

# FiberGuide® Fiber Management Systems

2020 Edition





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# FiberGuide<sup>®</sup> Fiber Management Systems

#### The Industry's Most Comprehensive Optical Raceway System

The FiberGuide<sup>®</sup> fiber management systems offer the greatest breadth of optical raceway products in the industry. FiberGuide systems add greater flexibility and drive down installation time to ensure a smooth deployment.

FiberGuide is a raceway system designed to protect and route fiber optic patch cords, multi-fiber cable assemblies and intrafacility fiber cable (IFC) to and from fiber splice enclosures, fiber distribution frames and fiber optic terminal devices. FiberGuide ensures a two-inch minimum bend radius is maintained throughout the system. Tool-less, Snap-Fit<sup>™</sup> junctions, cover options significantly reduce the amount of time required for installation.

The FiberGuide system is a complete set of products designed and manufactured to ensure total off-frame protection and ease of use. Basic components include horizontal and vertical straight sections, horizontal and vertical elbows, downspouts, junctions and numerous support hardware and flex-tube kits.

Available in a variety of sizes:

**2x2** – Ideal for smaller installations or for vertical routing of a maximum of four hundred 2 mm fiber optic patch cords. All 2x2 FiberGuide products are shipped with covers.

**2x6** – Designed for height restricted environments, this robust system provides the same support and system flexibility of the traditional 4-inch-high system while saving 2 inches of overhead space. It features a maximum capacity of 1,200, 2 mm patch cords.

**4x4** – Features the maximum capacity to support 1,600, 2 mm patch cords. It has been engineered to allow straight sections to be self-supporting over a span of up to 1.83 m (6 feet).

**4x6** – Features the same benefits of the 4-inch system and a maximum trough capacity of 2,400, 2 mm patch cords.

**4x12** – The 12-inch-wide trough has a maximum capacity to support nearly 5,000, 2 mm patch cords. Perfect for runs over fiber frame lineups and perimeter routes.

**4x24** – The 4x24-inch system is the ultimate raceway solution to securely route and protect patch cords over high-density optical distribution frames including CommScope's Next Generation Frame (NGF) and Next Generation 3 Frame (NG3<sup>®</sup>). Designed for maximum capacity, this robust system provides the same support and flexibility as the traditional 4x12-inch system while doubling capacity.





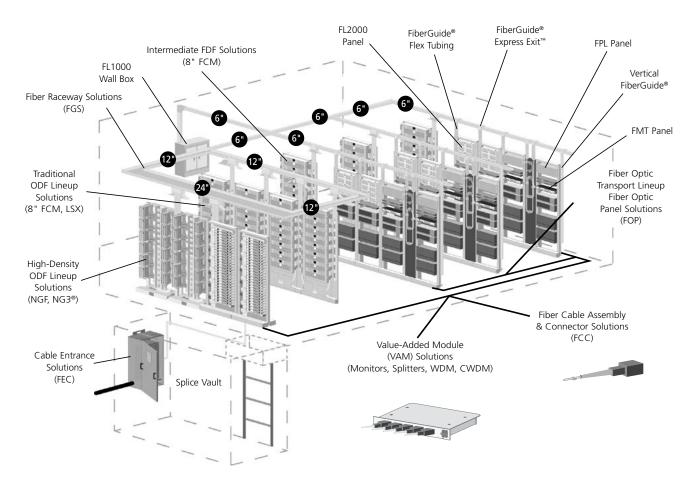








## Examples of FiberGuide® Integration



#### FiberGuide® Materials Product Statement

The FiberGuide fiber management system is a UL-listed (E151158) general purpose fiber optic raceway system. All FiberGuide products are manufactured from flame-retardant materials. No FiberGuide system parts contain PVC. The table summarizes the fire-resistant properties of FiberGuide straight sections, molded parts and flex tube.

	Raw Material Meets UL Requirement	Finished Product Meets UL Requirement
FiberGuide Straight Sections (All FiberGuide Systems)	Flame rated: UL94V-0	UL94V-0 and UL2024
FiberGuide Molded Fittings (All FiberGuide Systems)	Flame rated: UL94V-0	UL94V-0 and UL2024
FiberGuide Flex Tube (2")	Flame rated: UL94V-0	UL2024
FiberGuide Flex Tube (1")	Flame rated: UL94V-0	UL2024
FiberGuide Flex Tube (7/8")	Flame rated: UL94V-2	UL2024

Note: FiberGuide flex tube complies with the National Electrical Code (NEC) Article 770-51 and Underwriters Laboratory UL2024 requirements for General Purpose Fiber Optic Raceways.

## Introduction - Innovative Products

#### Snap-Fit<sup>™</sup> and Hinged Cover Options

To drive down valuable installation time, FiberGuide systems include tool-less Snap-Fit<sup>™</sup> and hinged cover options. Featuring simple, durable molded hardware, these covers install in minutes and require no tools.

The hinged cover option provides easy access, enabling installers and technicians to deploy the product quickly and easily. In addition, the covers do not need to be fully opened for maintenance.

#### **Snap-Fit Junction**

The Snap-Fit Junction is the industry's first and only completely tool-less junction. No additional tools are needed for installation or removal. Quick and easy to install, the FiberGuide Snap-Fit Junction saves valuable time and money.

#### Express Exits<sup>™</sup>

The FiberGuide system features a number of innovative Express Exit<sup>™</sup> options: Low profile, 2-inch and 4-inch options round out this innovative product line, designed to meet your most demanding network requirements. By simply securing an Express Exit to the sidewall of a FiberGuide straight section,

jumpers can be permanently or temporarily routed to the fiber optic terminal (FOT) equipment or fiber frames. No cutting is required. Positioning a drop with a member of the Express Exit family greatly simplifies installation, protects the integrity of existing fibers and increases the overall flexibility of the raceway system.

#### **Raceway Reconfiguration Solutions**

Two FiberGuide products to facilitate easy on-site raceway reconfigurations. Available for the 4x4, 4x6, 4x12 and 4x24\* systems, the cut-in "T" and the expandable straight section offer the required flexibility to optimize raceway systems in retrofit applications without jeopardizing the integrity of existing cables.

\*Expandable straight section not available for 4x24 system.



Hinged Cover System

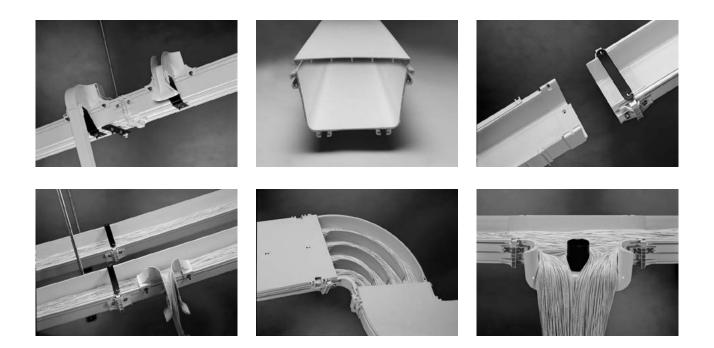


Express Exit<sup>™</sup> Family



Cut-in T

## Introduction - Features and Benefits



#### Features & Benefits

#### Speed of Installation

FiberGuide<sup>®</sup> systems feature a variety of products that allow for quick and easy installation. Express Exit<sup>™</sup> drops as well as tool-less products including Snap-Fit<sup>™</sup> junctions, snap-on covers and new hinged cover options save valuable time for installers.

#### Speed of Deployment

The Express Exit system enables new drops to be added or removed quickly and easily. A drop can be added into a fully loaded raceway in seconds—without cutting.

#### Raceway Flexibility

FiberGuide features 38 support structures, over 75 fittings, multiple drop options and several other components to suit any application you create.

#### **Fiber Protection**

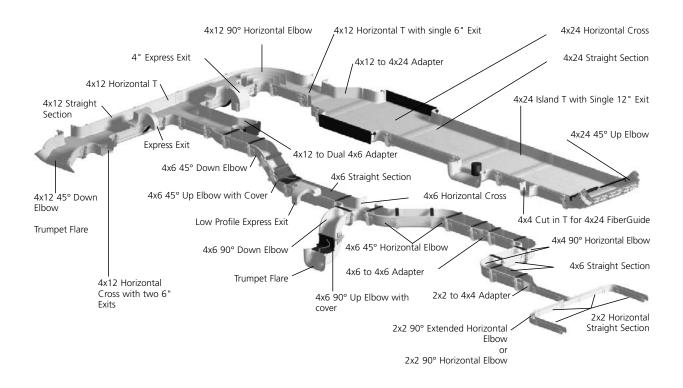
CommScope's expertise translates into maximum protection for your network. Two-inch minimum bend radius is maintained throughout the system regardless of the raceway size.

#### Strength and Durability

100% raceway reliability-stands up to any challenge.

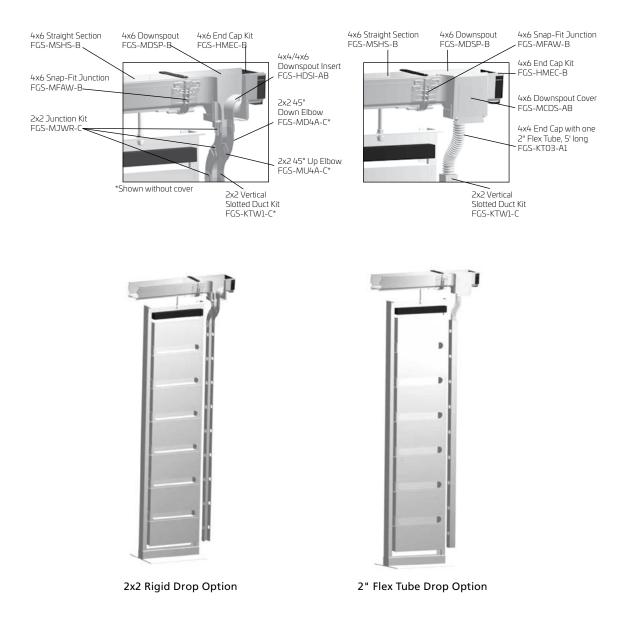
# Applications - Combining System Parts

A combination of components from the various sized raceway systems typically comprise overhead FiberGuide<sup>®</sup> systems. Adapters are used to make the transition between sizes. An example of an overhead system that combines many of CommScope's FiberGuide systems can be seen below.



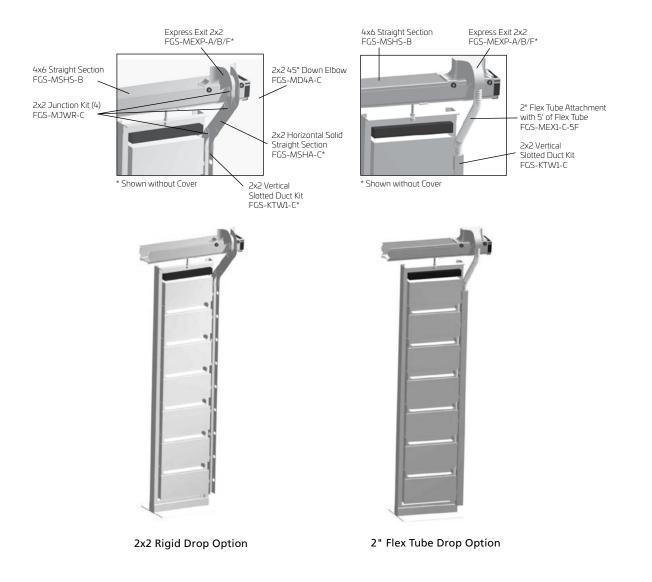
# Applications - Downspout Drop Options

A downspout drop is recommended over optical distribution frame lineups. The rigid 2-inch drop option and 2-inch flex tube option are two methods for directing fibers out of overhead FiberGuide<sup>®</sup> downspouts and into optical equipment bays. The rigid system is recommended because it offers excellent bend radius control and ensures a quality fiber backbone installation.



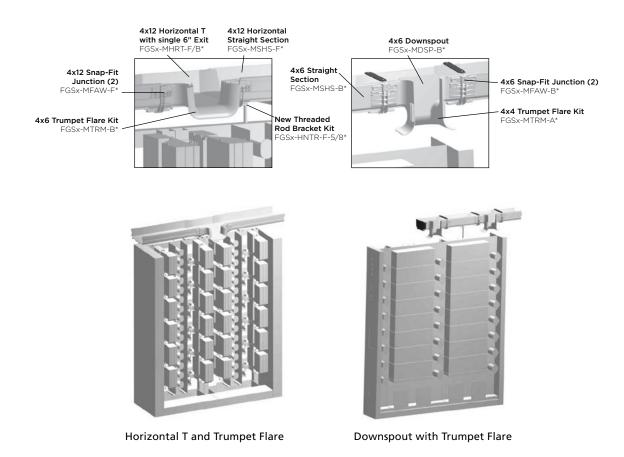
# Applications - Express Exit™ Drop Options

An Express Exit is recommended over active equipment racks or cabinets. The rigid 2-inch drop option and 2-inch flex tube option are two methods for directing fibers out of overhead FiberGuide<sup>®</sup> downspouts and into optical equipment bays. The rigid system is recommended because it offers excellent bend radius control and ensures a quality fiber backbone installation.

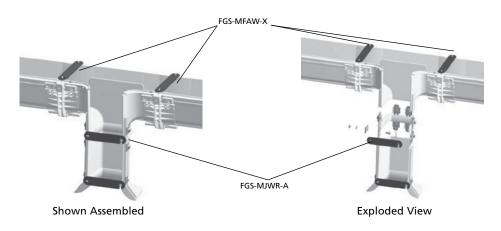


# Applications - Trumpet Flare Options

The trumpet flare is recommended at the bottom of a downspout when directing fibers into a fiber distribution bay. Trumpet flares provide bend radius protection and allow for a large number of fiber patch cords to transition into a fiber bay. A 4x4 trumpet flare is used for the 4x4 and 4x6 downspouts and a 4x6 trumpet flare is used for the 4x12 downspout.

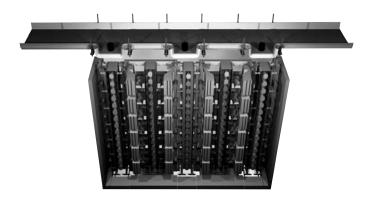


When attaching a straight section or fitting to the exit of a 4x4 or 4x6 downspout, the FGS-MJWR-A junction must be used. This junction is only required to connect the vertical part, the FGS-MFAW-X junction can be used to connect the horizontal parts.



# Applications - 4x24-Inch Island T

The 4x24 Island T with 12-inch exit is designed to be used over the NGF, NG3<sup>®</sup> or any high-density fiber frame. The 4x24 Island T, a horizontal T with spool and factory-installed trumpet flare, channels fiber directly into the vertical cableways below.

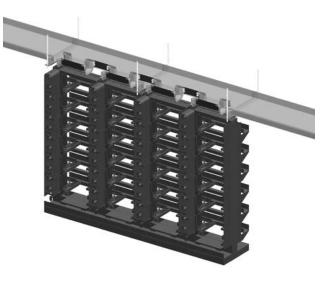


4x24 Island T (Shown with support brackets over an NGF frame.)

## FiberGuide FlexExit

FiberGuide flex exit was designed to ensure a precise fiber drop from the raceway system into CommScope's NG4access optical distribution frame (ODF) or other high-density frame solutions. It easily installs on the sidewall of the existing raceway system, and promotes 4, 6 or 12 inch fiber drops. The FiberGuide flex exit easily adjusts vertically, side-to-side and forward for precise alignment with the ODF equipment.





