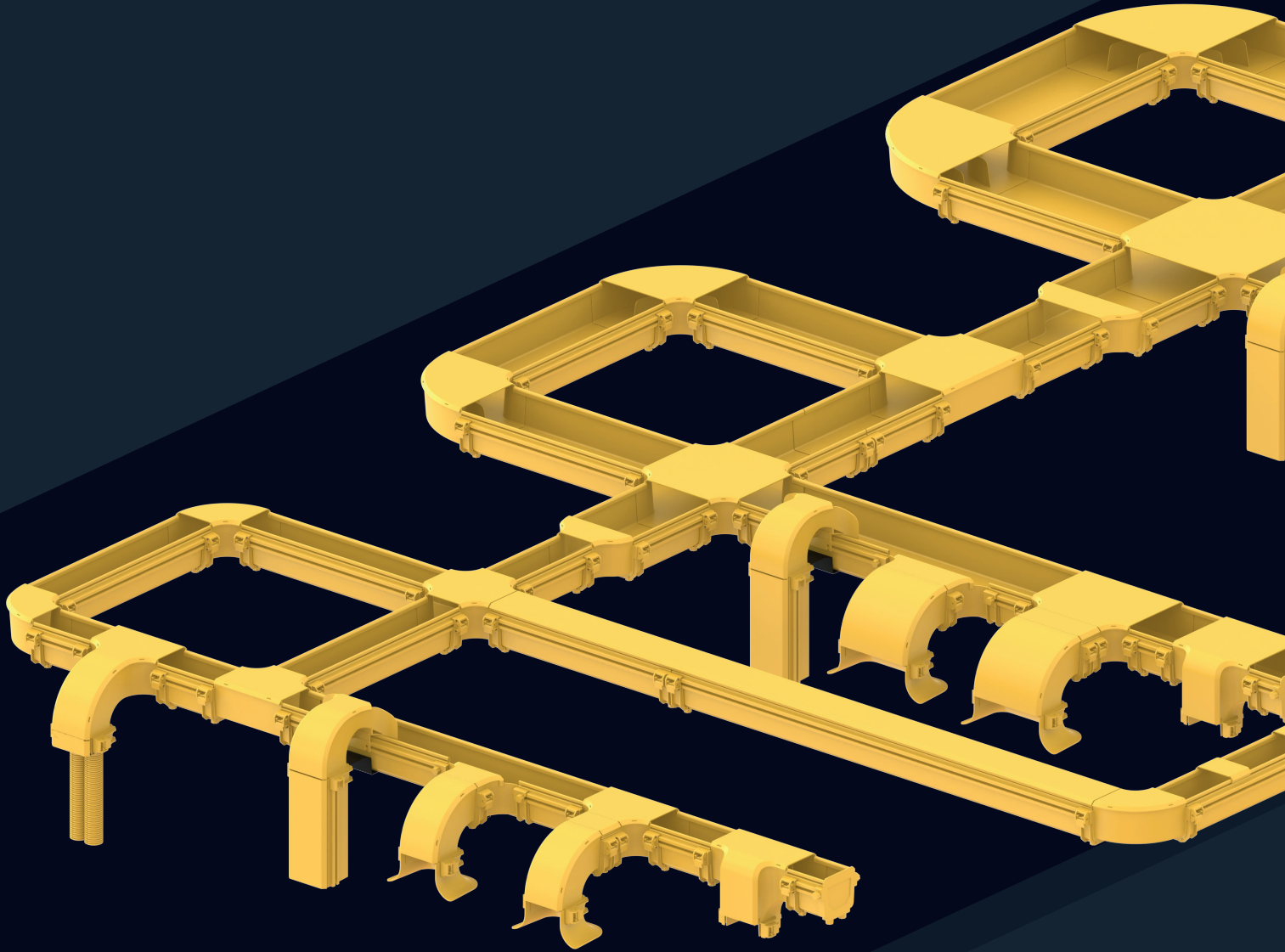




DATA CENTER  
SOLUTIONS



# FDS FIBER DUCTING SOLUTIONS



Founded in 2003, SAMP Technology offers cutting-edge products and services in the fields of telecommunication infrastructure and data center by producing in line with the expectations and needs of its customers.

With more than 20 years of experience, SAMP Technology has become one of the important suppliers of Europe in terms of capacity, technology and innovation by continuously investing in production, technology, R&D and people.

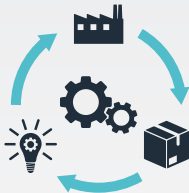
SAMP Teknoloji produces high performance fiber optic cables, fiber optic cable assemblies, data center infrastructure products and structured cabling solutions in its two factories located in the Gosb/Gebze industrial zone.

SAMP also has a ministry-approved research and development center since 2017.



### **20+ Years' Experience**

With more than 200 employees and 2 factories, we have achieved several significant projects in telecommunication fiber optic infrastructure.



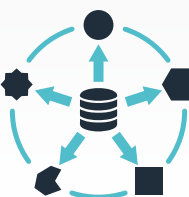
### **World Class Production**

With systematic and scientific methods, we always focus on reaching the highest quality in our fiber optic cable production and assembly lines.



### **Connecting Continents**

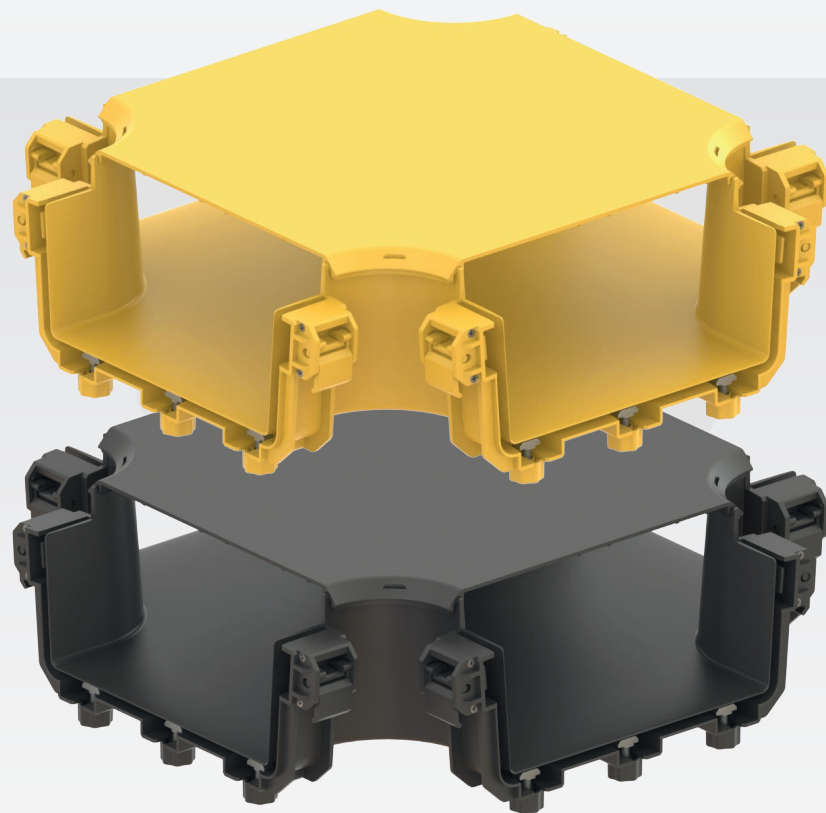
An advantageous shipping location, at the intersection of Asia, Europe and the Middle-East.



