

# **PRODUCT CATALOG**



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#### **History**

US Conec is a global leader in providing passive components for high density optical interconnects. The company was founded in 1992 to expand the use of MT style multi-fiber technology through the design, manufacturing and sales of high precision fiber optic components. Today, US Conec brands span the globe, delivering cost effective technology solutions for data center and enterprise structured cabling, public networks, on-board & co-packaged optical interconnects, and industrial & military markets worldwide.

#### **Service and Quality**

US Conec provides industry leading components that enable high bandwidth systems such as cloud computing, core routing of the Internet, and fiber-to-the-home. The continued success is driven by the ongoing satisfaction and loyalty of customers. US Conec strives to exceed customer expectations, including product design and performance, quality, logistics, and customer service. A thorough understanding of customer requirements and the broader application is essential to the collective success of the company.

#### **Innovation & Growth**

US Conec consistently invests in product design, development, and manufacturing to support the growth of new and more cost-effective applications. The company actively participates in worldwide standards and implementation forums to drive broad support for new technology. The strategy is to combine investment in people talent with leading edge technology to build a foundation for growth. US Conec actively partners with the world's leading technology companies to develop unique, cutting-edge products.

#### **Product Developments**

The company's key product developments include MT-style multi-fiber ferrules, MTP<sup>®</sup> brand MPO connectors, MXC<sup>®</sup> connectors, PRIZM<sup>®</sup> lensed ferrule technology, DirectConec<sup>™</sup> push-pull technology, ELiMENT<sup>®</sup> brand single fiber connectors, MDC connectors, IBC<sup>™</sup> brand fiber optic cleaning solutions, termination equipment, high precision optical packaging components, and custom optical interconnect solutions.

#### **Environmental Commitment**

In all aspects of business, US Conec strives to minimize the environmental impact by developing products and practices that are safe and sustainable. Dedicated to continual improvement in environmental initiatives, US Conec maintains and monitors current global environmental legislation activities to ensure business practices are aligned with and adhere to industry relevant compliances.

#### **Share Holders**

US Conec is an equity venture of three leading communications technology companies—Corning Optical Communications, Fujikura Ltd., and NTT Advanced Technology Corp. The shareholders provide leading-edge communications and information technology products and services for global customers.

#### **MT Ferrules**

US Conec manufactures durable, composite, Polyphenylene Sulfide (PPS) based thermoplastic ferrules available with up to 72 fiber holes that terminate 125 micrometer optical fiber. The alignment mechanism consists of two stainless steel guide pins that fit into precisely molded alignment holes. The ferrules are used in conjunction with US Conec's industry hailed, MTP<sup>®</sup> brand, MPO type connectors; however, they are also suitable for custom designed passive or active fiber coupling packages. US Conec's MT ferrule is compliant with IEC Standard 61754-5.

#### **Features:**

- High density; fiber pitch: 0.25mm
- Increased precision of fiber and guide pin hole sizes and location
- Consistent optical performance for multimode (flat protruded polish) and single-mode (angled protruded polish)
- Extremely low hygroscopic material for exceptional environmental stability
- Mold marks to indicate fiber type and ferrule grade
- Pre-angled SM available
- MM MT Elite<sup>®</sup> optimized for 10G, 40G, 100G and 400G applications
- SM MT Elite<sup>®</sup> PA (pre-angled) meets IEC 61755-3-31 grade B requirements



12 Fiber, Single-mode Pre-Angled MT Ferrule

#### **MT Ferrule Performance**

US Conec offers MT ferrules in multiple performance grades tailored to specific application and fiber count requirements. Both single-mode and multimode ferrules are available in standard insertion loss performance and low insertion loss performance. US Conec's industry leading low-loss MT components are referred to as MT Elite® ferrules. With physical contact of the fiber tips, single-mode standard ferrules will have a maximum mated fiber pair insertion loss of 0.75dB while single-mode MT Elite<sup>®</sup> ferrules will have a maximum insertion loss of 0.35dB. Standard loss multimode ferrules offer a maximum insertion loss of 0.6dB when tested at 850nm on OM2, OM3 or OM4 fiber. Similarly, multimode MT Elite® ferrules have a maximum insertion loss of 0.35dB when tested at 850nm on OM2, OM3 or OM4 fiber. US Conec's single-mode MT Elite® low loss ferrules are produced to meet the ratified IEC 61755-3-31 grade B specification.