Rear Fiber Entry for Cross-Connect Applications

Dual Front Fiber Entry for Interconnect Applications

# Applications - Raceway Reconfigurations

## Cut-in T, Fitting and Fixture

The innovative cut-in T fitting and fixture enable on-site raceway modifications without jeopardizing the integrity of installed fibers. Available in 4-, 6-, and 12-inch widths, the cut-in T fitting can be retrofitted to any installed 4-, 6-, 12-, and 24-inch straight section using the cut-in T fixture and the hardware supplied with the fitting. No special tools are required.





Fixture attached to sidewall of raceway

Fixture protects cables during cutting of sidewall



Fitting fills gap left by removed sidewall

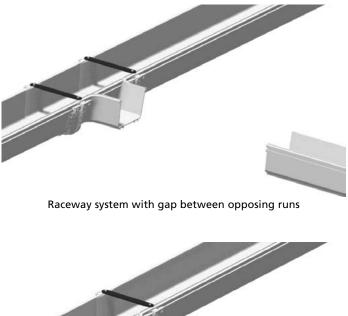


Supplied hardware secures fitting to raceway and completes installation

# Applications - Raceway Reconfigurations

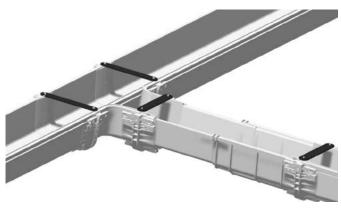
#### Expandable Straight Sections

The expandable straight section simplifies installation and enhances the overall flexibility of the raceway system. The innovative straight section also provides an access point for future reconfigurations. Available in 4-, 6-, and 12-inch widths, the expandable straight section reduces the installation time necessary to connect opposing runs and provides continuous support for patch cords.





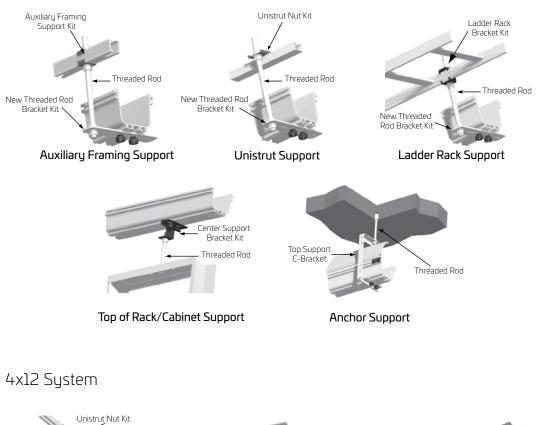
Expandable straight section extends to connect runs

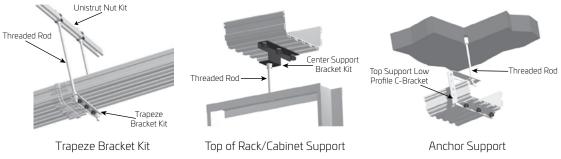


Completed installation

# Applications - Supporting Overhead Systems

A variety of support kits are available for each FiberGuide<sup>®</sup> system. Whenever possible, FiberGuide support kits should be attached to existing hardware (cable racks, digital cableways, existing threaded rods or equipment racks).



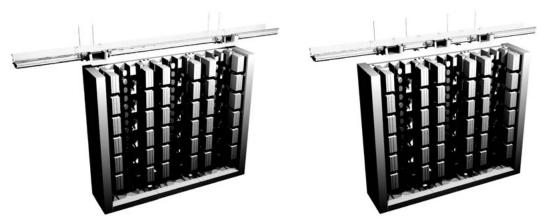


## 2x6, 4x4, 4x6 Systems

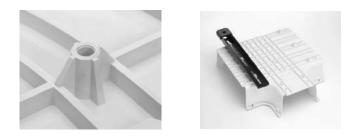
# Applications - Supporting Overhead Systems

## 4x12 and 4x24 Systems

The straight sections on the 4x12 and 4x24 FiberGuide<sup>®</sup> system are exceptionally strong, making frequent placement of supports beneath them unnecessary. Whenever possible the supports should be placed under the fittings using the mounting bosses as shown (photos 1 and 2). This placement provides the strongest system and requires the least amount of support hardware to be used. Occasionally it is not possible to attach the support bracket to the mounting bosses on the fittings; in those instances the variable fitting support locator can be installed on the bottom of the fitting, allowing the support to be attached anywhere along the fitting bottom (photos 3, 4 and 5). When combining several straight sections, it is recommended that support brackets are installed on both sides of each junction.



Typical 4x12 system installation over a Next Generation Frame Line-up





3





Variable Fitting Support Locator

Note: See pages 40 and 49 for 4x12 and 4x24 system fittings.

## Patch Cord Densities

#### Recommended and Maximum Patch Cord Densities

Recommended capacity takes into consideration random jumper placement into the FiberGuide® system. Maximum density refers to the maximum number of fiber jumpers in a given cross-section of a FiberGuide installation. The TracerLight® Connector Identification System features slightly different dimensions than standard patch cords.

#### Recommended/Maximum Density

1.2 mm	1.7 mm	2.0 mm	3.0 mm
Patch Cords (per in²)			
250/285	120/142	90/102	

#### Trough Pileup Recommended/Maximum Density

		2-Inch	3-Inch	4-Inch
4x24 System	1.2mm	12,000/13,680	18,000/20,520	24,000/27,360
	1.7 mm	5,760/6,816	8,640/10,224	11,520/13,632
	2.0 mm	4,320/4,869	6,480/7,344	8,640/9,792
	3.0 mm	1,920/2,112	2,880/3,168	3,840/4,224
4x12 System	1.2mm	6,000/6,840	9,000/10260	12,000/13680
	1.7 mm	2,880/3,408	4,320/5,112	5,760/6,816
	2.0 mm	2,160/2,448	3,240/3,672	4,320/4,896
	3.0 mm	960/994	1,440/1,584	1,920/2,112
4x6 System	1.2mm	3,000/3,420	4,500/5,130	6,000/6,840
	1.7 mm	1,440/1,704	2,160/2,556	2,880/3,408
	2.0 mm	1,080/1,224	1,620/1,836	2,160/2,448
	3.0 mm	480/528	720/792	960/1056
4x4 System	1.2mm	2,000/2280	3,000/3,420	4,500/4,560
4x4 System	1.7 mm	960/1,136		
		,	1,440/1,704	1,920/2,272
	2.0 mm 3.0 mm	720/816	1,080/1,224 480/528	1,440/1,632 640/704
	5.0 mm	320/332	480/328	040/704
2x6 System	1.2mm	3,000/3,492		
	1.7 mm	1,440/1,740	-	-
	2.0 mm	1,080/1,224	-	-
	3.0 mm	480/528	-	-
2x2 System	1.2mm	1,000/1,140		
	1.7 mm	480/568	-	
	2.0 mm	360/408	-	-
	3.0 mm	160/176	-	-

#### TracerLight<sup>®</sup> Patch Cords – 65 Patch Cords per in<sup>2</sup>

	2-Inch	3-Inch	4-Inch
4x24 System	3,120	4,680	6,420
4x12 System	1,560	2,340	3,120
4x6 System	780	1,170	1,560
4x4 System	520	780	1,040
2x6 System	780	-	-
2x2 System	260	-	-

# 2x2 System Fittings – 2" H x 2" W



Horizontal T (FGS-MHTA-C)



90° Horizontal Elbow (FGS-MH9A-C)



45° Down Elbow (FGS-MD4A-C)



Horizontal Cross (FGS-MHXP-C)



90° Extended Horizontal Elbow (FGS-MH9A-C-45/2)



2x2 to 4x4 Straight Adapter (FGS-MDSA-AC)



45° Horizontal Elbow (FGS-MH4A-C)



45° Up Elbow (FGS-MU4A-C)



End Cap (FGS-HMEC-C)

Ordering Information
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Description	Part Number			
	Number of Junctions	Yellow System	Black System	
2x2 fittings				
Horizontal T; cover included	3	FGS-MHTA-C	FGSB-MHTA-C	
Horizontal cross; cover and two 2x2 junctions included; two additional 2x2 junctions required (see p. 17)	2+2	FGS-MHXP-C	FGSB-MHXP-C	
45° horizontal elbow; cover included	2	FGS-MH4A-C	FGSB-MH4A-C	
90° horizontal elbow; cover included	2	FGS-MH9A-C	FGSB-MH9A-C	
90° extended horizontal elbow; cover included; similar to two 45° horizontal elbows joined	2	FGS-MH9A-C-45/2	FGSB-MH9A-C-45/2	
45° up elbow; cover included	2	FGS-MU4A-C	FGSB-MU4A-C	
90° up elbow; cover included	2	FGS-MU9A-C	FGSB-MU9A-C	
45° down elbow; cover included	2	FGS-MD4A-C	FGSB-MD4A-C	
90° down elbow; cover included	2	FGS-MD9A-C	FGSB-MD9A-C	
2x2 conversions				
2x2 to 4x4 straight adapter; cover included	(1) 2x2, (1) 4x4	FGS-MDSA-AC	FGSB-MDSA-AC	
2x2 end cap				
End cap; junction included	_	FGS-HMEC-C	FGSB-HMEC-C	

# 2x2 System

## Downspouts and Attachments – 2" H x 2" W



2x2 Standard Downspout (FGS-MSDS-C)



2x2 Extended Downspout (FGS-MDSP-C)



Extended Downspout (FGS-KDH2-C shown attached to 2x2 FiberGuide system) \*hose for reference only



Dual 7/8" Flex Tube Attachment (FGS-KT03-CNH) \*hose for reference only



Dual 7/8" Flex Tube Attachment (FGS-KT03-CNH shown attached to downspout) \*hose for reference only



2x2 Trumpet Flare (FGS-MTRM-C)

Description	Part Number		
	Number of Junctions	Yellow System	Black System
2x2 downspouts			
Standard downspout; cover included	2	FGS-MSDS-C	FGSB-MSDS-C
Extended downspout; cover included	1	FGS-MDSP-C	FGSB-MDSP-C
Extended downspout; cover and 2" flex tube, 2' long, included	1	FGS-KDH2-C	FGSB-KDH2-C
Trumpet flare; 2x2 junction included	-	FGS-MTRM-C	FGSB-MTRM-C
2x2 attachments			
2x2 flex tube attachment – 2x2 junction included			
KIT, ADAPTER, 2X2 TO 2" Fiber Hose		FGS-MEX1-C-0F	FGSB-MEX1-C-0F
Dual 7/8" flex tube attachment – 2x2 junction included			
KIT, ADPTR, 2" FGS - (2) 7/8" hose		FGS-KT03-CNH	FGS-KT03-CNH
Flex tube clamp kit of 10; attaches 7/8" flex tube to rack	-	FGS-HSHC-10	FGS-HSHC-10
Slotted flex tubes			
2" outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)		FGS-MIDY-XF	FGSB-MIDY-XF
7/8" outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)		FGS-MFTY-XF	FGSB-MFTY-XF

# 2x2 System Straight Section and Junction – 2" H x 2" W

#### **Straight Section**

The 2x2 straight section is a U-shaped trough that provides a protective raceway for optical fibers. Available in 6-foot lengths, the straight section carries fibers horizontally throughout the system. It can also be installed vertically when routing around obstructions. A warning label indicating caution around fiber optic cable is included with each junction kit.



Horizontal Straight Section (FGS-MSHA-C)

## Ordering Information

Description	Part Number		
	Yellow System Black System		
2x2 straight section; horizontal straight section; 6' long, cover included	FGS-MSHA-C	FGSB-MSHA-C	

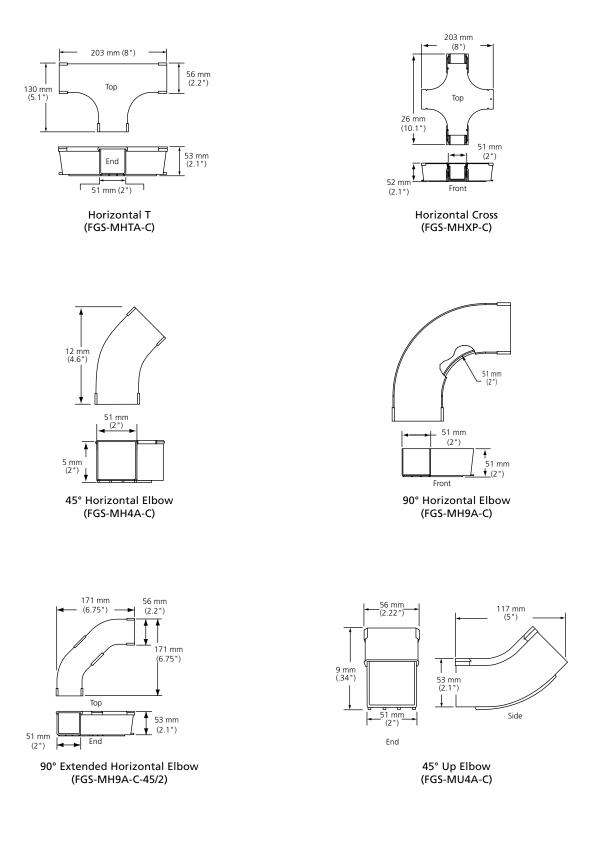
#### Junction

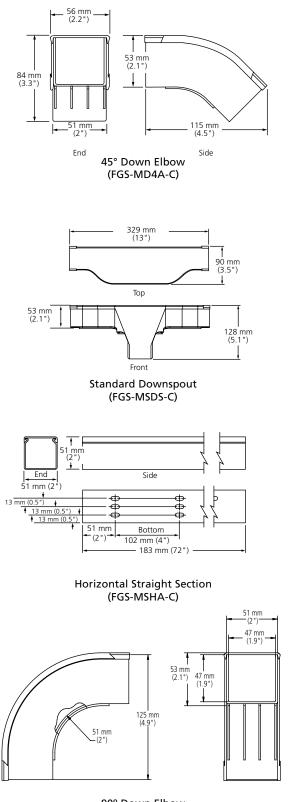
The 2x2 junction is used for mechanically joining FiberGuide<sup>®</sup> sections. No tools are required for assembly.



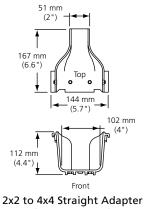
Junction (FGS-MJWR-C)

Description	Part Number	
	Yellow System Black System	
2x2 junction	FGS-MJWR-C	FGSB-MJWR-C

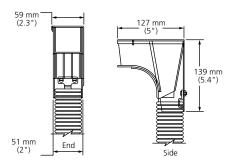




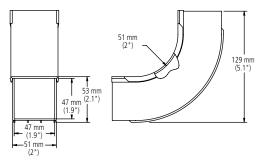
90° Down Elbow (FGS-MD9A-C)



(FGS-MDSA-AC)



Extended Downspout (FGS-KDH2-C)



90° Up Elbow (FGS-MU9A-C)

# 2x6 System Fittings, Downspouts and Attachments – 2" H x 6" W

## Ordering Information

Description	Part Number		
	Number of Junctions	Yellow System	Black System
2x6 fittings			
Horizontal T	3	FGS-MHRT-G	FGSB-MHRT-G
Horizontal cross	4	FGS-MHXP-G	FGSB-MHXP-G
90° horizontal elbow	2	FGS-MH9E-G	FGSB-MH9E-G
90° down elbow	2	FGS-MD9E-G	FGSB-MD9E-G
45° horizontal elbow	2	FGS-MH4E-G	FGSB-MH4E-G
45° up elbow, metal cover included	2	FGS-MU4E-G	FGSB-MU4E-G
45° down elbow	2	FGS-MD4E-G	FGSB-MD4E-G
2x6 conversions			
2x6 to 4x4 adapter	(1) 2x6, (1) 4x4	FGS-MDSA-GA	FGSB-MDSA-GA
2x6 to 4x6 adapter	(1) 2x6, (1) 4x6	FGS-MDSA-GB	FGSB-MDSA-GB
Trumpet flare	-	FGS-MTRM-G	FGSB-MTRM-G
2x6 downspouts			
2x6 to 2x2 downspout	2	FGS-MDSP-G	FGSB-MDSP-G
2x6 attachments			
Dual 2" flex tube attachment	-	FGS-KT03-G-0F	FGS-KT03-G-0F
2x6 end cap	-	FGS-HMEC-G	FGS-HMEC-G
Slotted flex tubes			
2" outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)		FGS-MIDY-XF	FGSB-MIDY-XF

## Low-Profile Express Exit™

Designed for low-ceiling or height restricted environments, the Express Exit for the 2x6 FiberGuide system extends only two inches above the straight section sidewall. The Express Exit accommodates up to 150 (3 mm) patch cords, includes removable rear cable guides for additional cable management, and features a 2x2 exit opening. It is designed specifically for the 2x6 FiberGuide system and should not be used on any other FiberGuide system.