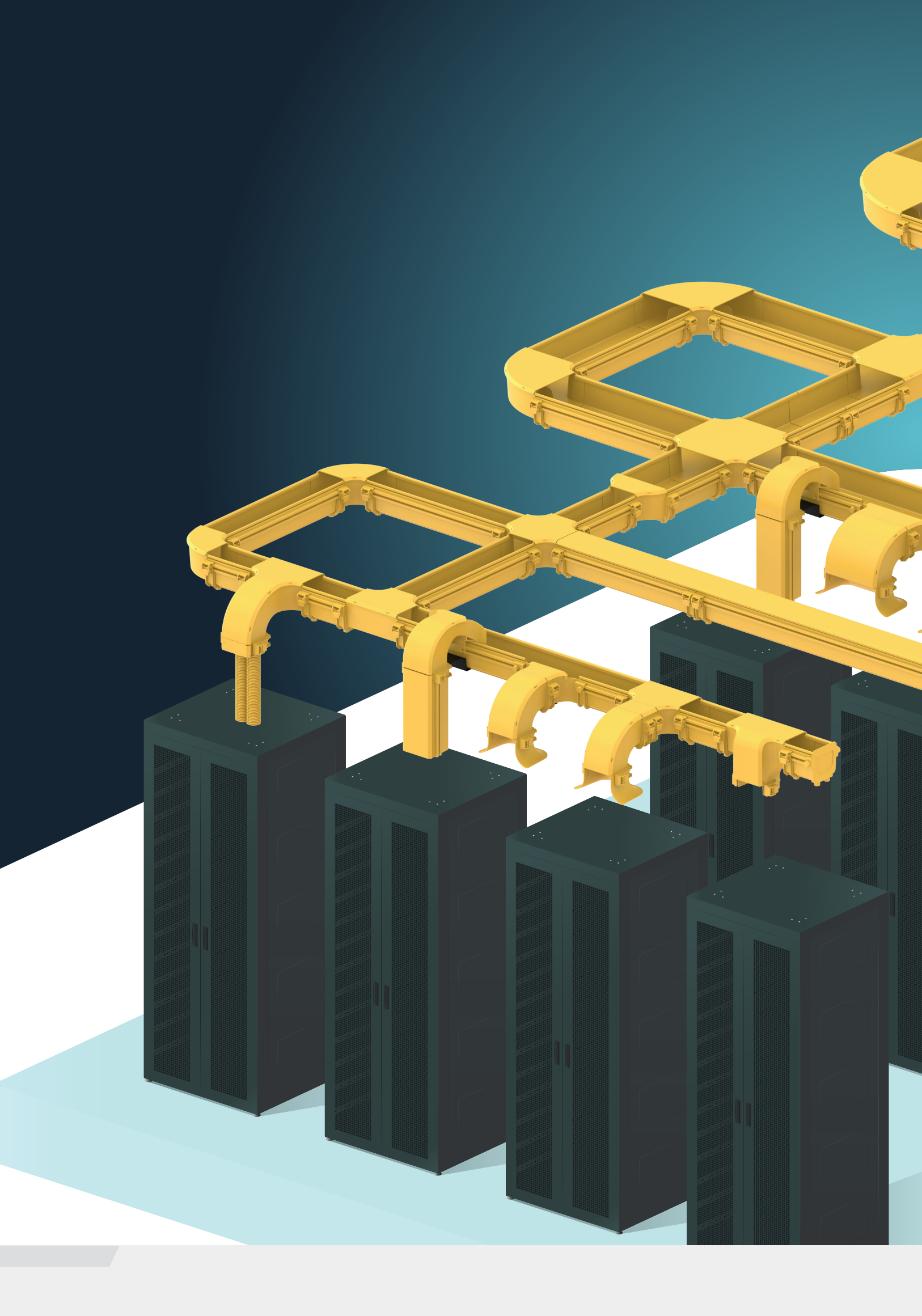
### **Innovative Solutions**

We are passionate about responding to customer demand and keeping pace with the ever-evolving telecommunication and fiber optic technologies.

# Protecting and Routing Fiber Cable Infrastructure



**FDS**  
**FIBER DUCTING SOLUTIONS**







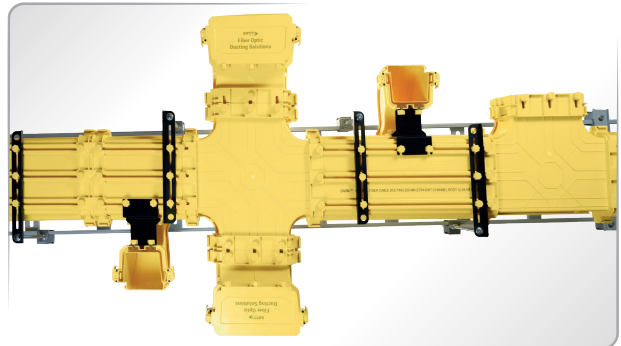
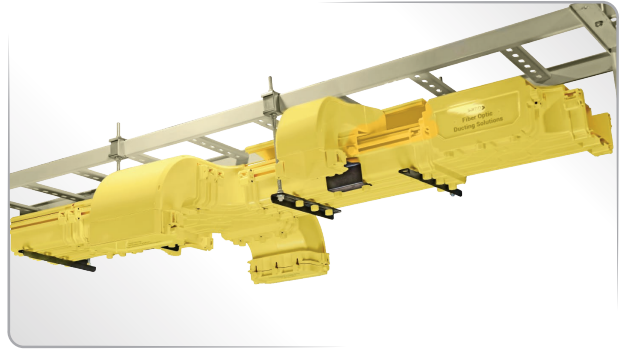
**NEW GENERATION  
PLASTIC CABLE TRAYS  
FOR DATA CENTERS**

# Fiber Ducting Solutions

SAMM Fiber Ducting Solution (FDS) is a fully enclosed ducting system that segregates, routes, and protects fiber optic cables and jumpers from building entry point to fiber termination and distribution equipment.

With the ducting system, fiber cables are easily traced and accessed through the convenient fully wrap-around, lay-in design of the ducting channels. Straight channels and various curved fittings are specifically designed to prevent fibers from violating a 30mm minimum bending radius requirement, and they also protect fibers from snagging, crimping, and stress.

The ducting system's modular design and extensive mounting kit selection enable project engineers to meet cable capacity requirements and future expansion needs using existing superstructure or cable and equipment racking. The flexibility and simplicity of our ducting system ensures cost-effective installations for new or existing cable routes in Central Offices, CEVs, Head-ends, Remote Offices, Data Centers, and Wiring Closets.



## Material & Product Compliance

- **Rohs Compliancy** : Compliant acc. to Rohs Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU
- **Flame Retardancy**: UL 94V-0 Material Rating for Flammability
- **Halogen Content** : Halogenfree in accordance with IEC 61249-2-21

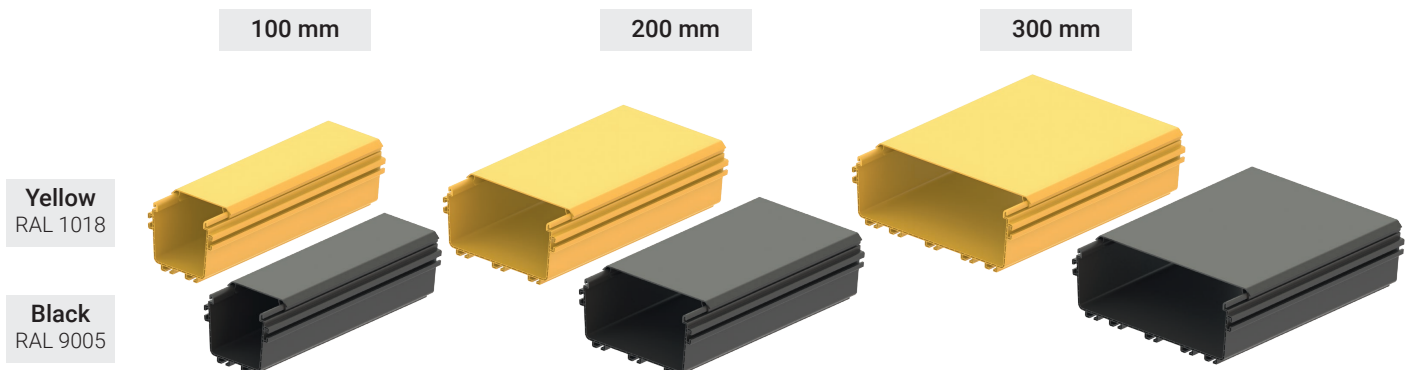
## Technical Features

- Integrated coupling and mounting design
- Tool-less installation for all components and covers
- Zero Downtime. Fast and Easy Installations
- Robust and strong product design
- Versatile and various mounting kits

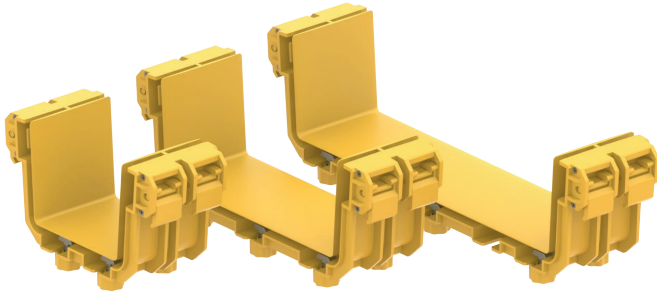
## Material

- All Channels&Covers : PC+ABS-FR
  - All Connection Accessories&Covers : PC+ABS-FR
- \*\*No FDS Ducting Solution parts contain PVC.*