#### **Specifications**

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Ferrule Type	Random Mated Attenuation <sup>1</sup> ( $\geq$ 97% dB)	Mean Random Mated Attenuation (dB)	Return Loss (dB)
Single-mode MT Elite <sup>®</sup> PA	≤0.25 <sup>23</sup>	≤0.12 <sup>23</sup>	≥60
Single-mode	≤ <b>0</b> .50 <sup>2,4</sup>	≤0.25 <sup>2,4</sup>	≥60
Multimode MT Elite®	≤0.25	≤0.12	≥25
Multimode	≤0.45	≤0.20	≥25

Per IEC 61755-3-31, predicted performance yield will vary at different ferrule fiber counts (e.g., For 12F, IEC Grade B estimated attenuation of 0.35dB with 93% yield).

<sup>1</sup> IEC 61755-1 defines Grades based on  $\geq$  97% random mated loss probability of channels meeting or exceeding loss specification. <sup>2</sup> IEC 61755-3-31 is defined for up to 12 fibers for SM APC only.

<sup>3</sup> Exceeds IEC 61755-1 Grade B performance.

#### Single-mode MT Ferrule Kits (Includes MT Ferrule and Boot)

Part Number	Description
MTFA-4SM5-02	4-Fiber, Single-mode APC Ferrule
15778	8-Fiber, Single-mode Pre-angled Ferrule
13642	12-Fiber, Single-mode Pre-angled Ferrule
19654	12-Fiber, Single-mode 80µm Pre-angled Ferrule
12678	24-Fiber, Single-mode Pre-angled Ferrule 9.8N
17181	24-Fiber, Single-mode Pre-angled Ferrule 20N

# Single-mode MT Elite<sup>®</sup> PA Ferrule Kits (Includes MT Ferrule and Boot)

Part Number	Description
16339	8-Fiber, Single-mode MT Elite <sup>®</sup> Pre-angled Ferrule
17187	12-Fiber, Single-mode MT Elite <sup>®</sup> , Pre-angled Ferrule
18182	24-Fiber, Single-mode MT Elite <sup>®</sup> , Pre-angled Ferrule 9.8N
18184	24-Fiber, Single-mode MT Elite <sup>®</sup> , Pre-angled Ferrule 20N

# Single-mode Super-MT Elite® Ferrule Kits (Includes MT Ferrule and Boot)

Part Number	Description
19809	12-Fiber, Super-MT Elite <sup>®</sup> , APC Reference Ferrule, Pre-Angled

#### Multimode MT Ferrule Kits (Includes MT Ferrule and Boot)

Part Number	Description
7413	24-Fiber, Multimode Ferrule
12599	48-Fiber, Multimode Ferrule
9730	72-Fiber, Multimode Ferrule (*ferrule boot is not included)

#### Multimode MT Elite<sup>®</sup> Ferrule Kits (Includes MT Ferrule and Boot)

Part Number	Description
17185	12-Fiber, Multimode MT Elite®, Ferrule
24904	12-Fiber, Multimode MT Elite <sup>®</sup> , Pre-angled Ferrule
18007	24-Fiber, Multimode MT Elite <sup>®</sup> , Ferrule

#### **Epoxy** (For use with MT Ferrules)

Part Number	Description
24689	Epoxy, 353ND, 4g Pack

#### **MT-16 Ferrules**

US Conec manufactures durable, composite, Polyphenylene Sulfide (PPS) based thermoplastic ferrules. US Conec's MT-16 ferrules are designed to support next generation parallel transmission protocols that are arranged in increments of 8 or 16 fibers. Available in one row or two rows, the 16 fiber MT Elite® ferrule format utilizes the same external ferrule footprint as the existing traditional 12 fiber ferrule, leveraging all the proven features and technology of US Conec's PPS MT ferrules in a higher density format. The ferrule meets the requirements being standardized by TIA 604-18 (FOCIS 18) and the emerging IEC 61754-7-3 and IEC 61754-7-4.