Express Exit (FGS-MEXP-LP-G)

Description	Part Number	Part Number	
	Yellow System	Black System	
Low-Profile Express Exit <sup>™</sup> (designed exclusively for the 2x6 system) Base, cover, mounting hardware, and support bracket included	FGS-MEXP-LP-G	FGSB-MEXP-LP-G	

# 2x6 System Fittings, Downspouts and Attachments – 2" H x 6" W



2x6 to 2x2 Downspout (FGS-MDSP-G)



90° Horizontal Elbow (FGS-MH9E-G)



45° Up Elbow (FGS-MU4E-G) (Metal Cover Included)



2x6 to 4x6 Adapter (FGS-MDSA-GB)



Horizontal T (FGS-MHRT-G)



90° Down Elbow (FGS-MD9E-G)



45° Down Elbow (FGS-MD4E-G)



Trumpet Flare (FGS-MTRM-G)



Horizontal Cross (FGS-MHXP-G)



45° Horizontal Elbow (FGS-MH4E-G)



2x6 to 4x4 Adapter (FGS-MDSA-GA)

# 2x6 System Straight Section and Junction – 2" H x 6" W

#### **Straight Section**

The unique four-channel design of the 2x6 FiberGuide<sup>®</sup> straight section allows the standard system to be attached to the support structure without the need to cut or drill any holes within the trough. This ensures that the patch cords will not come in contact with any screw heads or bolts.

## Ordering Information

Description	Part Number	Part Number		
	Yellow System	Black System		
<b>2x6 straight section;</b> horizontal straight section; 6' <i>long, cover sold seperately</i>	FGS-MSHS-G	FGSB-MSHS-G		
2x6 accessories				
2x6 hinged cover kit for horizontal straight section; three mounting hinges and three clips included	FGS-MSNC-B/G	FGSB-MSNC-B/G		
6-inch snap-on cover kit for horizontal straight section; six capture clips with mounting clasps included	FGS-MSSC-B/G	FGSB-MSSC-B/G		
Kit-10 black capture clips*	FGS-DHCP	FGS-DHCP		

\*See drawings on page 24 for more detail on how capture clips and hinges are used.



Straight Section (FGS-MSHS-G)



Hinged Cover Kit for Horizontal Straight Section (FGS-MSNC-B/G)



6-inch Snap-on Cover (FGS-MSSC-B/G)

#### Junction

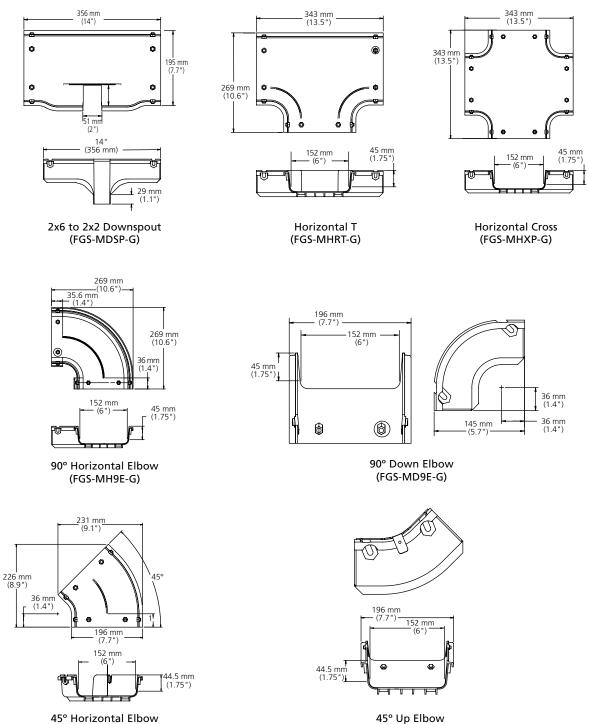
The one-piece junction employs factory-installed set screws to assure strength and durability. No cutting or drilling of the components is required for assembly. A warning label indicating caution around fiber optic cable is included with each junction kit.



2x6 Junction (FGS-JUNC-G)

Description	Part Number	
	Yellow System Black System	
2x6 junction	FGS-JUNC-G	FGSB-JUNC-G

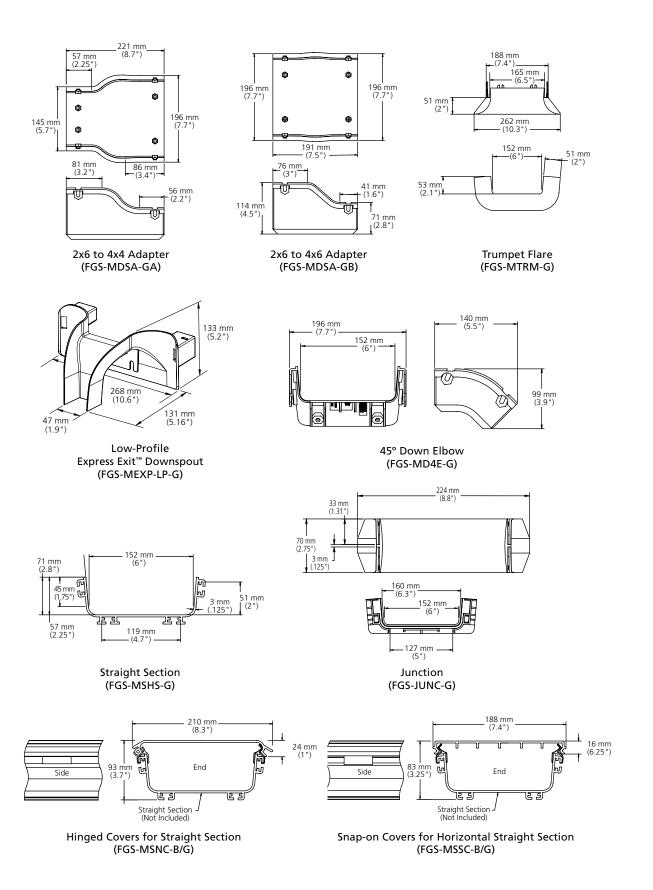
# 2x6 System Part Drawings



45° Up Elbow (FGS-MU4E-G)

(FGS-MH4E-G)

# 2x6 System Part Drawings



# 4x4 System Fittings – 4" H x 4" W

Description		Part Number				
	Number of Junctions	Yellow System	Yellow System Snap-on Cover	Black System	Black System Snap-on Cover	Fixed Metal Cover
4x4 fittings						
Horizontal T	3	FGS-MHRT-A	FGS-SHRT-A	FGSB-MHRT-A	FGSB-SHRT-A	FGS-CHRT-A
Horizontal cross	4	FGS-MHXP-A	FGS-SHXP-A	FGSB-MHXP-A	FGSB-SHXP-A	FGS-CHXP-A
90° horizontal elbow	2	FGS-MH9E-A	FGS-SH9E-A	FGSB-MH9E-A	FGSB-SH9E-A	FGS-CH9E-A
90° up elbow metal cover included	2	FGS-MU9E-A	FGS-SU9E-A	FGSB-MU9E-A	FGSB-SU9E-A	-
90° down elbow	2	FGS-MD9E-A	FGS-SD9E-A	FGSB-MD9E-A	FGSB-SD9E-A	FGS-CD9E-A
45° horizontal elbow	2	FGS-MH4E-A	FGS-SH4E-A	FGSB-MH4E-A	FGSB-SH4E-A	FGS-CH4E-A
45° up elbow metal cover included	2	FGS-MU4E-A	FGS-SU4E-A	FGSB-MU4E-A	FGSB-SU4E-A	-
45° down elbow	2	FGS-MD4E-A	FGS-SD4E-A	FGSB-MD4E-A	FGSB-SD4E-A	FGS-CD4E-A
4x4 conversions						
4x4 to 4x6 straight adapter	(1) 4x4, (1) 4x6	FGS-MDSA-AB	FGS-SDSA-AB	FGSB-MDSA-AB	FGSB-SDSA-AB	FGS-CDSA-AI
4x4 expandable straight section	2	FGS-MVAR-A	-	FGSB-MVAR-A	_	-
4"Cut-in T; assembly hardware included	_	FGS-MHIS-A	_	FGSB-MHIS-A	-	_
6"Cut-in T; assembly hardware included	-	FGS-MHIS-B	_	FGSB-MHIS-B	-	-
12 "Cut-in T; assembly hardware included	_	FGS-MHIS-F	_	FGSB-MHIS-F	_	-
Cut-in T fixture	-	FGS-MHIS-JIG-A/B/F	-	FGS-MHIS-JIG-A/B/F	-	_
4x4 end cap	-	FGS-HMEC-A	_	FGS-HMEC-A	-	-

## 4x4 System Fittings – 4" H x 4" W



Horizontal T (FGS-MHRT-A)



90° Up Elbow Metal Cover Included (FGS-MU9E-A)



Horizontal Cross (FGS-MHXP-A)



90° Down Elbow (FGS-MD9E-A)



90° Horizontal Elbow (FGS-MH9E-A)



45° Horizontal Elbow (FGS-MH4E-A)



45° Up Elbow Metal Cover Included (FGS-MU4E-A)



45° Down Elbow (FGS-MD4E-A)



4x4 to 4x6 Straight Adapter (FGS-MDSA-AB)



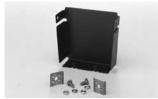
Expandable Straight Section (FGS-MVAR-A)



Cut-in T (FGS-MHIS-A)



Cut-in T Fixture shown on straight section (FGS-MHIS-JIG-A/B/F)



End Cap (FGS-HMEC-A)



Snap-on Plastic Cover (FGS-SH4E-A shown attached to 45° horizontal elbow with junctions)

## 4x4 System

Downspouts and Attachments – 4" H x 4" W

An array of 4x4 downspout options are available to feed fiber from overhead straight sections into fiber optic equipment below.

## Ordering Information

Description	Part Number		
	Number of Junctions	Yellow System	Black System
4x4 downspouts			
Downspout	2**	FGS-MDSP-A	FGSB-MDSP-A
Cover for 4x4 downspout	-	FGS-MCDS-AB	FGSB-MCDS-AB
Extended downspout	2*	FGS-MDSP-EX-A	FGSB-MDSP-EX-A
Cover for 4x4 extended downspout	-	FGS-MCDS-EX-AB	FGSB-MCDS-EX-AB
Insertable downspout	-	FGS-MDSP-A/I	FGSB-MDSP-A/I
Trumpet flare used on both 4x4 and 4x6 downspouts; no 4" junction kit required	-	FGS-MTRM-A	FGSB-MTRM-A
Downspout exit junction kit	-	FGS-MJWR-A	FGSB-MJWR-A
4x4/4x6 downspout; insert converts bottom of downspout to 2x2" without using 2" to 4" adapter, saving vertical space	-	FGS-HDSI-AB	FGS-HDSI-AB
4x4 attachments			
Square to 2" round adapter to flex tube attachmen one 4x4 junction kit (FGS-MJWR-A) required to atta		drop	· · · · · · · · · · · · · · · · · · ·
4"square to 2" round adapter kit		FGS-MSRA-A	FGSB-MSRA-A
Dual 2" flex tube attachment; no 4x4 junction kit r	equired		
		FGS-KT03-ANH	FGS-KT03-ANH
Single 2" flex tube attachment; no 4x4 junction kit	required		
		FGS-KT03-A1NH	FGS-KT03-A1NH
Quad 2" flex tube attachment; no 4x4 junction kit	required		
		FGS-KT03-A4-0F	FGS-KT03-A4-0F
4x4 quad 7/8" flex tube attachment; no 4x4 junction	on kit required		
		FGS-KT07-A4-0F	FGS-KT07-A4-0F
Slotted flex tubes			
2″ outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)		FGS-MIDY-XF	FGSB-MIDY-XF
7/8" outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)		FGS-MFTY-XF	FGSB-MFTY-XF

\*A third junction is needed if drop is to a fitting or straight section.

\*\*This drop junction must be a junction type FGS-MJWR-A, FGSB-MJWR-A.

## 4x4 System Downspouts and Attachments – 4" H x 4" W



Downspout (FGS-MDSP-A)



Cover for 4x4 Downspout (FGS-MCDS-AB)



Extended Downspout (FGS-MDSP-EX-A shown with and without cover)



Insertable Downspout (FGS-MDSP-A/I)



4x4/4x6 Downspout Insert (FGS-HDSI-AB)



Single 2" Flex Tube Attachment (FGS-KT03-A1NH) \*hose for reference only



Trumpet Flare (FGS-MTRM-A)



4" Square to 2" Round Adapter with Flex Tube (FGS-MSRA-A requires FGS-MJWR-A Junction Kit) \*hose for reference only



2" Quad Flex Tube Attachment (FGS-KT03-A4-0F) \*hose for reference only



Downspout Exit Junction Kit (FGS-MJWR-A)



Dual 2" Flex Tube Attachment (FGS-KT03-ANH) \*hose for reference only

## 4x4 System Straight Section and Snap-Fit<sup>™</sup> Junction – 4" H x 4" W

#### **Straight Section**

The unique four-channel design of the 4x4 FiberGuide<sup>®</sup> straight section allows the standard system to be attached to the support structure without the need to cut or drill any holes within the trough. This ensures that the patch cords will not come in contact with any screw heads or bolts, an important consideration in 4x4 systems where higher cable counts apply increased pressure on patch cords at the bottom of the trough.



Horizontal Straight Section (FGS-MSHS-A)



Expandable Straight Section (FGS-MVAR-A)



Hinged Cover for Horizontal Straight Section (FGS-MSNC-A)



Snap-On Cover for Horizontal Straight Section (FGS-MSSC-A)

## Ordering Information

Description	Part Number		
	Yellow System	Black System	
4x4 straight section			
Horizontal straight section; 6' long, cover sold seperately	FGS-MSHS-A	FGSB-MSHS-A	
Expandable straight section	FGS-MVAR-A	FGSB-MVAR-A	
4x4 accessories			
Hinged cover kit for horizontal straight section; includes three mounting hinges and three clips	FGS-MSNC-A	FGSB-MSNC-A	
Snap-on cover kit for horizontal straight section; includes six capture clips with mounting clasps	FGS-MSSC-A	FGSB-MSSC-A	
Kit - 10 black capture clips*	FGS-DHCP	FGS-DHCP	
Kit - 10 black capture clips and 10 hinges*	FGS-DHHC (Yellow Hinge)	FGSB-DHHC (Black Hinge)	

\*See drawings on page 31 for more detail on how capture clips and hinges are used

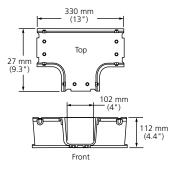
#### Snap-Fit<sup>™</sup> Junction

The Snap-Fit<sup>™</sup> junction assembly is available for the 4-inch FiberGuide<sup>®</sup> system. The Snap-Fit junction is a completely tool-less junction. No additional tools are required for installation or removal. The junction exhibits superior holding force and accommodates support brackets. A warning label indicating caution around fiber optic cable is included with each junction kit.