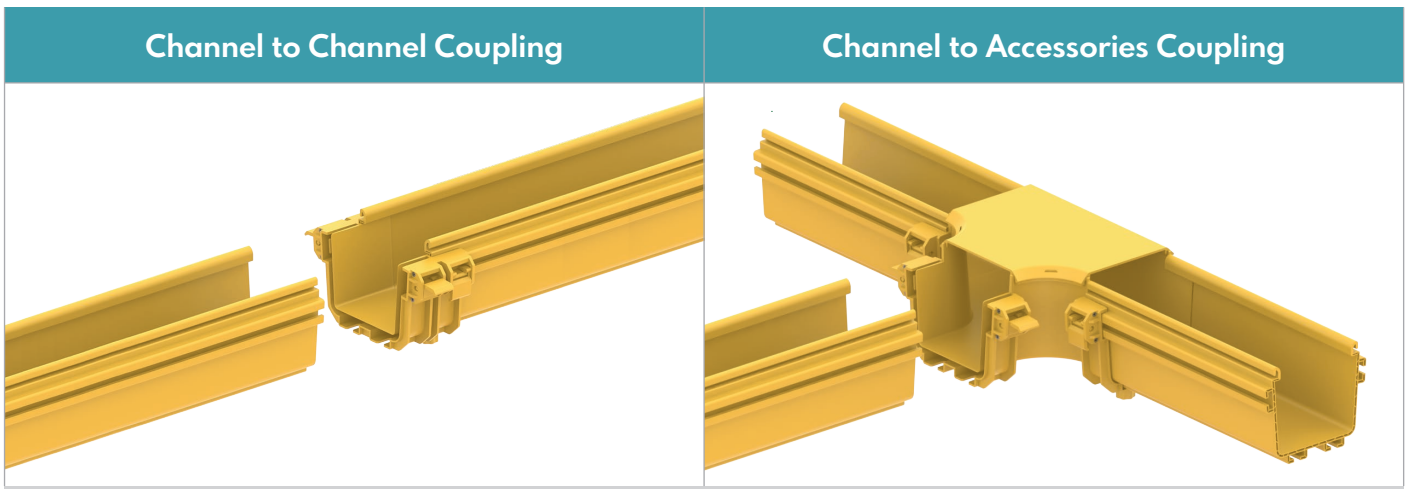
## Available Size and Color Options



# Unique and Innovative Toolless Connection System Integrated Into The Entire Structure



- No Drilling And No Punching
- No Need Additional Joiners
- No Need Any Tools
- Effortless and Time Saving
- Secure, Safe and Reusable
- Patent Pending Mounting Clamp Design

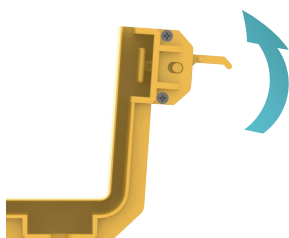


The entire FDS System installation and component connections have a special design that does not require drilling and grooving.

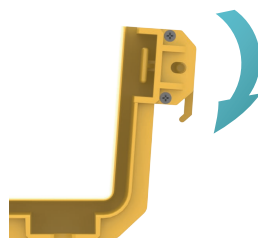
This innovative and tool-free assembly method allows safe, fast and easy installation of all channels and accessories used in the system without the need for additional parts.

There is no need for additional attachments for the connection of duct structures with accessories. The unique coupling structure integrated into the accessories provides a significant advantage in terms of total investment costs in installations as it does not require any additional attachment parts.