#### **Features:**

Ferrules

- Highest density physical contact
- Fiber pitch: 0.25mm within the row; 0.50mm between rows
- Consistent optical performance for multimode (flat protruded polish)
- Extremely low hygroscopic material for exceptional environmental stability
- MM MT Elite<sup>®</sup> for high speed VCSEL links
- Same external footprint as traditional MT ferrules

#### MT-16, Single-mode MT Ferrule Kits (Includes MT Ferrule and Boot)

Part Number	Description
18731	16-fiber, Single-mode (1x16 Footprint)
18733	32-fiber, Single-mode (2x16 Footprint)

#### MT-16, Single-mode MT Elite® Ferrule Kits (Includes MT Ferrule and Boot)

Part Number	Description
18732	16-fiber, Single-mode MT Elite <sup>®</sup> (1x16 Footprint)

#### MT-16, Multimode MT Ferrule Kits (Includes MT Ferrule and Boot)

Part Number	Description	
17948	32-Fiber, Multimode (2x16 Footprint)	

#### MT-16, Multimode MT Elite® Ferrule Kits (Includes MT Ferrule and Boot)

Part Number	Description		
22008	16-Fiber, Multimode MT Elite® (1x16 Footprint), for APC Polish		
16505	32-Fiber, Multimode MT Elite® (2x16 Footprint)		

#### Epoxy (For use with MT Ferrules)

Part Number	Description
24689	Epoxy, 353ND, 4g Pack





Ferrules

# **Custom MT Ferrules**

US Conec supports custom multi-fiber ferrule requests. Custom ferrules could have non-standard footprints, fiber hole size, guide pin hole size, fiber counts and material.

# **MT Alignment Guide Pins**

The performance of any MT based connector is only as good as the guide pin used in the mating process. Precision alignment is achieved with patented guide pins combined with the tightly controlled guide pin holes on US Conec's MT ferrules. US Conec offers MT guide pins in several different configurations for use in a variety of applications. Please note that the guide pins are integrated into the appropriate pin clamp when ordering MTP<sup>®</sup> connectors, so there is no need to purchase individual pins in that situation.

### Features:

- Single-mode, low loss single-mode, and multimode precision available
- Elliptical pin tips preserve ferrule guide-pin holes
- Available with custom features such as grooves and collars
- Lead free for RoHS compliance without reliance on exemptions

# **Applications:**

- Incorporated into receptacles and lens holders
- Custom high precision alignment for module packaging
- Custom connectors

# Specifications:

- Meets TIA standard 604-5 (Type-MPO)
- RoHS Compliant

# MT Alignment Guide Pins

Part Number	Description			
16738	Single-mode MT Elite <sup>®</sup> Grooved Guide Pin			
12766	Aultimode Flat Head Guide Pin			
16736	Multimode Grooved Guide Pin			
16737	Single-mode/Multimode MT Elite <sup>®</sup> Grooved Guide Pin			
16744	Multimode Flat Pin Clamp			
16745	Single-mode Flat Pin Clamp			
16396	MT Elite® Flat Pin Clamp			

US Conec also provides custom guide pins for a variety of MT ferrule and parallel optic module packaging applications.





Precision Alignment Pins

Flat Pin Clamp











#### **PRIZM® MT Ferrules**

The PRIZM<sup>®</sup> MT ferrule takes robust multi-fiber expanded beam connectors to the equipment card-edge. The outer dimensional footprint is identical to traditional MT ferrules making the PRIZM<sup>®</sup> MT compatible with any MT ferrule based connector hardware package. The novel, molded-in, hermaphroditic post and hole alignment features eliminate the need for costly stainless steel guide pins. Complex, costly endface geometry and polishing control associated with physical contact array connectors are eliminated with the no-polish, free-space, expanded beam PRIZM<sup>®</sup> MT ferrule, all while greatly reducing sensitivity to debris. Reduction in the necessary ferrule spring force makes this optical interconnect ideal for applications requiring mass mating of multiple ferrules in high density trunk cables and optical backplanes. The PRIZM<sup>®</sup> MT ferrule platform supports fiber rows up to 16 fibers and up to 4 rows of fibers for fiber lane counts as high as 64. US Conec offers PRIZM<sup>®</sup> MT with anti-reflective (AR) coatings which allow lower insertion losses. AR coating, for the specified wavelength, decreases the maximum insertion loss to 0.75 dB max and is ideal for loss sensitive applications.