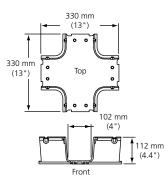


Snap-Fit Junction (FGS-MFAW-A)

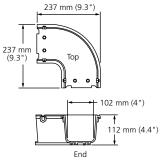
Description	Part Number	art Number	
	Yellow System	Black System	
4x4 Snap-Fit <sup>™</sup> junction	FGS-MFAW-A	FGSB-MFAW-A	



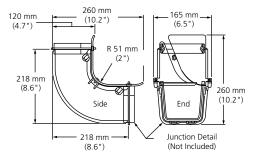
Horizontal T (FGS-MHRT-A)



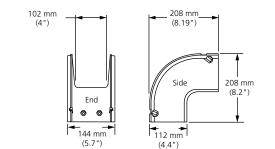
Horizontal Cross (FGS-MHXP-A)



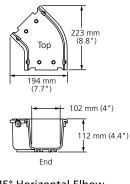
90° Horizontal Elbow (FGS-MH9E-A)



90° Up Elbow (FGS-MU9E-A)

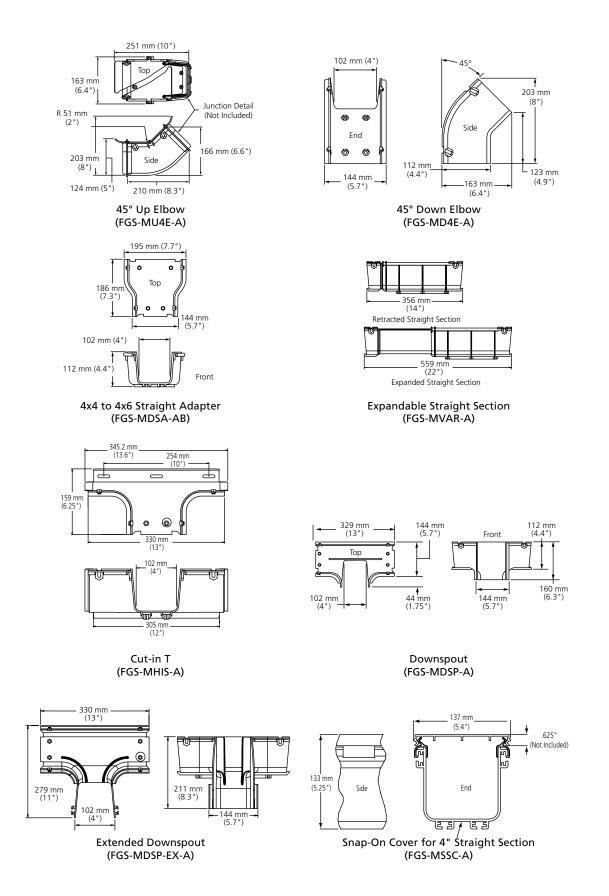


90° Down Elbow (FGS-MD9E-A)

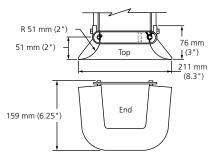


45° Horizontal Elbow (FGS-MH4E-A)

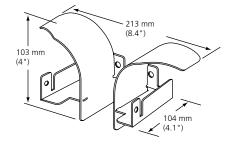
## 4x4 System Part Drawings



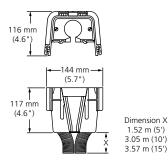
# 4x4 System Part Drawings



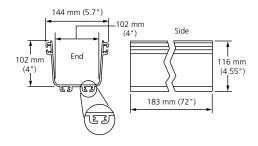
Trumpet Flare (FGS-MTRM-A)



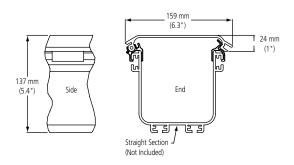
4x4/4x6 Downspout Insert (FGS-HDSI-AB)



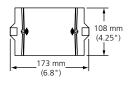
4" Square to 2" Round Adapter with Flex Tube (FGS-ASRI-X\*)

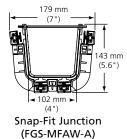


Horizontal Straight Section (FGS-MSHS-A)



Hinged Cover for 4" Horizontal Straight Section (FGS-MSNC-A)





# 4x6 System Fittings – 4" H x 6" W

		Part Number					
	Number of Junctions	Yellow System	Yellow System Snap-on Cover	Black System	Black System Snap-on Cover	Fixed Metal Cover	
4x6 fittings							
Horizontal T	3	FGS-MHRT-B	FGS-SHRT-B	FGSB-MHRT-B	FGSB-SHRT-B	FGS-CHRT-B	
Horizontal cross	4	FGS-MHXP-B	FGS-SHXP-B	FGSB-MHXP-B	FGSB-SHXP-B	FGS-CHXP-B	
90° horizontal elbow	2	FGS-MH9E-B	FGS-SH9E-B	FGSB-MH9E-B	FGSB-SH9E-B	FGS-CH9E-B	
90° up elbow metal cover included	2	FGS-MU9E-B	-	FGSB-MU9E-B	-	FGS-CU9E-B	
90° down elbow	2	FGS-MD9E-B	FGS-SD9E-B	FGSB-MD9E-B	FGSB-SD9E-B	FGS-CD9E-B	
45° horizontal elbow	2	FGS-MH4E-B	FGS-SH4E-B	FGSB-MH4E-B	FGSB-SH4E-B	FGS-CH4E-B	
45° up elbow metal cover included	2	FGS-MU4E-B	FGS-SU4E-B	FGSB-MU4E-B	FGSB-SU4E-B	FGS-CU4E-B	
45° down elbow	2	FGS-MD4E-B	FGS-SD4E-B	FGSB-MD4E-B	FGSB-SD4E-B	FGS-CD4E-B	
4x6 conversions							
4x4 to 4x6 straight adapter	(1) 4x4, (1) 4x6	FGS-MDSA-AB	FGS-SDSA-AB	FGSB-MDSA-AB	FGSB-SDSA-AB	FGS-CDSA-AB	
4x12 to single 4x6 adapter	-	FGS-MDSA-FB	FGS-SDSA-FB	FGSB-MDSA-FB	FGSB-SDSA-FB	-	
4x6 expandable straight section	2	FGS-MVAR-B	-	FGSB-MVAR-B	-	_	
4" Cut-in T; assembly hardware included	_	FGS-MHIS-A	_	FGSB-MHIS-A	-	-	
6" Cut-in T; assembly hardware included	_	FGS-MHIS-B	-	FGSB-MHIS-B	-	-	
12" Cut-in T; assembly hardware included	_	FGS-MHIS-F	_	FGSB-MHIS-F	-	-	
Cut-in T fixture	-	FGS-MHIS-JIG-A/B/F	-	FGS-MHIS-JIG-A/B/F	-	-	
1x6 end cap	-	FGS-HMEC-B	_	FGS-HMEC-B	_	-	

### 4x6 System Fittings – 4" H x 6" W



Horizontal T (FGS-MHRT-B)



90° Up Elbow Cover Included (FGS-MU9E-B)



45° Up Elbow Cover Included (FGS-MU4E-B)



Horizontal Cross (FGS-MHXP-B)



90° Down Elbow (FGS-MD9E-B)



45° Down Elbow (FGS-MD4E-B)



90° Horizontal Elbow (FGS-MH9E-B)



45° Horizontal Elbow (FGS-MH4E-B)



4x4 to 4x6 Straight Adapter (FGS-MDSA-AB)



Expandable Straight Section (FGS-MVAR-B)



6" Cut-in T (FGS-MHIS-B)



Cut-in T Fixture (FGS-MHIS-JIG-A/B/F shown on a straight section)



4x12 to Single 4x6 Adapter (FGS-MDSA-FB) (Cover: FGS-SDSA-FB)



End Cap (FGS-HMEC-B)



Snap-on Plastic Cover (FGS-SH4E-B shown attached to 45° horizontal elbow with junctions)

### 4x6 System Downspouts and Attachments – 4" H x 6" W

4x6 downspouts and attachments feed fiber from overhead straight sections into fiber optic equipment below. All 4x6 downspouts feature 4-inch exits and attach to the 4-inch x 4-inch attachments listed below.

### Ordering Information

Description		Part Number	
	Number of Junctions	Yellow System	Black System
4x6 downspouts			ĺ
Downspout Note: If a trumpet flare is required use a 4x4 flare (FGS-MTRM-A)	2*	FGS-MDSP-B	FGSB-MDSP-B
Cover for 4x6 downspout and dual downspout	-	FGS-MCDS-AB**	FGSB-MCDS-AB**
Extended downspout	2	FGS-MDSP-EX-B	FGSB-MDSP-EX-B
Cover for 4x6 extended downspout	-	FGS-MCDS-EX-AB	FGSB-MCDS-EX-AB
Insertable downspout	-	FGS-MDSP-B/I	FGSB-MDSP-B/I
Dual drop downspout	2*	FGS-MDSP-2B	FGSB-MDSP-2B
Trumpet flare for dual drop downspout (kit of 2 FGS-MTRM-A)	-	FGS-MTRM-2B	FGSB-MTRM-2B
Dual drop downspout with divider	2	FGS-MDSP-2B-IMP	FGSB-MDSP-2B-IMF
Trumpet flare for dual drop downspout with divider (kit of 2)		FGS-MTRM-2B-IMP	FGSB-MTRM-2B-IM
Downspout with exit junction		FGS-MJWR-A	FGSB-MJWR-A
4x4/4x6 downspout insert; converts bottom of downspout to 2x2 without using 2" to 4" adapter, saving vertical space		FGS-HDSI-AB	FGS-HDSI-AB
Trumpet flare; used on both 4x4 and 4x6 downspouts — no 4" junction kit required		FGS-MTRM-A	FGSB-MTRM-A
4x4 attachments			
Square to 2 " round adapter to flex tube attachment; one 4x4 junction kit (FGS-MJWR-A) required to attach to a downspout drop		·	
4"square to 2" round adapter kit		FGS-MSRA-A	FGSB-MSRA-A
Dual 2" flex tube attachment; no 4x4 junction kit required		I	1
		FGS-KT03-ANH	FGS-KT03-ANH
Single 2" flex tube attachment; no 4x4 junction kit required			
		FGS-KT03-A1NH	FGS-KT03-A1NH
Quad 2" flex tube attachment; no 4x4 junction kit required		·	
		FGS-KT03-A4-0F	FGS-KT03-A4-0F
4x4 quad 7/8" flex tube attachment; no 4x4 junction kit required			
		FGS-KT07-A4-0F	FGS-KT07-A4-0F
Slotted flex tubes			
2" outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)		FGS-MIDY-XF	FGSB-MIDY-XF
7/8" outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)		FGS-MFTY-XF	FGSB-MFTY-XF

\*A 4x4 junction is needed to drop to a fitting or a straight section. This drop junction must be a junction type FGS-MJWR-A or FGSB-MJWR-A. \*\*Dual downspout requires two covers.

### 4x6 System Downspouts and Attachments – 4" H x 6" W



Downspout (FGS-MDSP-B)



Insertable Downspout (FGS-MDSP-B/I)



Trumpet Flare Kit for 4x6 Dual Downspout (FGS-MTRM-2B)



Trumpet Flare Kit (FGS-MTRM-A)



4" Square to 2" Round Adapter with Flex Tube FGS-MSRA-A (requires FGS-MJWR-A Junction Kit) \*hose for reference only



Cover for 4x6 Downspout (FGS-MCDS-AB)



Dual Downspout (FGS-MDSP-2B)



Trumpet Flare Kit for Dual Downspout with Divider (FGS-MTRM-2B-IMP)



4x4/4x6 Downspout Insert (FGS-HDSI-AB)



Dual 2" Flex Tube Attachment (FGS-KT03-ANH) \*hose for reference only



Extended Downspout (FGS-MDSP-EX-B shown with and without cover)



Dual Downspout with Divider (FGS-MDSP-2B-IMP)



Single 2" Flex Tube Attachment (FGS-KT03-A1) \*hose for reference only



Downspout Exit Junction Kit (FGS-MJWR-A)



2" Quad Flex Flex Tube Attachment (FGS-KT03-A4-0F) \*hose for reference only

## 4x6 System Straight Section and Snap-Fit<sup>™</sup> Junction – 4" H x 6" W

#### Straight Section

The unique four-channel design of the 4x6 FiberGuide<sup>®</sup> straight section allows the standard system to be attached to the support structure without the need to cut or drill any holes within the trough. This ensures that the patch cords will not come in contact with any screw heads or bolts, an important consideration in 4x6 systems where higher cable counts apply increased pressure on patch cords at the bottom of the trough.



Horizontal Straight Section (FGS-MSHS-B)





Expandable Straight Section (FGS-MVAR-B)



Hinged Cover Kit for Horizontal Straight Section (FGS-MSNC-B/G)



6" Snap-on Cover for Horizontal Straight Section (FGS-MSSC-B/G)

Description	Part Number		
	Yellow System	Black System	
4x6 straight sections			
Horizontal straight section; 6' long, cover sold seperately	FGS-MSHS-B	FGSB-MSHS-B	
Expandable straight section	FGS-MVAR-B	FGSB-MVAR-B	
Slack storage straight section	FGS-MSHS-STOR-B	FGSB-MSHS-STOR-B	
4x6 accessories			
Hinged cover kit for horizontal straight section; includes three mounting hinges and three clips	FGS-MSNC-B/G	FGSB-MSNC-B/G	
6" snap-on cover kit for horizontal straight section; includes six capture clips with mounting clasps	FGS-MSSC-B/G	FGSB-MSSC-B/G	
Kit - 10 black capture clips*	FGS-DHCP	FGS-DHCP	
Kit - 10 black capture clips and 10 hinges*	FGS-DHHC	FGSB-DHHC	

\*See drawings on page 39 for more detail on how capture clips and hinges are used.

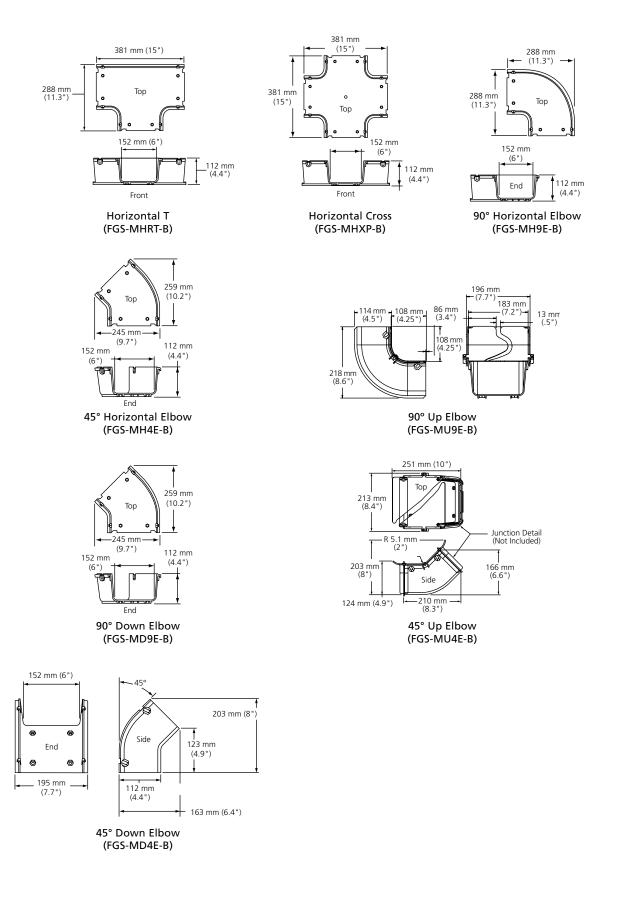
#### Snap-Fit<sup>™</sup> Junction

The Snap-Fit<sup>™</sup> junction assembly is available for the 6-inch FiberGuide<sup>®</sup> system. The new junction is a completely tool-less junction. No additional tools are required for installation or removal. The Snap-Fit Junction exhibits superior holding force and accommodates support brackets. A warning label indicating caution around fiber optic cable is included with each junction kit.