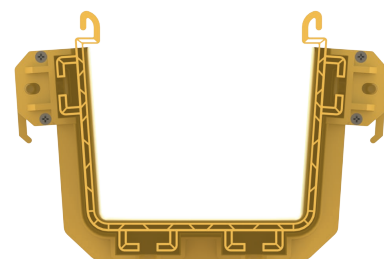
Clamp Function Unlocked



Clamp Function Locked



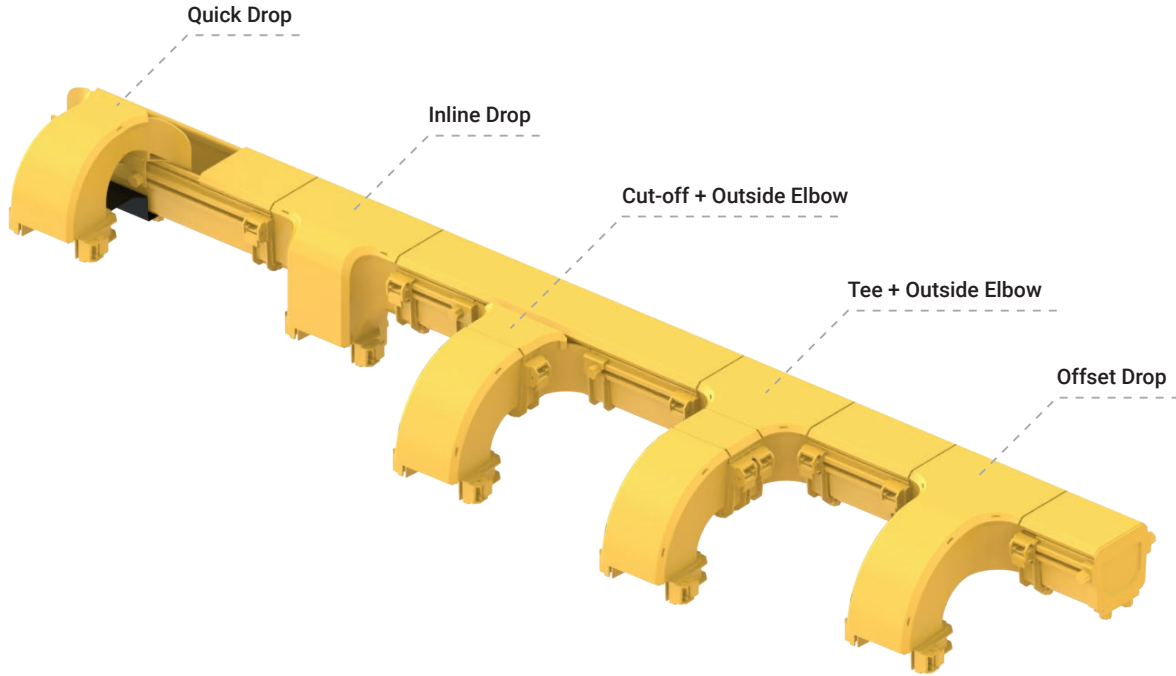
Channel Clamping



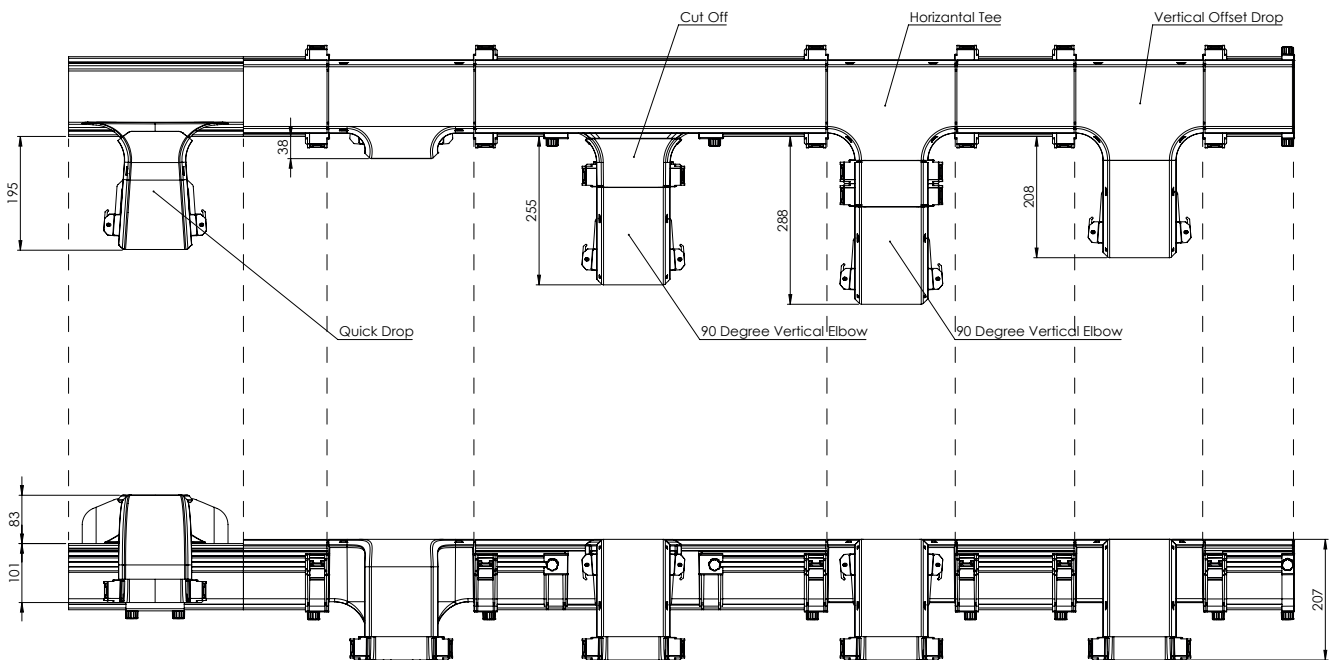
## Application Engineering Notes

### Off-Set Dimensions for Downspout Outlet Frames

Drop Outlet accessories can be positioned anywhere on the channel. Horizontal and vertical offset distances should be taken into account when deciding to the horizontal location of the suspension or mounting systems during design. Offset distances are shown below for the size of 100 mm. These offset distances are also the same for 200mm and 300mm sizes.



Top View

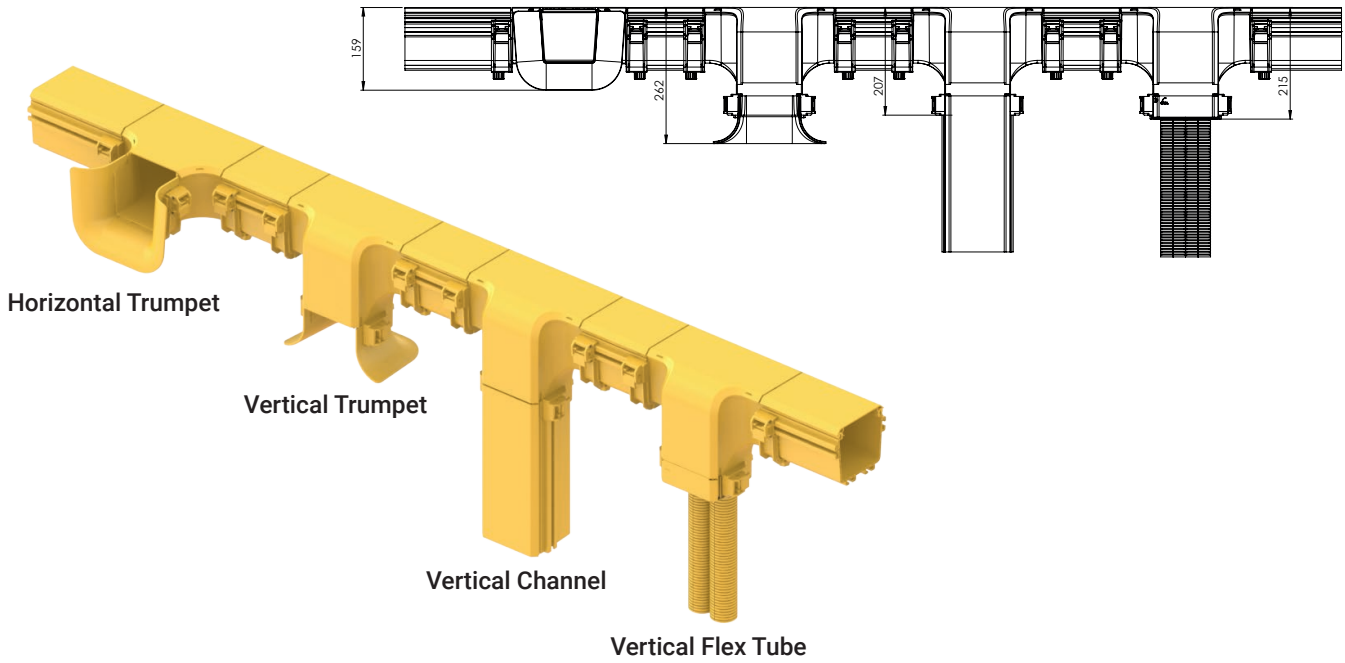


Side View

# Application Engineering Notes

## Downspout Options for Cable Dropping from Channels to Cabinets

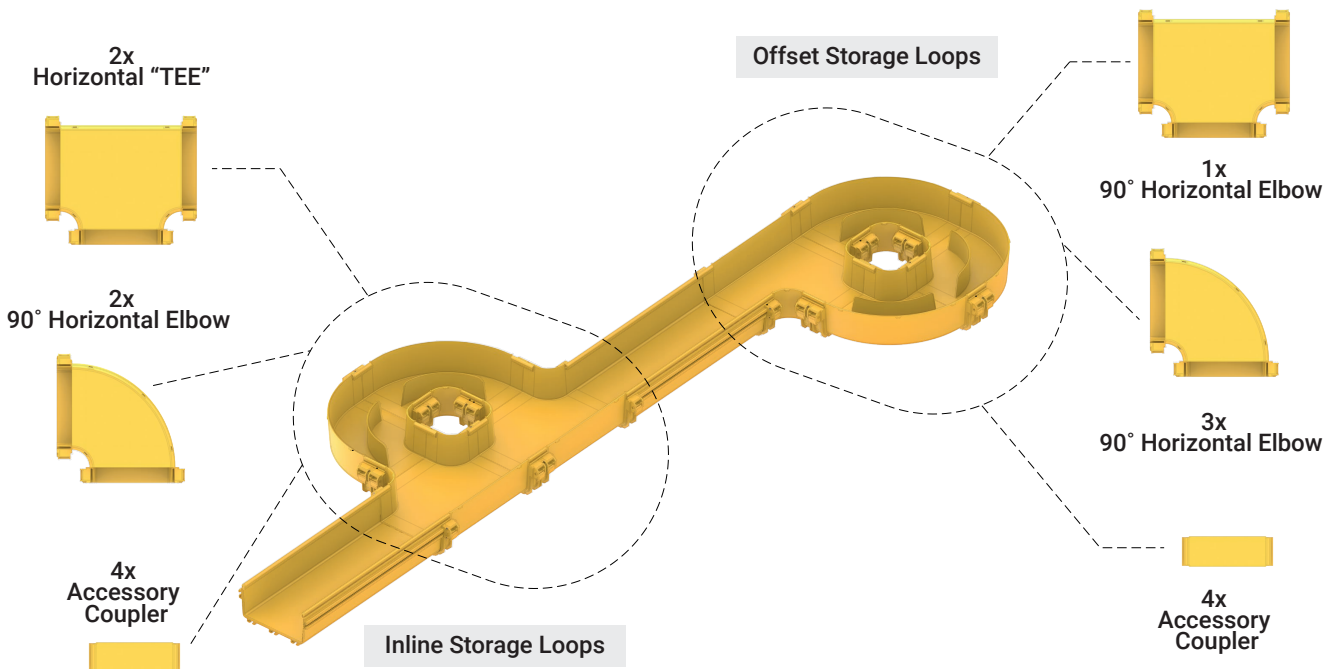
Different downspout products and accessories can be used to route the cables on the ducts into the cabinets. It may be necessary to know the vertical position distances of these products and accessories during designs. These distances are shown below for 100 mm size. These are also the same for the 200mm and 300mm sizes.



## Designing Fiber Storage Loops

Fiber Storage Loops allow excess patch cord lengths to be safely stored and organized throughout the fiber duct system. Inline Storage Loops contain fiber within the duct system while the Offset Storage Loop retains fiber away from the main duct.

Please create your storage loops using the below configurations for all 100mm,200mm and 300mm sizes.





## Selecting The Ducting Channel Size

Fiber ducting systems are available in three sizes. It's crucial to choose a size that accommodates future expansion and additions to the ducting system. Too often, cable systems are undersized in an attempt to reduce installation costs. However, in today's data-driven world, this approach is a false economy. It is far more cost-effective in the long run to plan for future growth and over-specify capacity, rather than just meeting current needs.