#### **Features:**

- Monolithic ferrule design
- Collimating lenses
- No physical contact
- No polish, low-cost termination process
- Up to 64 fibers per ferrule
  - ≤16 fibers per row
  - ≤4 rows per ferrule

#### **Specifications**

- Low insertion force
- Debris insensitivity
- GR-1435 compliant
- Optional AR coating
- Compatible with MXC<sup>®</sup> connectors and other MT based connector embodiments



PRIZM<sup>®</sup> MT Ferrules

Ferrule Grade	Random Mated IL (≥97%)	Typical IL	Return Loss
Multimode PRIZM® MT Elite	≤0.6dB	0.3dB	≥23dB
Multimode	≤1.2dB	0.9dB	≥20dB
Multimode + AR Coating	≤0.8dB	0.5dB	≥23dB

#### PRIZM<sup>®</sup> MT Ferrules

Part Number	Description	
18318	Ferrule, PRIZM® MT, 1x16 Multimode	
18320	Ferrule, PRIZM® MT, 2x16 Multimode	

#### PRIZM<sup>®</sup> MT Ferrules, 850 AR

Part Number	Description		
19883	Ferrule, PRIZM® MT Elite®, 1x16 Multimode, 850 AR		
19884	Ferrule, PRIZM® MT, 2x16 Multimode, 850 AR		

#### Epoxy (For use with PRIZM<sup>®</sup> Ferrules)

Part Number	Description	
16874	Epoxy, AB9320 for PRIZM® Ferrules	

# PRIZM<sup>®</sup> LightTurn<sup>®</sup> Ferrules

The PRIZM<sup>®</sup> LightTurn<sup>®</sup> is a monolithic, precision molded ferrule incorporating an array of microholes that accepts a ribbonized array of cleaved fibers and aligns them with individual aspheric total internal reflection (TIR) lenses. Each TIR lens redirects the light path approximately 90° to the fiber axis facilitating perpendicular mating to the printed circuit board. Molded alignment posts at the ferrule's optical exit window facilitate precision alignment to parallel optic devices. Termination is simple and low cost requiring no polishing of fibers. Fiber is secured to the ferrule with either a UV or thermal cure indexed matching epoxy. The PRIZM<sup>®</sup> LightTurn<sup>®</sup> ferrule is typically used in conjunction with US Conec's PRIZM<sup>®</sup> LightTurn<sup>®</sup> connector hardware and Mechanical Optical Interface (MOI) to create a miniature, detachable connector solution for highspeed board mounted parallel optic sources and detectors.

#### Features:

- TIR (total internal reflection) lenses
- Collimated light at PRIZM<sup>®</sup> LightTurn<sup>®</sup> ferrule exit window
- Precision microholes and fiber stop plane capture and position fibers for reliable & repeatable operation
- Wavelength independent optical grade material
- Bidirectional operation; one ferrule for both Tx and Rx operation
- Precision integrated alignment posts
- No polish, quick termination process
- Fast, easy installation into PRIZM<sup>®</sup> LightTurn<sup>®</sup> connector hardware



Interface	Coupling Performance	Lens Spec	Operation	Performance
12-channel	≤ 2.0 dB <sup>1</sup>	Aspherical TIR	Multimode 850nm	GR-1435 Uncontrolled <sup>2</sup>

<sup>1</sup> As measured through a PRIZM<sup>®</sup> LightTurn<sup>®</sup> to PRIZM<sup>®</sup> LightTurn<sup>®</sup> interposer

<sup>2</sup> Using thermal cure epoxy

### PRIZM<sup>®</sup> LightTurn<sup>®</sup> Ferrule

Part Number	Description
13950	PRIZM <sup>®</sup> LightTurn <sup>®</sup> Ferrule

#### Epoxy (For use with PRIZM® Ferrules)

Part Number	Description
16874	Epoxy, AB9320 for PRIZM® Ferrules

Meets GR-1435 uncontrolled environmental specifications



PRIZM<sup>®</sup> LightTurn<sup>®</sup> Ferrules

#### **MTP®** Overview

MTP<sup>®</sup> Connectors are the proven and trusted MPO style format which has pioneered the high density structured cabling interconnect market with state-of-the-art multi-fiber optical performance.

#### **US Conec Designed and Manufactured Ferrules and Components**

At the core of an MTP<sup>®</sup> connector is a US Conec designed and manufactured MT ferrule. The MTP<sup>®</sup> connector components and associated termination processes are designed as a system to work seamlessly together ensuring a high factory yield and reliable cable assembly in the field.

#### **Precision Components Exceeding Standards Requirements**

US Conec's MTP<sup>®</sup> connector components are engineered to occupy a small fraction of the standardized allowable tolerance zones.