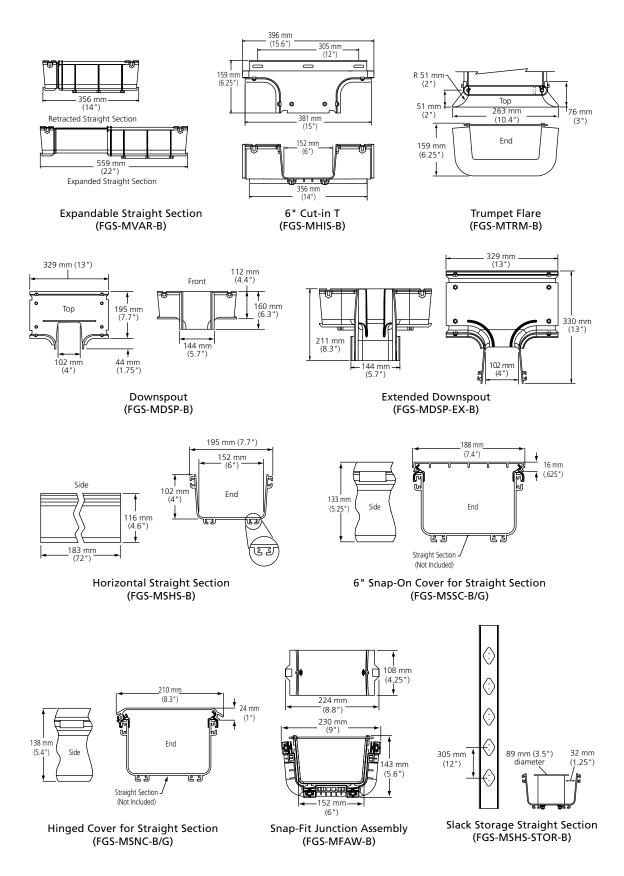


Snap-Fit Junction (FGS-MFAW-B)

Description	Part Number	
	Yellow System Black System	
4x6 Snap-fit junction	FGS-MFAW-B	FGSB-MFAW-B



## 4x6 System



## 4x12 System Fittings – 4" H x 12" W

Description		Part Number			
	Number of Junctions	Yellow System	Yellow System Snap-on Cover	Black System	Black System Snap-on Cover
4x12 fittings					
Horizontal T	3	FGS-MHRT-F	FGS-SHRT-F	FGSB-MHRT-F	FGSB-SHRT-F
Horizontal cross	4	FGS-MHXP-F	FGS-SHXP-F	FGSB-MHXP-F	FGSB-SHXP-F
90° horizontal elbow	2	FGS-MH9E-F	FGS-SH9E-F	FGSB-MH9E-F	FGSB-SH9E-F
90° down elbow	2	FGS-MD9E-F	FGS-SD9E-F	FGSB-MD9E-F	FGSB-SD9E-F
45° horizontal elbow	2	FGS-MH4E-F	FGS-SH4E-F	FGSB-MH4E-F	FGSB-SH4E-F
45° up elbow	2	FGS-MU4E-F	FGS-SU4E-F	FGSB-MU4E-F	FGSB-SU4E-F
45° down elbow	2	FGS-MD4E-F	FGS-SD4E-F	FGSB-MD4E-F	FGSB-SD4E-F
Horizontal T with single 6" exit	(2) 4x12, (1) 4x6	FGS-MHRT-F/B	FGS-SHRT-F/B	FGSB-MHRT-F/B	FGSB-SHRT-F/B
Horizontal cross with two 6" exits	(2) 4x12, (2) 4x6	FGS-MHXP-B/F	FGS-SHXP-B/F	FGSB-MHXP-B/F	FGSB-SHXP-B/F
4x12 conversions					
4x12 to dual 4x6 adapter	(1) 4x12, (2) 4x6	FGS-MDSA-F2B	FGS-SDSA-F2B	FGSB-MDSA-F2B	FGSB-SDSA-F2B
4x12 to single 4x6 adapter	(1) 4x12, (1) 4x6	FGS-MDSA-FB	FGS-SDSA-FB	FGSB-MDSA-FB	FGSB-SDSA-FB
4x12 to 4x6 right adapter; includes fastening hardware		FGS-MDSA-FB-R		FGS-MDSA-FB-R	
Fixed metal cover for right adapter		FGS-VDSA-FB-R		FGS-VDSA-FB-R	
4x12 to 4x6 left adapter; includes fastening hardware		FGS-MDSA-FB-L		FGS-MDSA-FB-L	
Fixed metal cover for left adapter		FGS-VDSA-FB-L		FGS-VDSA-FB-L	
Expandable straight section	2	FGS-MVAR-F	-	FGSB-MVAR-F	-
4" Cut-in T; assembly hardware included	-	FGS-MHIS-A	_	FGSB-MHIS-A	_
6" Cut-in T; assembly hardware included	-	FGS-MHIS-B	-	FGSB-MHIS-B	-
12 " Cut-in T; assembly hardware included	-	FGS-MHIS-F	-	FGSB-MHIS-F	-
Cut-in T fixture	-	FGS-MHIS-JIG-A/B/F	-	FGS-MHIS-JIG-A/B/F	-
4x12 end cap		FGS-HMEC-F		FGS-HMEC-F	
4x12 variable support locator kits for; Ea	ch kit contains a	all necessary mounting h	ardware. Fitting sold s	eparately.	
FGS-MDSP-F (downspout)		FGS-MDSP-F-VS		FGS-MDSP-F-VS	
FGS-MHRT-F (horizontal T)		FGS-MHRT-F-VS		FGS-MHRT-F-VS	
FGS-MHXP-F (horizontal cross)		FGS-MHXP-F-VS		FGS-MHXP-F-VS	
FGS-MH9E-F (90° horizontal elbow)		FGS-MH9E-F-VS		FGS-MH9E-F-VS	
FGS-MHRT-F/B (horizontal T – 6"/12")		FGS-MHRT-F/B-VS		FGS-MHRT-F/B-VS	
FGS-MHXP-B/F (horizontal cross- 6"/12"	)	FGS-MHXP-B/F-VS		FGS-MHXP-B/F-VS	

## 4x12 System Fittings – 4" H x 12" W



Horizontal T (FGS-MHRT-F)



45° Horizontal Elbow (FGS-MH4E-F)



Horizontal Cross with Two 6" Exits (FGS-MHXP-B/F)



Horizontal Cross (FGS-MHXP-F)



45° Up Elbow (FGS-MU4E-F)



90° Horizontal Elbow (FGS-MH9E-F)



45° Down Elbow (FGS-MD4E-F)



4x12 to Single 4x6 Adapter (FGS-MDSA-FB)



90° Down Elbow (FGS-MD9E-F)



Horizontal T with Single 6" Exit (FGS-MHRT-F/B)



4x12 to 4x6 Adapter – Right (FGS-MDSA-FB-R)



4x12 to 4x6 Adapter – Left (FGS-MDSA-FB-L)



Cut-in T Fixture (FGS-MHIS-JIG-A/B/F shown on a straight section)



4x12 to Dual 4x6

Adapter

(FGS-MDSA-F2B)

End Cap (FGS-HMEC-F)



Snap-on Cover (FGS-SH4E-F shown separate)



Expandable Straight Section (FGS-MVAR-F)



Snap-on Cover Installation



12" Cut-in T (FGS-MHIS-F)



Snap-on Cover (FGS-SH4E-F shown installed)

#### Downspouts and Attachments – 4" H x 12" W

An array of 4x12 downspouts and attachments are available to feed fiber from overhead straight sections into fiber optic equipment below. The 4x12 downspout features a 4x6 exit and accepts the 4x6 exit attachments listed below.

#### Ordering Information

Description		Part Number	
	Number of Junctions	Yellow System	Black System
4x12 downspouts			
Downspout	2*	FGS-MDSP-F	FGSB-MDSP-F
Cover for 4x12 downspout	-	FGS-SDSP-F	FGSB-SDSP-F
Insertable downspout	-	FGS-MDSP-F/I	FGSB-MDSP-F/I
Trumpet flare	-	FGS-MTRM-F	FGSB-MTRM-F
Downspout with rear T	3*	FGS-MDRT-F	FGSB-MDRT-F
Island T with spool and factory installed trumpet flare; designed for use over CommScope Next Generation Frame Storage Bay	2	FGS-ISLAND-F	FGSB-ISLAND-F
Island T with recessed dividing spool	3	FGS-ISLAND3-F	FGSB-ISLAND3-F
4x12 attachments			
4x6 dual 2" flex tube attachment		FGS-KT03-B-0F	FGS-KT03-B-0F
4x6 trumpet flare kit; used on 4x12 downspouts		FGS-MTRM-B	FGSB-MTRM-B
4x12 to 4x4 downspout converter; converts downspout opening to accept 4x4 slotted duct	_	FGS-HDSI-F/D	FGS-HDSI-F/D
4x12 to 2x2 downspout converter	-	FGS-HDSI-F/C	FGS-HDSI-F/C
Quad flex tube attachment		FGS-KT03-B4-0F	FGS-KT03-B4-0F
Slotted flex tubes			
2" outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)		FGS-MIDY-XF	FGSB-MIDY-XF

\*An additional junction is needed if drop is to fitting or straight section. This 4x6 junction must be a junction type FGS-MFAW-B, FGSB-MFAW-B.

#### Downspouts and Attachments – 4" H x 12" W



Downspout (FGS-MDSP-F)



Downspout with Rear T (FGS-MDRT-F)



Cover for 4x12 Downspout (FGS-SDSP-F)



Island T (FGS-ISLAND-F)



Trumpet Flare (FGS-MTRM-F)



Island T with Recessed Dividing Spool (FGS-ISLAND3-F shown with 12" Junction, 90° Down Elbow and Trumpet Flare)



4x6 Dual 2" Flex Tube Attachment (FGS-KT03-B-0F) \*hose for reference only



4x6 Trumpet Flare Kit (FGS-MTRM-B shown alone and attached to 4x12 Downspout)



4x12 to 4x4 Downspout Converter (FGS-HDSI-F/D)

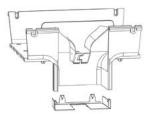


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The FGS-HSDI-F/D attached to both the 4x12 downspout and the 4x4 slotted duct without the use of hardware



Quad flex tube attachment (FGS-KT03-B4-0F) \*hose for reference only



Downspout converter 4x12 to 2x2 (FGS-HDSI-F/C)

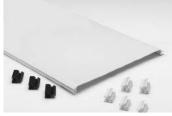
#### Straight Section – 4" H x 12" W

The unique nine-channel design of the 4x12 FiberGuide<sup>®</sup> straight section provides unmatched strength and allows the attachment of support structure without the need to cut or drill holes within the raceway. This ensures that the patch cords will not come in contact with any screw heads or bolts, an important consideration in 4x4, 4x6, and 4x12 systems where higher cable counts apply increased pressure on the patch cords at the bottom of the raceway.

The 4x12 system covers feature a snap-on design. This allows the cover to be used in environments with limited headroom. Two 3-foot cover sections come with each order, making it easy for one person to remove the covers. Each cover kit includes a tether kit. The straight section covers are designed to be placed over the 4x12 downspouts, speeding installation time by reducing the number of measurements and cuts that need to be made.



Horizontal Straight Section (FGS-MSHS-F)



12" Hinged Cover for Horizontal Straight Section (FGS-MSNC-F)

#### Ordering Information



Horizontal Straight Section Cover (FGS-MSSC-F includes two 3' Lengths and Tethering Hardware)



Straight Section Cover in Tethered Position



Expandable Straight Section (FGS-MVAR-F)



Straight Section Cover Attached to Straight Section

Description	Part Number	Part Number		
	Yellow System	Black System		
4x12 straight section				
Horizontal straight section; 6' long, cover sold seperately	FGS-MSHS-F	FGSB-MSHS-F		
Expandable straight section	FGS-MVAR-F	FGSB-MVAR-F		
Slack storage straight section	FGS-MSHS-STOR-F	FGSB-MSHS-STOR-F		
4x12 accessories				
Hinged cover kit for horizontal straight section; includes five mounting hinges and three clips	FGS-MSNC-F	FGSB-MSNC-F		
Snap-on cover kit* for horizontal straight section; includes 3' covers, optional tethering kit	FGS-MSSC-F	FGSB-MSSC-F		
Kit - 10 black capture clips*	FGS-DHCP	FGS-DHCP		
Kit - 10 black capture clips and 10 hinges	FGS-DHHC	FGSB-DHHC		

\*See drawings on page 48 for more detail on how capture clips and hinges are used.

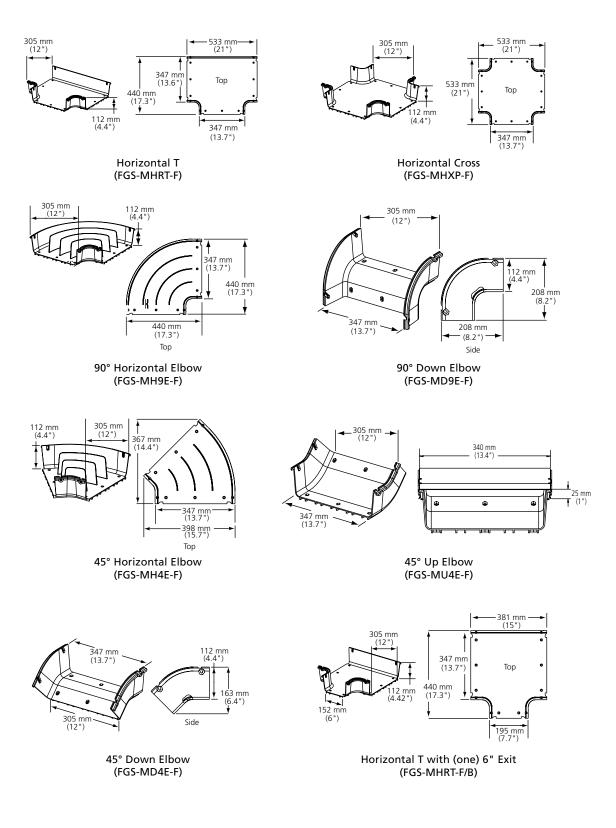
#### Snap-Fit<sup>™</sup> Junction – 4" H x 12" W

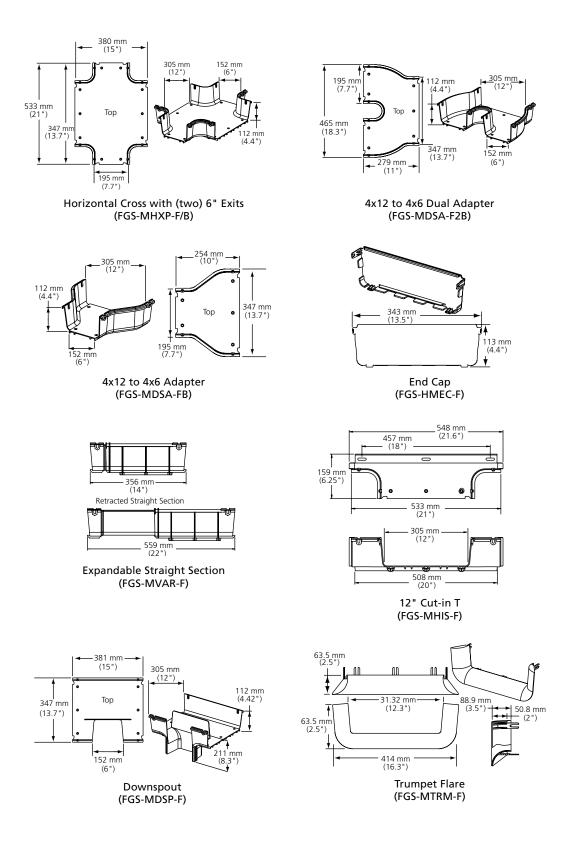
The new Snap-Fit<sup>™</sup> junction is available for the 12-inch FiberGuide<sup>®</sup> system. The Snap-Fit junction is a completely tool-less junction. No additional tools are required for installation or removal. The Snap-Fit junction exhibits superior holding force and accommodates support brackets.