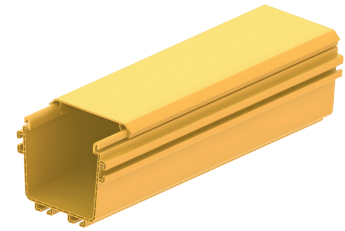
Duct Size (Metric/Inch)	100x100mm / 4x4"		200x100mm / 8x4"		300x100mm / 12x4"	
	Capacity(ea)	Weight(kg)	Capacity(ea)	Weight(kg)	Capacity(ea)	Weight(kg)
Patch cord/3.0mm (%100)	1065	15.91	2100	31.37	3128	46.73
Patch cord/3.0mm (%70)	743	11.10	1477	22.07	2206	32.96
Patch cord/3.0mm (%50)	534	7.98	1068	15.96	1598	23.87
Patch cord/2.0mm (%100)	2491	18.38	4996	36.87	7292	53.81
Patch cord/2.0mm (%70)	1733	12.79	3435	25.35	5135	37.90
Patch cord/2.0mm (%50)	1207	8.91	2409	17.78	3609	26.63
Patch cord/1.6mm (%100)	6393	34.52	7650	41.31	11397	61.54
Patch cord/1.6mm (%70)	5174	27.94	5308	28.66	7930	42.82
Patch cord/1.6mm (%50)	4385	23.68	3769	20.35	5642	30.47

\*\*\* The recommended capacities listed above will help prevent cable crushing and resulting damage.

\*\*\* Initial fill should be no more than 50% of capacity to accommodate future growth.

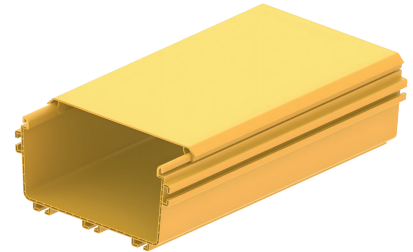
### 100x100mm (4x4") Channels

Description	Order Code	
	Yellow	Black
FDS_100mm Straight Solid Channel Body_1.8m	ME11001-11	ME11001-12
FDS_100mm Straight Solid Channel Cover_1.8m	ME11001-21	ME11001-22



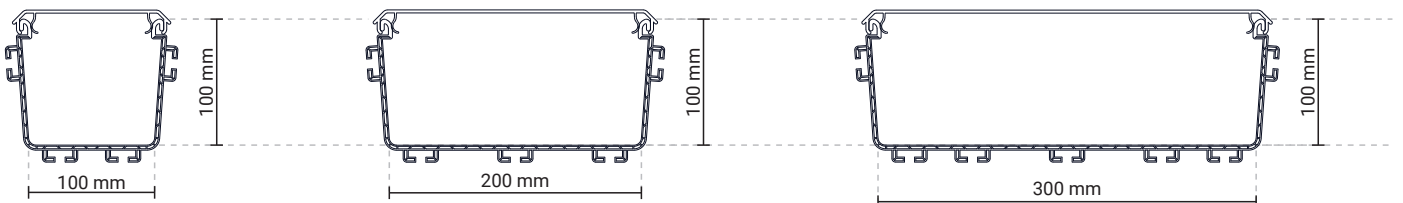
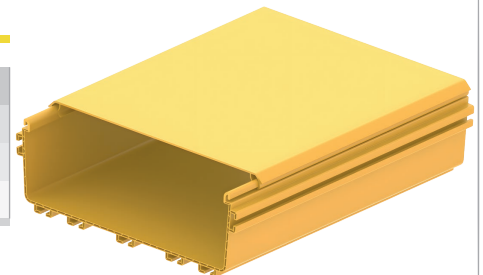
### 200x100mm (8x4") Channels

Description	Order Code	
	Yellow	Black
FDS_200mm Straight Solid Channel Body_1.8m	ME12001-11	ME12001-12
FDS_200mm Straight Solid Channel Cover_1.8m	ME12001-21	ME12001-22



### 300x100mm (12x4") Channels

Description	Order Code	
	Yellow	Black
FDS_300mm Straight Solid Channel Body_1.8m	ME13001-11	ME13001-12
FDS_300mm Straight Solid Channel Cover_1.8m	ME13001-21	ME13001-22

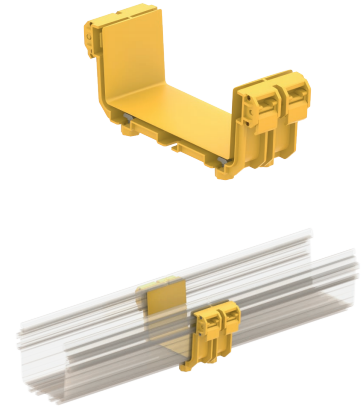


## Key Products and Guidelines for Component Assembly

### Channel to Channel Assembly

Channel couplers are used to connect channels together. The channels fit into the slots on each side of the coupler, and the clamping levers are then pressed down to secure the connection. While this setup is typically secure, it is recommended to further strengthen the assembly using Quick Knob and T-Bolt sets. These additional components can be installed easily, without the need for any tools, cutting, drilling, or slotting.

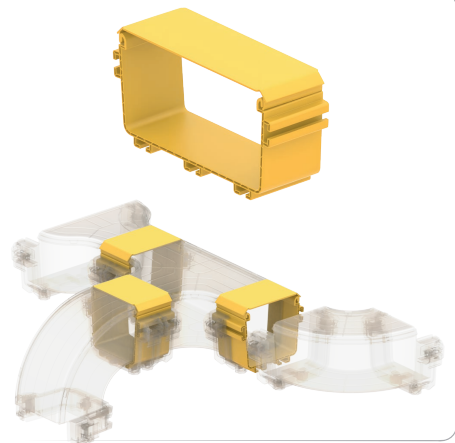
Description	Order Code	
	Yellow	Black
FDS_100mm Channel to Channel Coupler	ME11002-01	ME11002-02
FDS_200mm Channel to Channel Coupler	ME12002-01	ME12002-02
FDS_300mm Channel to Channel Coupler	ME13002-01	ME13002-02



### Accessory to Accessory Assembly

Accessory couplers are used to connect accessories together. The couplers are inserted into the slots of the connecting accessories, and the clamping levers are pressed down to secure the connection. While this setup is usually sufficient, it is recommended to further strengthen the assembly by using Quick Knob and T-Bolt sets. These can be installed easily, without the need for any tools, cutting, drilling, or slotting.

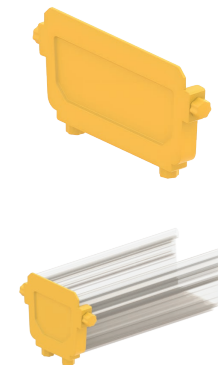
Description	Order Code	
	Yellow	Black
FDS_100mm Accessory to Accessory Coupler	ME11004-01	ME11004-02
FDS_200mm Accessory to Accessory Coupler	ME12004-01	ME12004-02
FDS_200mm Accessory to Accessory Coupler	ME13004-01	ME13004-02



### End Cap Assembly to Channel

End caps are used to close the open ends of channels, either permanently or temporarily, to prevent them from remaining exposed. These end caps are installed using a knurled quick knob and T-bolt sets, ensuring a secure fit.

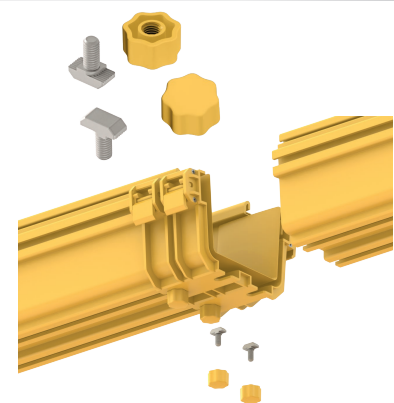
Description	Order Code	
	Yellow	Black
FDS_100mm Channel End Cap	ME11003-01	ME11003-02
FDS_200mm Channel End Cap	ME12003-01	ME12003-02
FDS_300mm Channel End Cap	ME13003-01	ME13003-02



### Quick Knobs for T-Slotted Profile Assemblies

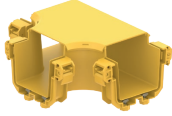
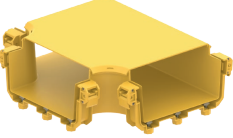
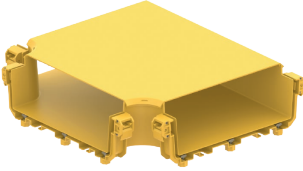
The Knurled Quick Knob with T-Bolt is designed for easy and secure connection of channels and accessories. Its knurled surface allows for quick, tool-free tightening, ensuring a strong and reliable connection. Perfect for both permanent and temporary installations, it offers a convenient solution for fastening components in a variety of applications.