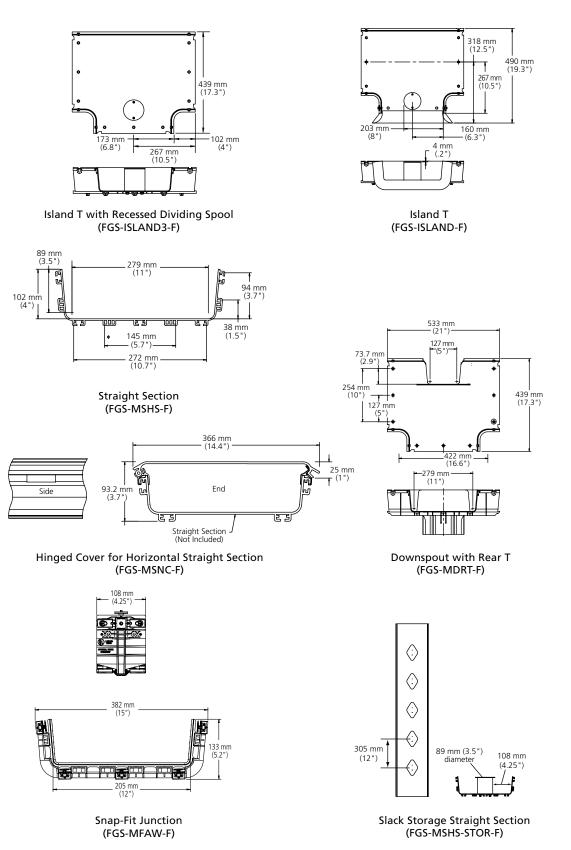


4x12 Snap-Fit Junction (FGS-MFAW-F)

Description	Part Number	
	Yellow System	Black System
4x12 Snap-Fit <sup>™</sup> junction	FGS-MFAW-F	FGSB-MFAW-F







## 4x24 System Fittings – 4" H x 24" W



End Cap (FGS-HMEC-H)



45° Horizontal Elbow (FGS-MH4E-H)



45° Down Elbow (FGSB-MD4E-H)

### Ordering Information



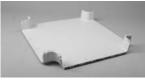
Horizontal Cross with Dual 12" Exits (FGS-MHXP-F/H)



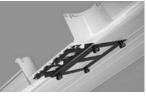
Horizontal T with Single 12" Exit (FGS-MHRT-H/F)



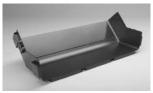
4x24 to 4x12 Adapter (FGSB-MDSA-HF)



Horizontal Cross (FGS-MHXP-H)



12" Cut-in T (FGS-MHIS-F/H)



45° Up Elbow (FGSB-MU4E-H)

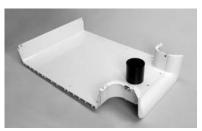
Description	Part Number	
	Yellow System	Black System
x24 fittings		
45° horizontal ebow	FGS-MH4E-H	FGSB-MH4E-H
Horizontal T with single 12" exit	FGS-MHRT-H/F	FGSB-MHRT-H/F
Horizontal T with three 24" exits	FGS-MHRT-H	FGSB-MHRT-H
Horizontal cross	FGS-MHXP-H	FGSB-MHXP-H
Horizontal cross with dual 12" exits	FGS-MHXP-F/H	FGSB-MHXP-F/H
45° up elbow	FGS-MU4E-H	FGSB-MU4E-H
45° down elbow	FGS-MD4E-H	FGSB-MD4E-H
x24 conversions		
12" cut-in T for 4x24*	FGS-MHIS-F/H	FGSB-MHIS-F/H
6" cut-in T for 4x24*	FGS-MHIS-B/H	FGSB-MHIS-B/H
4" cut-in T for 4x24*	FGS-MHIS-A/H	FGSB-MHIS-A/H
4x24 to 4x12 adapter	FGS-MDSA-HF	FGSB-MDSA-HF
4x24 end cap	FGS-HMEC-H	FGS-HMEC-H

\*Designed exclusively for the 4x24" system.

## 4x24 System

### Downspouts – 4" H x 24" W

4x24 downspouts and attachments feed fiber from overhead straight sections into fiber optic equipment below.



Island T with Single 12" Exit (FGS-ISLAND-H/F)



Trumpet Flare (FGS-MTRM-H)

Description	Part Number	
	Yellow System	Black System
Island T with single 12" exit	FGS-ISLAND-H/F	FGSB-ISLAND-H/F
Trumpet flare	FGS-MTRM-H	FGS-MTRM-H

## 4x24 System Straight Section, Snap-Fit™ Junctions and covers – 4" H x 24" W

#### **Straight Section**

The unique double wall channel design of the 4x24 straight section provides exceptional strength and durability for high fiber count applications and allows the standard system to be attached to the support structure without the need to cut or drill any holes within the trough. The six channel design ensures that the patch cords will not come in contact with any screw heads or bolts, an important consideration in 4x24 systems where higher cable counts apply increased pressure on patch cords at the bottom of the trough.



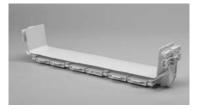
Straight Section (FGS-MSHS-H)

### Ordering Information

Description	Part Number	
	Yellow System Black System	
4x24 straight section; horizontal straight section, 6' long	FGS-MSHS-H	FGSB-MSHS-H

#### **Snap-Fit Junction**

The Snap-Fit<sup>™</sup> Junction assembly is available for the 24-inch FiberGuide<sup>®</sup> System. The Snap-Fit junction is a completely tool-less junction. No additional tools are required for installation or removal. The junction exhibits superior holding force and accommodates support brackets. A warning label is included with each junction kit.



Snap-Fit Junction (FGS-MFAW-H)

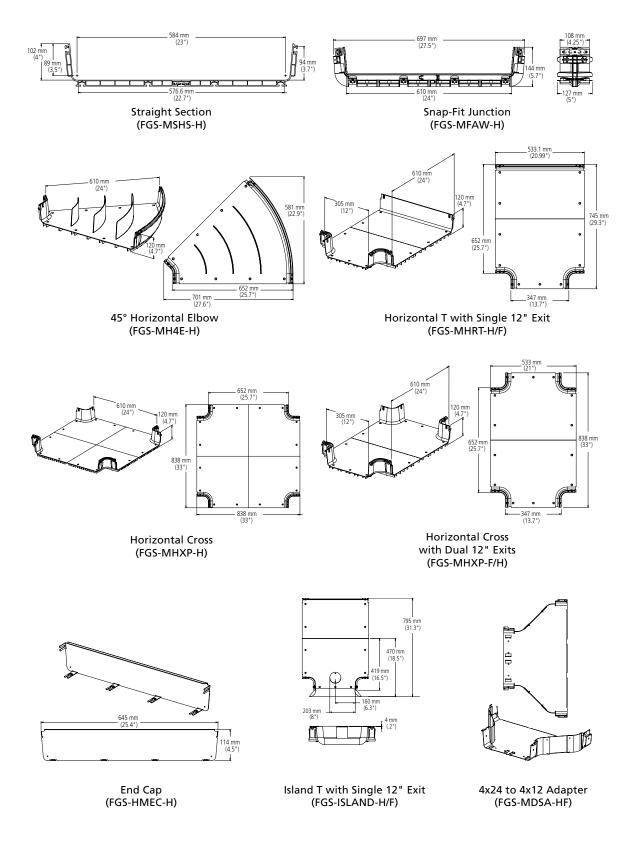
#### Ordering Information

Description	Part Number	
	Yellow System Black System	
4x24 Snap-Fit <sup>™</sup> junction	FGS-MFAW-H	FGSB-MFAW-H

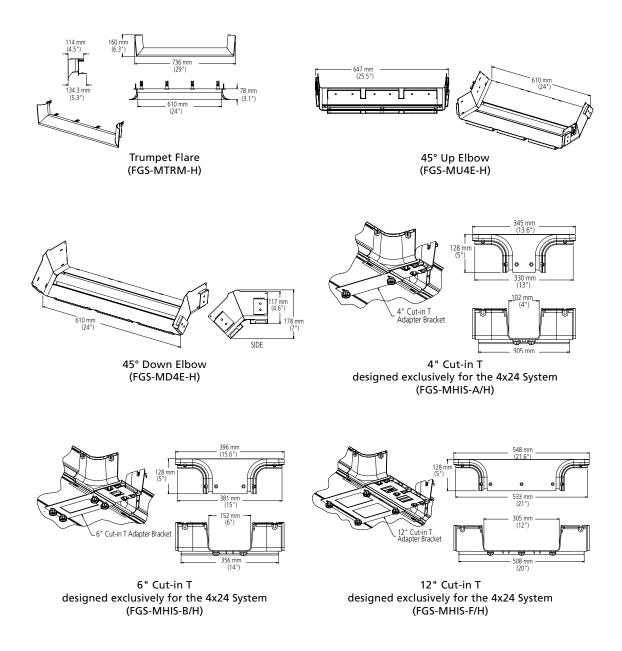
#### **Cover Kits**

Description	Part Number
Cover for 4"x24"x6' straight section - FGS-MSHS-H	FGS-FSFC-H
Cover for 4"x24" horizontal tee with single 12" Exit - FGS-MHRT-H/F	FGS-FHRT-H/F
Cover for 4"x24"horizontal cross with dual 12" Exits - FGS-MHXP-F/H	FGS-FHXP-F/H
Cover for 4"x24"horizontal cross - FGS-MHXP-H	FGS-FHXP-H
Cover for 4"x24" 45° horizontal elbow - FGS-MH4E-H	FGS-FH4E-H
Cover for 4"x24" horizontal tee - FGS-MHRT-H	FGS-FHRT-H
Cover for 4"x24" 45° down elbow - FGS-MD4E-H	FGS-FD4E-H
Cover for 4"x24" to 4"x12" reducer - FGS-MDSA-HF	FGS-FDSA-HF

## 4x24 System



## 4x24 System



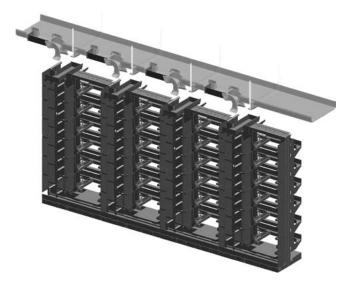
## FiberGuide FlexExit

FiberGuide raceway systems offer the greatest breadth of optical raceway products in the industry. FiberGuide systems add greater flexibility and drive down installation time to ensure a smooth deployment. It is designed to protect and route fiber optic patch cords, multi-fiber cable assemblies and intrafacility fiber cable (IFC) to and from fiber splice enclosures, fiber distribution frames and fiber optic terminal devices.

FiberGuide flex exit was designed to ensure a precise fiber drop from the raceway system into CommScope's NG4access optical distribution frame (ODF) or other high-density frame solutions. It easily installs on the sidewall of the existing raceway system, and promotes 4, 6 or 12 inch fiber drops. The FiberGuide flex exit easily adjusts vertically, side-to-side and forward for precise alignment with the ODF equipment.

#### Benefits

- · Accommodates large fiber drops into high-density optical distributions frames
- · Eliminates the need for custom engineering of raceway
- · Accommodates large 12" and 24" raceway systems
- · Increases flexibility of existing 12 or 24" raceway systems
- · Provides optimal bend radius protection
- $\cdot\;$  Durability built to provide long-lasting protection for your network



Rear Fiber Entry for Cross-Connect Applications



Dual Front Fiber Entry for Interconnect Applications





#### Flex Exit Kit

Includes molded flex exit, sliding expansion plate and misc. support and configuration hardware. Trumpet flare or 90° down elbows must be purchased separately (see below).

#### Cut-in Jig

The cut-in jig provides a protective guide to remove FiberGuide side wall to install the flex exit. The cut-in jig also provides a protection guide for preparing the FiberGuide raceway for cut-in depths applications.

Description	Part Number	Part Number	
Flex Exit Kit	FGS-FLEXEXIT-F/H		
Cut-in Jig	FGS-FLEXJIG-F/H	FGS-FLEXJIG-F/H	
Trumpet Flares (Any size trumpet flares can be attached to either exit side or both si	des of the flex exit and does not rec	uire a snap fit junction kit.)	
4" trumpet flare (no junction required)	FGS-MTRM-A	FGS-MTRM-A	
6" trumpet flare (no junction required)	FGS-MTRM-B	FGS-MTRM-B	
12" trumpet flare (no junction required)	FGS-MTRM-F	FGS-MTRM-F	
<b>90° Down Elbows and Snap Fit Junctions*</b> (Any size 90° down elbow can be attached to either exit side or both sides of the flex exit and requires a snap fit junction kit to secure to the flex exit.)	90° Down Elbow	Snap Fit Junction	
4" 90° down elbow and junction	FGS-MD9E-A	FGS-MFAW-A	
6" 90° down elbow and junction	FGS-MD9E-B	FGS-MFAW-B	
12" 90° down elbow and junction	FGS-MD9E-F	FGS-MFAW-F	

## Express Exit<sup>™</sup> Family

#### For 4x4, 4x6, 4x12, and 4x24 Systems

The patented\* Express Exit<sup>™</sup> family accommodates various raceway environments and applications.

By simply securing an Express Exit to the sidewall of any 4x4, 4x6, 4x12, or 4x24 FiberGuide<sup>®</sup> straight section, jumpers can be permanently or temporarily routed to fiber optic terminal (FOT) equipment below. No cutting of the FiberGuide system is required. Positioning a drop with a member of the Express Exit family greatly simplifies installation, protects the integrity of fibers already present in the raceway, and increases overall flexibility of the raceway system. All Express Exits guarantee 2-inch bend radius protection.



**Express Exit Family** 

Express Exit Style	Height Above Sidewall	Exit Opening		2 mm Patch Cord Capacity	Hinged Rear Cover	Exit Fin Inserts
2-Inch Express Exit	4"	2" x 2"1	150	350	No	No
Low-Profile Express Exit	2 "	2" x 2"1	150	350	No	No
4-Inch Express Exit	4"	4" x 4"2	300	700	Yes	Yes

<sup>1</sup>Accepts all standard 2x2<sup>"</sup> attachments. <sup>2</sup>Accepts all standard 4x4<sup>"</sup> attachments.

#### 4-Inch Express Exit<sup>™</sup>

The 4-Inch Express Exit is designed to distribute and manage medium cable counts to FOT or ODF equipment. It features a 4-inch by 4-inch exit opening to accept all standard 4x4 downspout attachments and includes insertable exit fins and removable rear cable guides for additional cable management.



See page 35 for 4-Inch Express Exit downspout attachments.