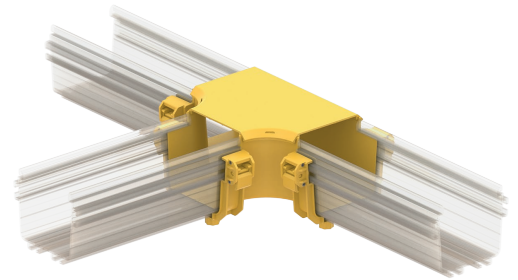
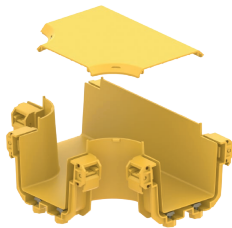
Description	Order Code	
	Yellow	Black
FDS_Knurled Quick Knob with T-Bolt, Kit of 1	ME30001-11	ME30001-12
FDS_Knurled Quick Knob with T-Bolt, Kit of 10	ME30001-21	ME30001-22



## Main Line Connections

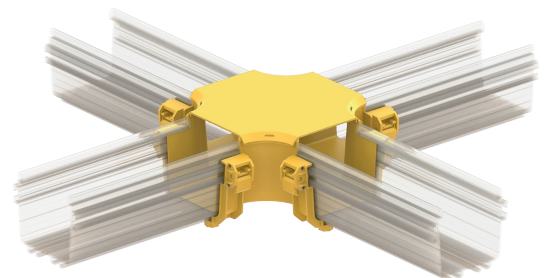
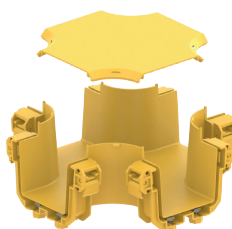
### Horizontal "TEE" Connection

Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_100mm Horizontal "TEE" Connection Body	ME11005-11	ME11005-12
	FDS_100mm Horizontal "TEE" Connection Cover	ME11005-21	ME11005-22
	FDS_200mm Horizontal "TEE" Connection Body	ME12005-11	ME12005-12
	FDS_200mm Horizontal "TEE" Connection Cover	ME12005-21	ME12005-22
	FDS_300mm Horizontal "TEE" Connection Body	ME13005-11	ME13005-12
	FDS_300mm Horizontal "TEE" Connection Cover	ME13005-21	ME13005-22



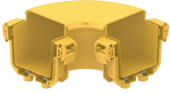
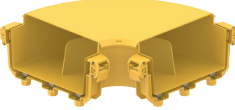

### 4-Way Cross Connection

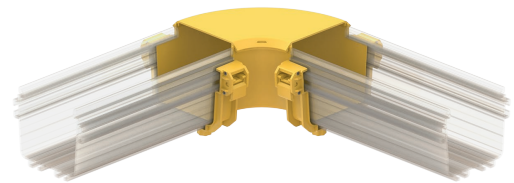
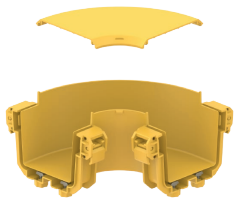
Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_100mm 4-Way Cross Connection Body	ME11008-11	ME11008-12
	FDS_100mm 4-Way Cross Connection Cover	ME11008-21	ME11008-22
	FDS_200mm 4-Way Cross Connection Body	ME12008-11	ME12008-12
	FDS_200mm 4-Way Cross Connection Cover	ME12008-21	ME12008-22
	FDS_300mm 4-Way Cross Connection Body	ME13008-11	ME13008-12
	FDS_300mm 4-Way Cross Connection Cover	ME13008-21	ME13008-22



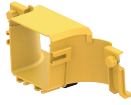
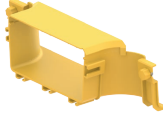
## Main Line Connections

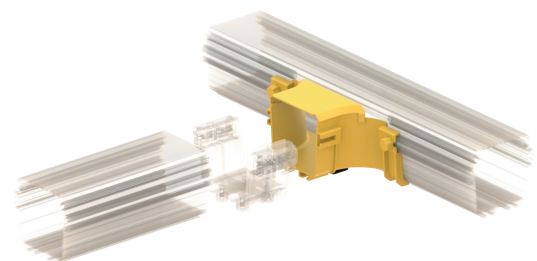
### 90° Horizontal Elbow Connection

Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_100mm 90° Horizontal Elbow Connection Body	ME11007-11	ME11007-12
	FDS_100mm 90° Horizontal Elbow Connection Cover	ME11007-21	ME11007-22
	FDS_200mm 90° Horizontal Elbow Connection Body	ME12007-11	ME12007-12
	FDS_200mm 90° Horizontal Elbow Connection Cover	ME12007-21	ME12007-22
	FDS_300mm 90° Horizontal Elbow Connection Body	ME13007-11	ME13007-12
	FDS_300mm 90° Horizontal Elbow Connection Cover	ME13007-21	ME13007-22


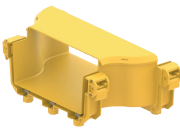
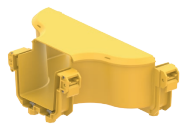


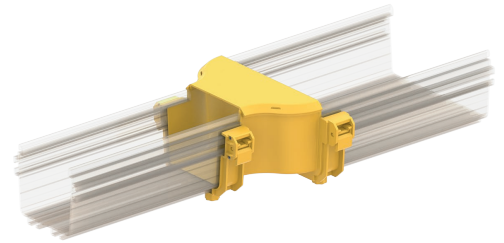
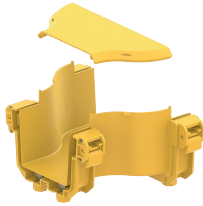
### Side Cut-Off Connection

Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_100mm Horizontal Cut-Off Connection Body	ME11006-11	ME11006-12
	FDS_100mm Horizontal Cut-Off Connection Cover	ME11006-21	ME11006-22
	FDS_200mm Horizontal Cut-Off Connection Body	ME12006-11	ME12006-12
	FDS_200mm Horizontal Cut-Off Connection Cover	ME12006-21	ME12006-22



## Horizontal Line Reducer Connection

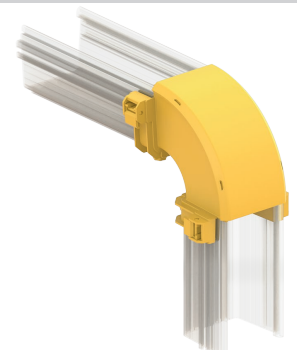
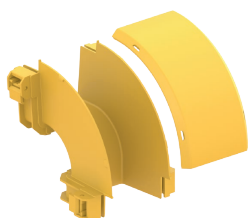
Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_200/100mm Line Reducer Body	ME11011-11	ME11011-12
	FDS_200/100mm Line Reducer Cover	ME11011-21	ME11011-22
	FDS_300/200mm Line Reducer Body	ME12011-11	ME12011-12
	FDS_300/200mm Line Reducer Cover	ME12011-21	ME12011-22
	FDS_300/100mm Line Reducer Body	ME13011-11	ME13011-12
	FDS_300/100mm Line Reducer Cover	ME13011-21	ME13011-22



## Elbow Junctions

### 90° Vertical Outside Elbow Connection

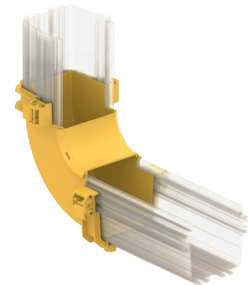
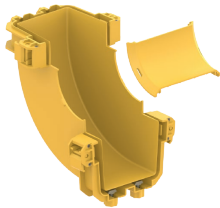
Product Illustration	Description	Order Code	
		Yellow	
	FDS_100mm 90° Vertical Outside Elbow Body	ME11009-11	ME11009-12
	FDS_100mm 90° Vertical Outside Elbow Cover	ME11009-21	ME11009-22
	FDS_200mm 90° Vertical Outside Elbow Body	ME12009-11	ME12009-12
	FDS_200mm 90° Vertical Outside Elbow Cover	ME12009-21	ME12009-22
	FDS_300mm 90° Vertical Outside Elbow Body	ME13009-11	ME13009-12
	FDS_300mm 90° Vertical Outside Elbow Cover	ME13009-21	ME13009-22





## 90° Vertical Inside Elbow Connection

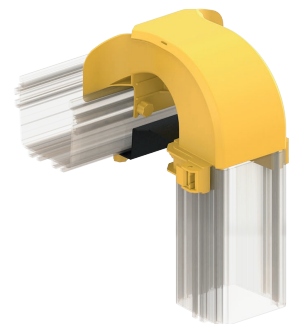
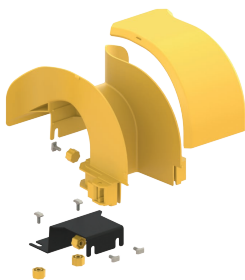
Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_100mm 90° Vertical Inside Elbow Body FDS_100mm 90° Vertical Inside Elbow Cover	ME11010-11 ME11010-21	ME11010-12 ME11010-22
	FDS_200mm 90° Vertical Inside Elbow Body FDS_200mm 90° Vertical Inside Elbow Cover	ME12010-11 ME12010-21	ME12010-12 ME12010-22
	FDS_300mm 90° Vertical Inside Elbow Body FDS_300mm 90° Vertical Inside Elbow Cover	ME13010-11 ME13010-21	ME13010-12 ME13010-22



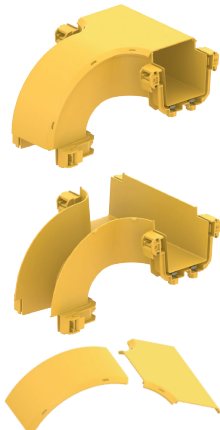
## Drop Connections

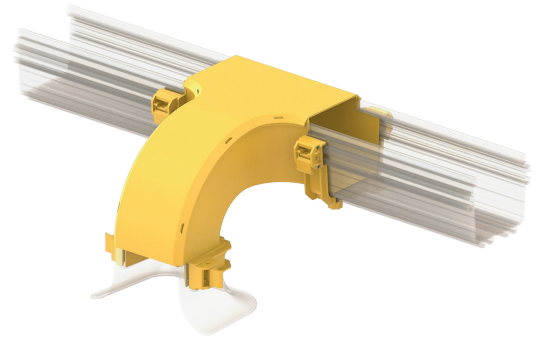
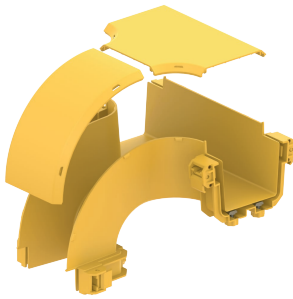
### Vertical Quick Drop Connection

Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_100mm_Vertical Quick Drop (Body+Cover)	ME11012-01	ME11012-02
	FDS_100mm_Vertical Quick Drop Body	ME11012-11	ME11012-12
	FDS_100mm_Vertical Quick Drop Cover	ME11012-21	ME11012-22



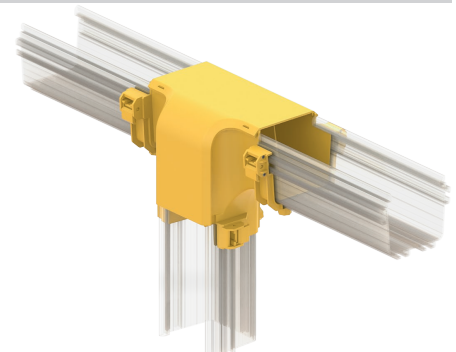
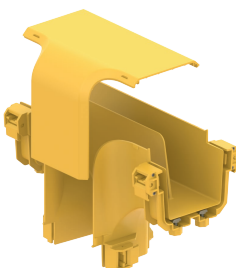
## Vertical Offset Drop Connection

Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_100mm Vertical Offset Drop (Body + Cover)	ME11013-01	ME11013-02
	FDS_100mm Vertical Offset Drop Body	ME11013-11	ME11013-12
	FDS_100mm Vertical Offset Drop Cover Set	ME11013-21	ME11013-22



## Vertical Line Drop Connection

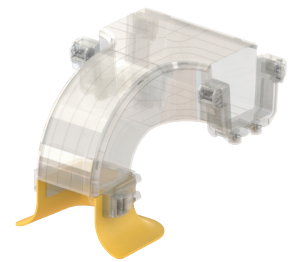
Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_100/100mm Vertical Line Drop Body	ME11014-11	ME11014-12
	FDS_100/100mm Vertical Line Drop Cover	ME11014-21	ME11014-22
	FDS_200/100mm Vertical Line Drop Body	ME12014-11	ME12014-12
	FDS_200/100mm Vertical Line Drop Cover	ME12014-21	ME12014-22
	FDS_300/100mm Vertical Line Drop Body	ME13014-11	ME13014-12
	FDS_300/100mm Vertical Line Drop Cover	ME13014-21	ME13014-22



## Drop Connection Accessories

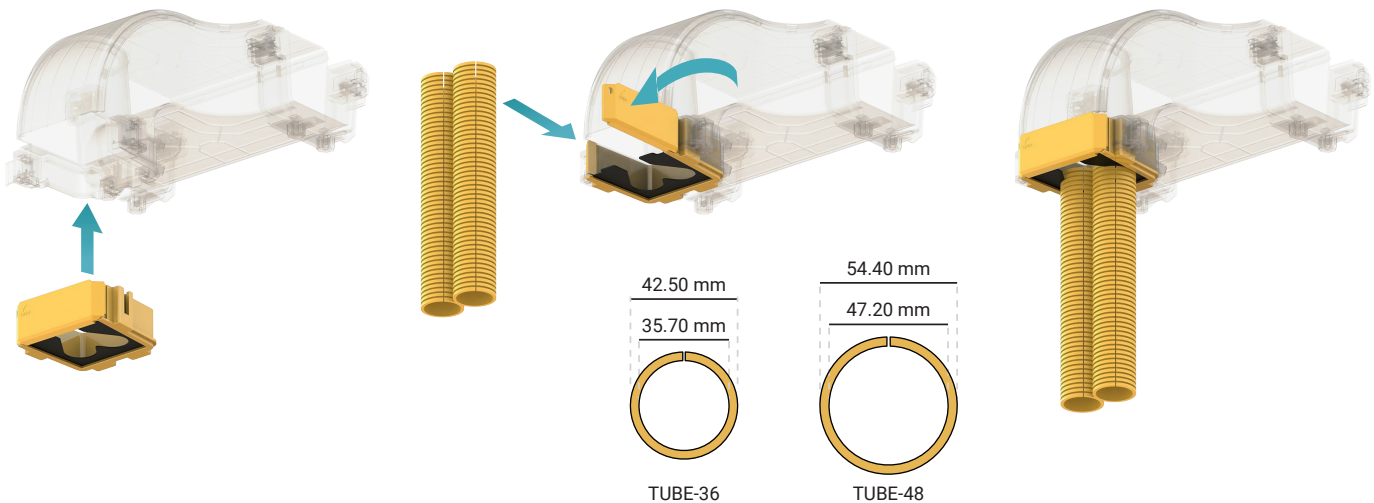
### Outlet Bend Radius Trumpet

Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_100mm Outlet Bend Radius Trumpet	ME11015-01	ME11015-02
	FDS_200mm Outlet Bend Radius Trumpet	ME12015-01	ME12015-02
	FDS_300mm Outlet Bend Radius Trumpet	ME13015-01	ME13015-02



### Outlet Flex Tube and Adapters

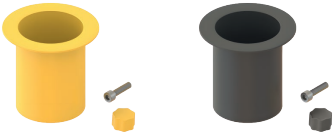
Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_100mm/1x48mm Outlet Flex Tube Adapter	ME11016-01	ME11016-02
	FDS_100mm/2x36mm Outlet Flex Tube Adapter	ME11017-01	ME11017-02
	Single Wall Slitted Flex Tube-48_1M	ME30002-11	ME30002-12
	Single Wall Slitted Flex Tube-36_1M	ME30002-21	ME30002-22

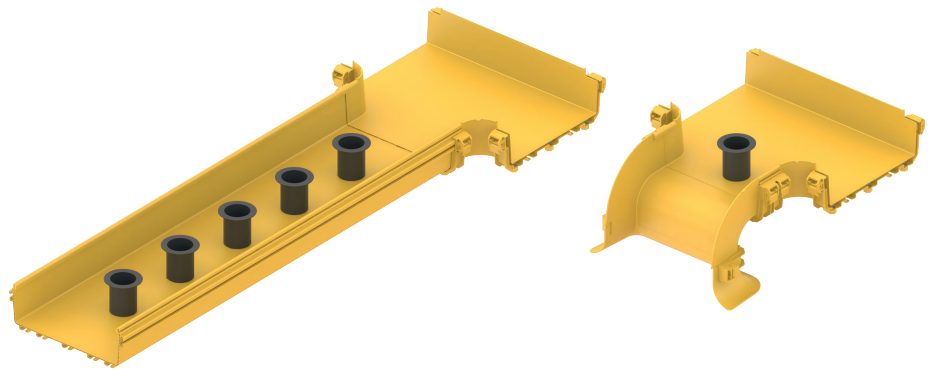
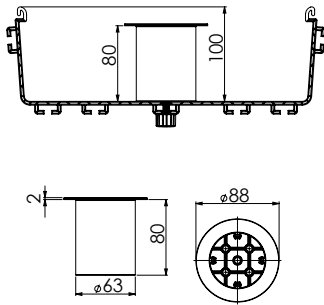


## Accessories

### Cable Management Spools for Guiding or Storing

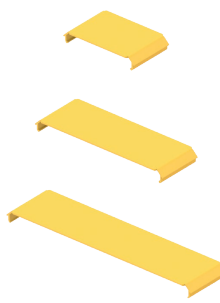
The fiber management spool has been designed for excess cable storing and cable orientation on accessories. This product is sold as a separate set to enable on-site use in field applications. The installation is made by drilling on the channel or accessories.