4-Inch Express Exit

Description	Part Number	Part Number	
	Yellow System	Black System	
4-inch Express Exit™			
Express Exit; base, base cover, mounting hardware, support bracket, and exit inserts included	FGS-MEXP-E-A/B/F	FGSB-MEXP-E-A/B/F	
4-inch accessories			
Express Exit rear hinged cover kit; one 4x4, 4x6, 4x12 rear hinged cover	FGS-MEXC-E-A/B/F	FGSB-MEXC-E-A/B/F	
Express Exit rear hinged cover for 4x4 raceway	FGS-MEXC-E-A	FGSB-MEXC-E-A	
Express Exit rear hinged cover for 4x6 raceway	FGS-MEXC-E-B	FGSB-MEXC-E-B	
Express Exit rear hinged cover for 4x12 raceway	FGS-MEXC-E-F	FGSB-MEXC-E-F	

## Express Exit<sup>™</sup> Family For 4x4, 4x6, 4x12, and 4x24 Systems

#### 2-Inch Express Exit<sup>™</sup>

The 2-Inch Express Exit accommodates up to 350, 2 mm patch cords. The patch cords are routed from a 4x4, 4x6, 4x12 or 4x24 straight section to FOT equipment below the raceway.



#### Ordering Information

Description	Part Number	
	Yellow System	Black System
2-Inch Express Exit <sup>™</sup> base, base cover, mounting hardware and support bracket included	FGS-MEXP-A/B/F	FGSB-MEXP-A/B/F

#### Low-Profile Express Exit<sup>™</sup>

Designed for low-ceiling or height-restricted environments, the Low-Profile Express Exit features a front-removable cover and extends only 2 inches above the FiberGuide<sup>®</sup> straight section sidewall. It also includes removable rear cable guides for additional cable management.



Low-Profile Express Exit

#### Ordering Information

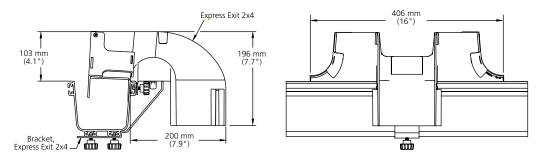
Description	Part Number	
	Yellow System	Black System
Low-Profile Express Exit <sup>™</sup> base, base cover, mounting hardware and support bracket included	FGS-MEXP-LP-A/B/F	FGSB-MEXP-LP-A/B/F

#### Attachments for 2-Inch Express Exit<sup>™</sup> and Low-Profile Express Exit<sup>™</sup>

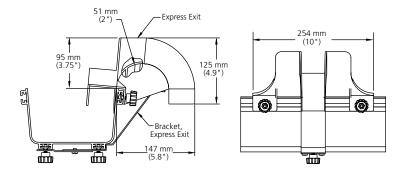
Description	Part Number	
	Yellow System	Black System
2x2 attachments		
2x2 flex tube attachment – 2x2 junction included		
KIT, ADAPTER, 2X2 TO 2" Fiber Hose	FGS-MEX1-C-0F	FGS-MEX1-C-0F
Dual 7/8" flex tube attachment – 2x2 junction included		
KIT, ADPTR, 2" FGS - (2) 7/8" hose	FGS-KT03-CNH	FGS-KT03-CNH
Flex tube clamp kit of 10; attaches 7/8" flex tube to rack	FGS-HSHC-10	FGS-HSHC-10
Slotted flex tubes		
2" outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)	FGS-MIDY-XF	FGSB-MIDY-XF
7/8" outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)	FGS-MFTY-XF	FGSB-MFTY-XF

Express Exit™

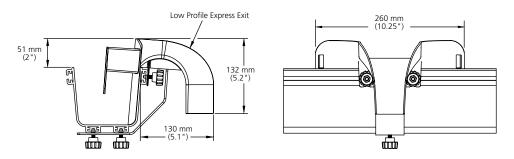
Part Drawings



4-Inch Express Exit (FGS-MEXP-E-A/B/F shown attached to 4x4 straight section)

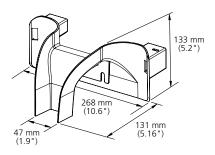


2-Inch Express Exit (FGS-MEXP-A/B/F; fits 4x4, 4x6 and 4x12 systems; shown attached to 4x6 straight section)





(FGS-MEXP-LP-A/B/F; fits 4x4, 4x6 and 4x12 systems; shown attached to 4x4 straight section)



Low-Profile Express Exit Designed Exclusively for 2x6 System (FGS-MEXP-LP-G shown attached to 2x6 straight section)

### FlexVertical kits

FlexVertical is a vertical routing kit that allows easy and safe routing of fiber cables & cords from the horizontal tray to the cabinet or rack. FlexVertical consists of configurable components that snap together and install onto an existing FiberGuide exit (such as an ExpressExit or traditional downspout).

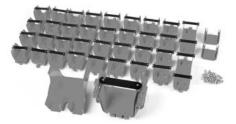
- More flexibility: the rotation is controlled within 1 degree increments with a lock-in mechanism for stability and to avoid unwanted movement.
- **Tool-less installation (no hardware):** FlexVertical connects to the exit via a "snap-on" mechanism requiring minimal hardware making it easy to install. Easier access to patchcords is provided via an easy latching mechanism.
- $\cdot$   $\,$  New, trumpet style exit to the vertical space
- The FlexVertical kits easily mount to a rack or inside a cabinet with simple mounting hardware, (ideal for in-cabinet solutions).
- Inside the FlexVertical raceway, fiber is well protected with minimal risk of over-bending or pinching and is easily accessible.

### Ordering Information

Description	Part Number
FiberGuide FLEXV KIT, 2 in x 2 in, 4 ft.	FGS-FLEXV-4F-C
FiberGuide Dual FLEXV Kit, 4 in x 4 in to dual 2 in x 2 in, 4 ft.	FGS-FLEXV-4F-A2C
FiberGuide Universal Aapter Kit, 2 in x 2 in, 7ft.	FGS-FLEXVAD-7F-C



FGS-FLEXV-4F-C



FGS-FLEXV-4F-A2C



FGS-FLEXVAD-7F-C

Vertical Solid and Slotted Duct Kits now with Hinged Covers



2x2 Solid Vertical Duct Kit (FGS-KTW1-JN) (cover closed)



2x4 Solid Vertical Duct Kit (FGS-KTW2-RN) (cover open)



4x4 Slotted Vertical Duct Kit (FGS-KTW2-J) Shown with cover removed



90° Inside Elbow (FGS-V9E44)



4-Inch Vertical to 2x2 Trumpet Fitting (FGS-TRMP42)

#### **Applications**



2x2 Slotted Duct with 2-Inch Exit Trumpet (FGS-KTW1-JA with FGS-VQE22 attached)



2-Inch Exit Trumpet

(FGS-VQE22)

4x4 Slotted Duct with 4-Inch Exit Trumpet (FGS-KTW2-K with FGS-VQE44 attached)

4-Inch Exit Trumpet (FGS-VQE44)



4x4 Modified Trumpet Flare Kit (FGS-MTRM-D)



2x4 Trumpet Flair Kit (FGS-MTRM-DS)



4x4 Slotted Duct with Entrance Trumpet Flare at top and 4-Inch to 2x2 Exit Trumpet (FGS-KTW2-K with FGS-MTRM-D and FGS-TRMP42 attached)



2x2 Slotted Duct with 2-Inch Exit Trumpet in horizontal application - can be attached to the 4-Inch to 2x2 Exit Trumpet (FGS-KTW1-JA with FGS-VQE22 attached)

### 2" and 4" Vertical Solid and Slotted Duct Kits and Components

### Ordering Information

Description	Part Number	
	Yellow System	Black System
x1 System (1" wide x 2" deep)		
2x1, vertical slotted duct kit (4" slot spacing), pop-off covers	FGS-KTW1-E	FGSB-KTW1-E
2x1, vertical solid duct kit, pop-off covers	FGS-KTW4-E	FGSB-KTW4-E
2x2 to 2x1 conversion piece (order when converting from 2x2 to 2x1 system)	FGS-ACC063	FGSB-ACC063
2X2 System (2" wide x 2" deep)		
2x2, 6' vertical duct kit*, slotted (1.5" slot spacing) hinged cover	FGS-KTW1-JA	FGSB-KTW1-JA
2x2, 6' vertical duct kit*, slotted (4" slot spacing) hinged cover	FGS-KTW1-JB	FGSB-KTW1-JB
2x2, 6' vertical duct kit*, solid, hinged cover	FGS-KTW1-JN	FGSB-KTW1-JN
2x4 system (2" wide x 4" deep)		
2x4, 6' vertical duct kit*, slotted (2" slot spacing) hinged cover	FGS-KTW2-R	FGSB-KTW2-R
2x4, 6' vertical duct kit*, solid, hinged cover	FGS-KTW2-RN	FGSB-KTW2-RN
4x4 system (4" wide x 4" deep)		
4x4, 6' vertical duct kit*, slotted (2" slot spacing) hinged cover	FGS-KTW2-K	FGSB-KTW2-K
4x4, 6' vertical duct kit*, slotted (4" slot spacing) hinged cover	FGS-KTW2-J	FGSB-KTW2-J
4x4, 6' vertical duct kit*, solid, hinged cover	FGS-KTW2-JN	FGSB-KTW2-JN
lx2 system (4" wide x 2" deep)		
4x2, 6' vertical duct kit*, slotted (1.5" slot spacing) hinged cover	FGS-KTW2-T	FGSB-KTW2-T
4x2, 6' vertical duct kit*, solid, hinged cover	FGS-KTW2-TN	FGSB-KTW2-TN
rumpets and elbows		
4" deep vertical to 2x2 trumpet to horizontal fitting	FGS-TRMP42	FGSB-TRMP42
4" deep vertical to 4x4 trumpet to horizontal fitting	FGS-TRMP44	FGSB-TRMP44
4" exit to horizontal trumpet for vertical channel, 1" bend radius	FGS-VQE44	FGS-VQE44
2" exit to horizontal trumpet for vertical channel, 1" bend radius	FGS-VQE22	FGS-VQE22
2x4 entrance trumpet flare kit	FGS-MTRM-DS	FGSB-MTRM-DS
4x4 entrance trumpet flare kit	FGS-MTRM-D	FGSB-MTRM-D
4" deep 90° inside elbow	FGS-V9E44	FGSB-V9E44
Components		
2x2 vertical slotted duct (1.5" slot spacing); 6' Long	FGS-MSHS-CB	FGSB-MSHS-CB
Hinged cover for 2x2 duct; 6' long	FGS-MSHC-J	FGSB-MSHC-J
2x4 slotted duct, 2" slot spacing	FGS-MSHS-K	FGSB-MSHS-K
2x4 solid duct, vertical	FGS-MSHS-KN	FGSB-MSHS-KN
4x4 slotted duct, 2" slot spacing	FGS-MSHS-KT	FGSB-MSHS-KT
4" cover - hinged	FGS-MSHC-K	FGSB-MSHC-K
4x4 slotted duct, 4" slot spacing	FGS-MSHS-KF	FGSB-MSHS-KF
4x4 solid duct, vertical	FGS-MSHS-KS	FGSB-MSHS-KS
nd caps		
4x4	FGS-HMEC-D	FGSB-HMEC-D
4x2	FGS-HMEC-E	FGSB-HMEC-E
2x2	FGS-HMEC-CA	FGSB-HMEC-CA
2x4	FGS-HMEC-24	FGSB-HMEC-24

\* Universal mounting brackets included in kit.

2"x 2" Accessories



2"x 2" Vertical Duct Universal Mounting Brackets (FGS-HWMB-C)

Description	Part Number	Part Number	
	Yellow System	Black System	
2x1 System (1" wide x 2" deep)			
2x2 vertical slotted duct universal mounting bracket; kit of 5 – typically five brackets used for every 6' section of 2x2 vertical duct	FGS-HWMB-C	FGS-HWMB-C	
2x2 adapter junction kit; used to join new 2x2 Vertical duct with hinged cover to standard 2x2 FiberGuide® profile	FGS-MJWRM-C	FGSB-MJWRM-C	

4"x 4" and 4"x 2" Accessories



4"x 4" Vertical Duct Mounting Bracket (FGS-HWMB-D)

Description	Part Number	Part Number		
	Yellow System	Black System		
2x1 System (1" wide x 2" deep)				
4x4 vertical slotted duct mounting bracket; typically three brackets used for every 6' section of 4x4 vertical duct	FGS-HWMB-D	FGS-HWMB-D		
4x2 vertical slotted duct mounting bracket; kit of 10	FGS-HKW2-E	FGS-HKW2-E		
4x2 vertical slotted duct cap	FGS-HMEC-E	FGS-HMEC-E		
4x4 adapter junction kit; used to join new 4x4 vertical duct with hinged cover to standard 4x4 FiberGuide® profile	FGS-MJWR-D	FGSB-MJWR-D		

### 2x2 System Support Kits Direct Support Kits



Ladder Rack Support Kit (FGS-HLR2-C shown alone and attached to ladder rack)



Bay Top Support Short L Bracket Kit (FGS-BTBS-C)



Bay Top Support Long L Bracket Kit (FGS-BTBL-C)



Digital Cableway Support Kit (FGS-HDCB-C)



Under Floor Support Kit (FGS-HUFB-C shown alone and attached to .62" round pipe)

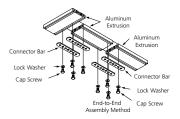
### Ordering Information

Description	Part Number
2x2 direct support kits	
Ladder rack support kit; for use with 3.5" (maximum) ladder rack	FGS-HLR2-C
Bay top support short L bracket kit	FGS-BTBS-C
Bay top support long L bracket kit	FGS-BTBL-C
Digital cableway support kit	FGS-HDCB-C
Under floor support kit; can be secured to .62" to 1.2" round or square post	FGS-HUFB-C

Note: Recommended spacing of direct support kits is every 2' to 3'. Custom brackets are available, please contact CommScope

# 2x2 System Support Kits

## Aluminum Track Support Kit



Aluminum Track Support Kit (FGS-HASK-C)



New Threaded Rod Bracket Kit (FGS-HTR2-XX shown alone and attached to aluminum track support)

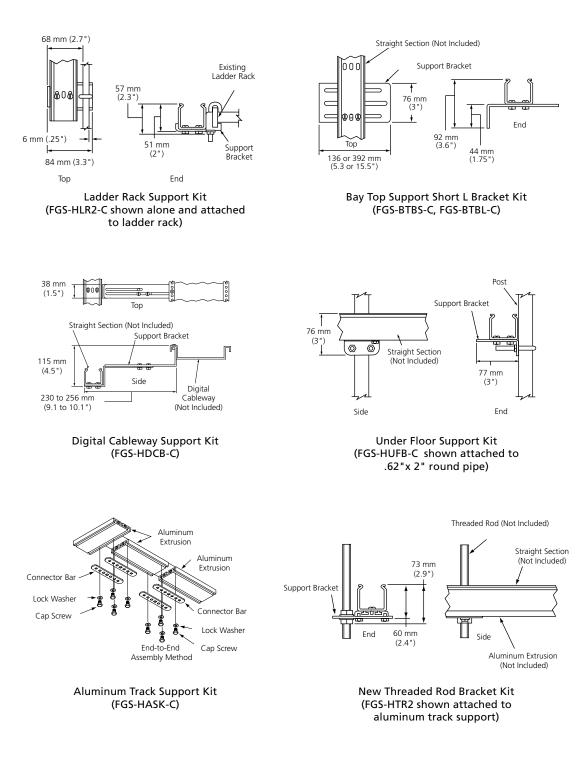


Existing Threaded Rod Bracket Kit (FGS-HTR2-2-5/8)