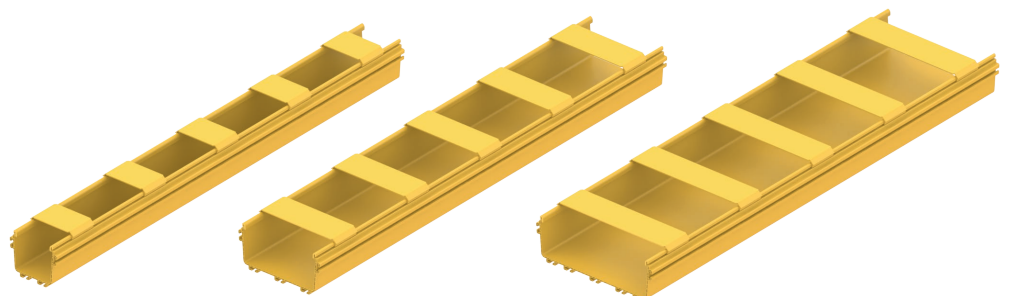
Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_88/63mm Cable Management Spool, Kit of 1	ME30004-11	ME30004-12
	FDS_88/63mm Cable Management Spool, Kit of 10	ME30004-21	ME30004-22



### Flex Channel Covers

In cases where the use of fully enclosed channel cover structures are not desired, 79mm wide flex channel covers can be applied on the cable channels in the required quantities and positions. In this way, the cables are protected within the channel without completely closing the cable channels


Product Illustration	Description	Order Code	
		Yellow	Black
	FDS_100mm Flex Channel Cover_79mm, Kit of 5	ME11018-01	ME11018-02
	FDS_200mm Flex Channel Cover_79mm, Kit of 5	ME12018-01	ME12018-02
	FDS_300mm Flex Channel Cover_79mm, Kit of 5	ME13018-01	ME13018-02



## Hook & Loop Cable Ties

This cable tie offers a soft bundling method and is ideal for use on telephone cables, optical fiber and network cables. These kind of ties can be reopened and reused many times. A perfect solution for temporary installations and cable management for stage equipment, at outdoor events or for prototype harnessing. Also suitable for use in private or office applications.

- Quick and simple to use without tools
- Easy to release and reuse
- Can be attached to the bundle permanently
- Ideal for applications requiring frequent cabling moves, adds or changes
- Black Color

Product Illustration	Description	Order Code
	9mm x 15,2 CM Hook and Loop Tie	HT00355

## Velcro Grip tie Roll

This velcro tape offers a soft bundling method and is ideal for use on telephone cables, optical fiber and network cables. These kind of velcro tapes can be reopened and reused many times. A perfect solution for temporary installations and cable management for stage equipment, at outdoor events or for prototype harnessing. Also suitable for use in private or office applications.


- Quick and simple to use without tools
- Double sided hook and loop grip structure
- Can be used with different diameter bundles cutting into different lengths
- Easy to release and reuse
- Can be attached to the bundle permanently
- Ideal for applications requiring frequent cabling moves, adds or changes
- Black Color

Product Illustration	Description	Order Code
	13mm X50m Grip Tie Roll	HT02384



## Hardware and Mounting Kits

### "L" Shaped Ladder Rack Mounting Kits

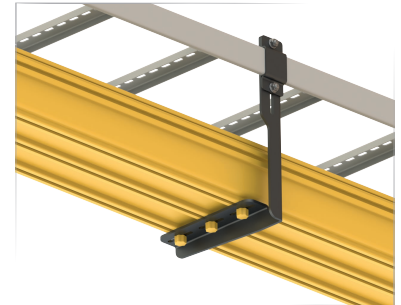
Product Illustration	Description	Order Code
	FDS_100mm "L" Shaped Ladder Rack Mounting Kits	ME21003-02
	FDS_200mm "L" Shaped Ladder Rack Mounting Kits	ME22003-02
	FDS_300mm "L" Shaped Ladder Rack Mounting Kits	ME23003-02

**Technical Notes**


- Brackets are recommended every 900 mm for direct channel mounting.

**Content Notes**

- Quick Knob + T-bolt sets are included in the kits.



### Central Supported Mounting Brackets

Product Illustration	Description	Order Code
	FDS_100mm Center Supported Mounting Bracket	ME21004-02
	FDS_200mm Center Supported Mounting Bracket	ME22004-02
	FDS_300mm Center Supported Mounting Bracket	ME23004-02

**Technical Notes**

- Suitable for M14 and M16 threaded rod.
- Brackets are recommended every 900 mm for direct channel mounting.




**Content Notes**

- Threaded rods and nuts are purchased separately.
- Quick Knob + T-bolt sets are included in the kits.



## Hardware and Mounting Kits

### Single Rod Suspension Brackets

Product Illustration	Description	Order Code
	FDS_100mm Single Rod Suspension Bracket	ME21006-02
	FDS_200mm Single Rod Suspension Bracket	ME22006-02
	FDS_300mm Single Rod Suspension Bracket	ME23006-02

#### Technical Notes

- Suitable for M14 and M16 threaded rod.
- Brackets are recommended every 900 mm for direct channel mounting.

#### Content Notes

- Threaded rods and nuts are purchased separately.
- Quick Knob + T-bolt sets are included in the kits.



### Double Rod Suspension Brackets

Product Illustration	Description	Order Code
	FDS_100mm Double Rod Suspension Bracket	ME21005-02
	FDS_200mm Double Rod Suspension Bracket	ME22005-02
	FDS_300mm Double Rod Suspension Bracket	ME23005-02

#### Technical Notes


- Suitable for M14 and M16 threaded rod.
- Brackets are recommended every 900 mm for direct channel mounting.

#### Content Notes

- Threaded rods and nuts are purchased separately.
- Quick Knob + T-bolt sets are included in the kits.



## Ladder Mounting Suspension Clamp

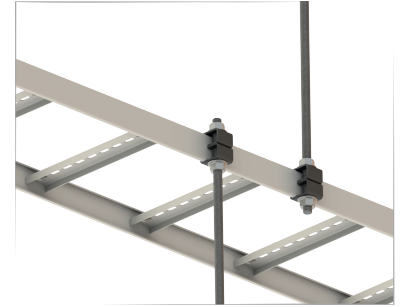
Product Illustration	Description	Order Code
	FDS_Ladder Suspension Quick Clamp Set for M14 Rod and 50mm Ladder_BK	ME23008-12
	FDS_Ladder Suspension Quick Clamp Set for M16 Rod and 50mm Ladder_BK	ME23008-22

### Technical Notes


- Suitable for M14 and M16 threaded rod.
- Brackets are recommended every 900 mm for direct channel mounting.

### Content Notes

- Threaded rods and nuts are purchased separately.



## Threaded Rods

Product Illustration	Description	Order Code
	FDS_Galvanized Steel M14 Threaded Rod, 1M	ME20009-10
	FDS_Galvanized Steel M16 Threaded Rod, 1M	ME20009-20

## Flanged Nuts

Product Illustration	Description	Order Code
	FDS_DIN 6923 Galvanized Steel M14 Flanged Nut, Kit of 1	ME20010-10
	FDS_DIN 6923 Galvanized Steel M14 Flanged Nut, Kit of 10	ME20010-20
	FDS_DIN 6923 Galvanized Steel M16 Flanged Nut, Kit of 1	ME20010-30
	FDS_DIN 6923 Galvanized Steel M16 Flanged Nut, Kit of 10	ME20010-40



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