Description	Part Number
<b>2x2 aluminum track support kit;</b> 6' long, track connecting bar kit included – aluminum track is self-supporting for spans up to 6'	FGS-HASK-C
2x2 bracket kits; used to support aluminum track kits	
New threaded rod bracket kit; 5/8"	FGS-HTR2-5/8
New threaded rod bracket kit; 1/2"	FGS-HTR2-1/2
Existing threaded rod bracket kit; 5/8" for up to two 2x2 FiberGuide® Systems	FGS-HTR2-2-5/8
Track connecting bar kit; used to join two aluminum track kits; order only if extras are needed	FGS-HAEJ-C

## 2x2 System Support Kits

#### Support Kit Drawings



### 2x6, 4x4, 4x6 System Support Kits



Ladder Rack Cantilever Support Bracket Kit (FGS-HDLB-4)



Existing Threaded Rod Bracket Kit (FGS-HETR-XX shown alone and attached to threaded rod)



Top Support C-Bracket Kit (FGS-HNTS-XX)



L Bay Support Bracket Kit (FGS-HLBK shown alone and attached to 4x4 FiberGuide)



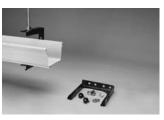
Modified New Threaded Rod Bracket Kit (FGS-HNTR-5/8-A shown alone and attached to threaded rod)



Modified Existing Threaded Rod Bracket Kit (FGS-HETR-5/8-A shown alone and attached to threaded rod)



New Threaded Rod Bracket kit (FGS-HNTR-XX shown alone and attached to threaded rod)



Top Support Low Profile C-bracket Kit (FGS-HNTS-XX-LP)



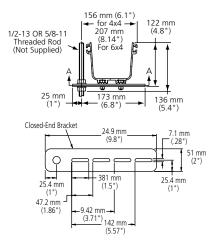
Center Support Bracket Kit (FGS-HTUB-XX)

Description	Part Number
2x6, 4x4, 4x6 system support kits	
Ladder rack cantilever support bracket kit	FGS-HDLB-4
L bay support bracket kit	FGS-HLBK
Ladder rack clip	FGS-HLDR-V
New threaded rod bracket kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm, 18 mm)	FGS-HNTR-XX
Existing threaded rod bracket kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm)	FGS-HETR-XX
Modified new threaded rod bracket kit; 5/8"	FGS-HNTR-5/8-A
Top support low-profile C-bracket kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm)	FGS-HNTS-XX-LP
Top support C-bracket kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm)	FGS-HNTS-XX
Modified existing threaded rod bracket kit; 5/8"	FGS-HETR-5/8-A
Center support bracket kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm, 20 mm)	FGS-HTUB-XX
Digital cableway bracket kit; 305 mm (12")	FGS-HCBL-12
Digital cableway bracket kit; 381 mm (15")	FGS-HCBL-15
Ladder rack center support bracket kit	FGS-HNLR-AB
OMX frame center support bracket kit; 16 mm (.63")	FGS-HOMX-16MM
Under floor support bracket kit	FGS-HUFB-A

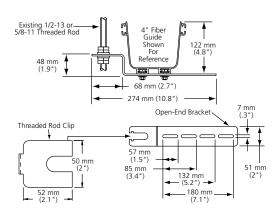
Custom brackets are available, please contact CommScope.

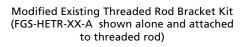
# 2x6, 4x4, and 4x6 System Support Kits

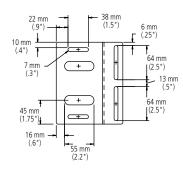
Support Kit Drawings

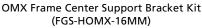


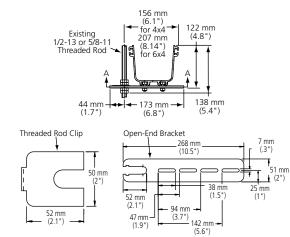
New Threaded Rod Bracket Kit (FGS-HNTR-XX shown alone and attached to threaded rod)



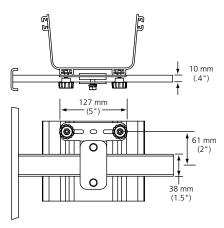




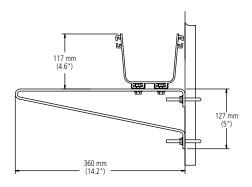




Existing Threaded Rod Bracket Kit (FGS-HETR-XX shown alone and attached to threaded rod)



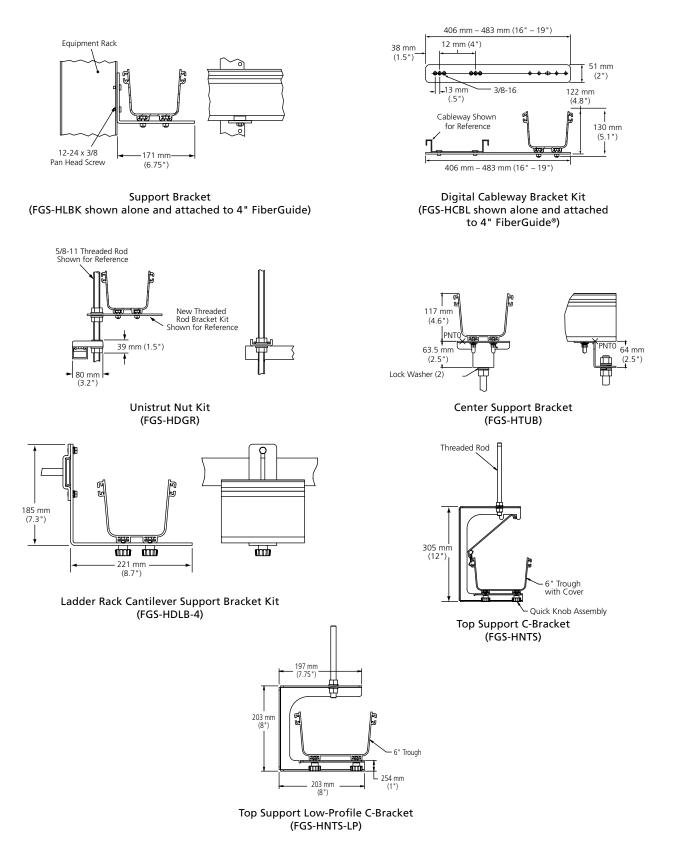
Ladder Rack Center Support Bracket Kit (FGS-HNLR-AB)



Under Floor Support Bracket Kit (FGS-HUFB-A)

## 2x6, 4x4, and 4x6 System Support Kits

Support Kit Drawings



### 4x12 System Support Kits



Existing Ladder Rack Center Support Bracket Kit (FGS-HETP-F-XX)



Top Support Low-Profile Threaded Rod Bracket Kit (FGS-HNTS-F-XX-LP shown alone and attached to threaded rod)



Trapeze Bracket Kit (FGS-HNTP-F-XX)



Top Support Threa**ded** Rod Bracket Kit (FGS-HNTS-F-XX)



Center Support Threaded Rod Bracket Kit (FGS-HTUB-F-XX shown alone and attached to threaded rod)



New Threaded Rod Bracket Kit (FGS-HNTR-F-XX)

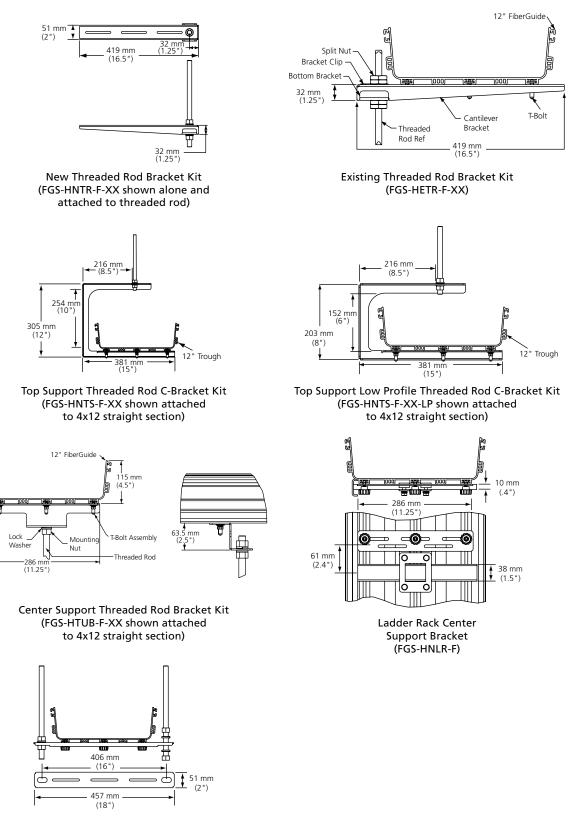


Existing Threaded Rod Bracket Kit (FGS-HETR-F-XX)

Description	Part Number
4x12 system support kits	
New ladder rack center support bracket kit	FGS-HNLR-F
Existing ladder rack center support bracket kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm)	FGS-HETP-F-XX
Trapeze bracket kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm)	FGS-HNTP-F-XX
Center support threaded rod bracket kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm, 20 mm)	FGS-HTUB-F-XX
Top support low-profile threaded rod C-bracket kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm)	FGS-HNTS-F-XX-LP
Top support threaded rod C-bracket kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm)	FGS-HNTS-F-XX
New threaded rod bracket kit; (XX = size: 5/8", 14 mm, 16 mm, 18 mm)	FGS-HNTR-F-XX
Existing threaded rod bracket kit; (XX = size: 5/8", 14 mm, 16 mm)	FGS-HETR-F-XX

## 4x12 System Support Kits

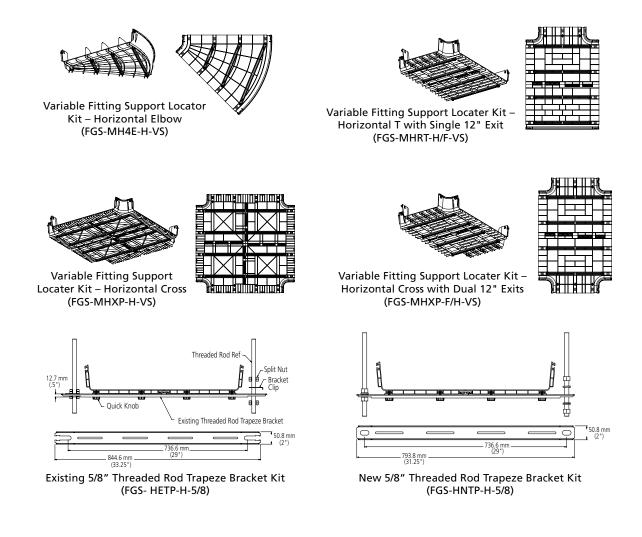
Support Kit Drawings



Trapeze Bracket Kit (FGS-HNTP-F)

5

## 4x24 System Support Kits



Description	Part Number
4x24 System Support Kits	
Variable fitting support locater kit for;	
Horizontal elbow	FGS-MH4E-H-VS
Horizontal T with single 12" exit	FGS-MHRT-H/F-VS
Horizontal cross	FGS-MHXP-H-VS
Horizontal cross with dual 12" exits	FGS-MHXP-F/H-VS
Threaded rod trapeze bracket kit for;	
Existing; 5/8"	FGS-HETP-H-5/8
New; 5/8"	FGS-HNTP-H-5/8

### Support Kit Accessories 2x2, 2x6, 4x4, 4x6, 4x12, 4x24 Support Kit Accessories



Threaded Rod (FGS-HTHR)



Ladder Rack Bracket Kit FGS-HLDR shown alone and attached to ladder rack



Auxiliary Framing Kit (FGS-HFCK)



Adjustable Angle Support Brackets (FGS-HASB)



Unistrut Nut Kit (FGS-HDGR)

Description	Part Number
Threaded rod	
5/8" - 11 x 12"	FGS-HTHR-5/8-12
5/8" - 11 x 30"	FGS-HTHR-5/8-30
5/8" - 11 x 72"	FGS-HTHR-5/8-72
1/2" - 13 x 12"	FGS-HTHR-1/2-12
1/2" - 13 x 30"	FGS-HTHR-1/2-30
1/2" - 13 x 72"	FGS-HTHR-1/2-72
<b>Threaded rod;</b> (XX = size: 12 mm, 14 mm, 16 mm) (NN = length: 30 cm, 75 cm)	FGS-HTHR-XX-NN
Auxiliary framing kit	
2x 9/16" x 3/16" for 5/8" rod	FGS-HFCK-5/8
2x 9/16" x 3/16" for 1/2" rod	FGS-HFCK-1/2
Adjustable angle support brackets with 5/8" threaded rod	
11 x 36" rod	FGS-HASB-5/8-36
11 x 48" rod	FGS-HASB-5/8-48
Adjustable angle support brackets with 1/2" threaded rod	
13 x 36" rod	FGS-HASB-1/2-36
13 x 48" rod	FGS-HASB-1/2-48
Ladder rack bracket kit for radiused ladder racking	FGS-HLDR-A
Ladder rack bracket kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm)	FGS-HLDR-XX
Unistrut nut kit; 5/8"	FGS-HDGR
Frame mounting hardware kit; (XX = size: 1/2", 5/8", 12 mm, 14 mm, 16 mm)	FGS-HKFM-XX

### System Accessories



2" Outer Diameter Slotted Flex Tube (FGS-MIDY)



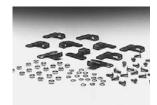
7/8" Outer Diameter Slotted Flex Tube (FGS-MFTY)



Single Hinges for 4" and 6" Covers (FGS-HHGK)



Retainer Rings (FGS-HFRR-10)



Flex Tube Clamp (FGS-HHEC-10)



Retrofit Fin – Kit of 10 (FGS-MFIN-10)



Storage Spools (FGS-MSTOR-A/B/F)



Quick Knobs - Kit of 10 (FGS-KQKB)



Shown Installed (FGS-MSTOR-A/B/F)



Mitre Box and Saw (FGS-MKIT-ABF)

## System Accessories

Description	Part Number	
	Yellow System	Black System
Trough cover clip kit	FGS-KT09	FGS-KT09
Slotted and solid flex tubes		
2" outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)	FGS-MIDY-XF	FGSB-MIDY-XF
1″ outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)	FGS-MLDY-XF	FGSB-MLDY-XF
7/8" outer diameter slotted flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)	FGS-MFTY-XF	FGSB-MFTY-XF
2" outer diameter solid flex tube; (X = length in feet: 5, 10, 15, 20, 25, 50, 75, 100, 125, 150, 200, 250)	FGS-MISY-XF	FGSB-MISY-XF
Hinges; single hinges for 4x4 and 4x6 covers	FGS-HHGK	
Retainer rings; kit of 10 – used to retain fibers in 2" flex tube	FGS-HFRR-10	
Description	Part Number	
Flex tube clamp; kit of 10 – used to secure 2" flex tube to 2" vertical ducts	FGS-HHEC-10	
Storage spools for dark fiber jumpers; kit of 2	FGS-MSTOR-A/B/F	
Mitre box with saw		
Used to cut 2x2, 4x4, 4x6, and 4x12 FiberGuide® straight sections to size	FGS-MKIT-ABF	
Used to cut 2x2, 4x4, and 4x6 FiberGuide straight sections to size	FGS-MKIT	
Used to cut 4x24 FiberGuide straight sections to size	FGS-MKIT-H	
Saw; 26" miter, FGS	FGS-MSAW26	
IFC tie down for;		
4x4 system	FGS-HIFC-A	
4x6 system	FGS-HIFC-B	
4x12 system	FGS-HIFC-F	
Quick knobs with T-bolt and cover slip; kit of 10	FGS-KQKB	
Reverse junction adapter kit for 4x4, 4x6, and 4x12 systems; used to connect two parts rotated 180°	FGS-HRJA-A/B/F	
Retrofit fin; kit of 10	FGS-MFIN-10	

Notes	

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