- Industry leading optical performance
- Minimized debris generation
- Optimal stability and repeatability

#### **Novel Features Ensuring Reliability and Usability**

- Elliptical pins maximize durability and minimize installation time
- Floating ferrule with accurate pre-alignment ensures robust, stable connection
- Removable housing enables servicing and configurability
- Oval spring minimizes size and maximizes fiber clearance
- Centered forces ensure consistent, stable performance across all fibers

#### **Unmatched Process Training and Support Infrastructure**

- Formal termination, testing and installation training
- Full suite of ancillary support products
- Product evaluations
- On-site field support
- Product selection and use guidance



# **MTP® Solutions**

US Conec offers an MTP<sup>®</sup> brand MPO solution for virtually any low-loss physical contact application for use in controlled and uncontrolled environments, and supporting 9.8N (single array) and 20N (multiple array) variants.

#### **MTP<sup>®</sup> PRO**

The state-of-the-art MTP<sup>®</sup> PRO connector brings simplified use to the MPO format by offering optimal field flexibility and enhanced performance while leveraging proven features and technology of US Conec's MTP<sup>®</sup> family.

- Field polarity change
- Field gender change
- DirectConec<sup>™</sup> push-pull system
- Enhanced alignment and performance

### MTP<sup>®</sup>-16

Trusted MTP<sup>®</sup> brand performance emerging 16 fiber applications.

- SR8
- PSM8
- High density trunk cabling compatible with duplex, 4+4 and 8+8 parallel formats

#### **MTP**<sup>®</sup>

Broadest offering of MPO connectors on the market with trusted performance and reliability.

- Fiber counts from 4 to 72
- 9.8N and 20N
- Controlled and uncontrolled environments
- Cable sizes from 2.0mm to 5.5mm
- Straight and angled cable exits
- MTP<sup>®</sup> Secure Key
- Round, oval, bare ribbon and MTP<sup>®</sup> FLEX boots









FOCIS 18 / TIA-604-18 (MTP®-16)





# MTP<sup>®</sup> PRO with DirectConec<sup>™</sup> Push-Pull Boot | 9.8N Spring Force Ø 2.0mm – 3.6mm Nominal Cable OD





9.8N Spring Force, MTP<sup>®</sup> PRO Connector with DirectConec<sup>™</sup> Push-Pull Boot (Exploded View)

#### Ø 2.0mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO with DirectConec<sup>™</sup> Boot

Housing Color	Multimode MTP Elite®	
	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	21744	21743
Heather Violet	21746	21745
Lime	21748	21747
Housing Color	Single-Mod	e MTP Elite®
	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	21750	21749

#### Ø 2.5mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO with DirectConec<sup>™</sup> Boot

Housing Color	Multimode MTP Elite®	
	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	21752	21751
Heather Violet	21754	21753
Lime	21756	21755
Heuring Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	21758	21757

#### Ø 3.0mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO with DirectConec<sup>™</sup> Boot

Hausing Calar	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	21760	21759
Heather Violet	21762	21761
Lime	21764	21763
Housing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	21766	21765

### Ø 3.6mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO with DirectConec<sup>™</sup> Boot

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	23098	23097
Heather Violet	23100	23099
Lime	23102	23101
Housing Color	Single-Mod	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	23104	23103

# MTP<sup>®</sup> PRO with DirectConec<sup>™</sup> Push-Pull Boot | 20N Spring Force Ø 2.0mm – 3.6mm Nominal Cable OD





20N Spring Force, MTP<sup>\*</sup> PRO Connector with DirectConec<sup>™</sup> Push-Pull Boot (Exploded View)

#### Ø 2.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO with DirectConec<sup>™</sup> Boot

Heuring Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	21768	21767
Heather Violet	21770	21769
Lime	21772	21771
Heuring Color	Single-Mod	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	21774	21773

# Ø 2.5mm, Controlled, 20N Spring Force, MTP® PRO with DirectConec™ Boot

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	21776	21775
Heather Violet	21778	21777
Lime	21780	21779
Heuring Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	21782	21781

### Ø 3.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO with DirectConec<sup>™</sup> Boot

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	21784	21783
Heather Violet	21786	21785
Lime	21788	21787
Heuring Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	21790	21789

### Ø 3.6mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO with DirectConec<sup>™</sup> Boot

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	23106	23105
Heather Violet	23108	23107
Lime	23110	23109
Housing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	23112	23111



# Ø 2.0mm Short Boot, Controlled, 9.8N Spring Force, MTP® PRO

Housing Color	Multimode MTP Elite®	
	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	23192	23191
Heather Violet	23194	23193
Lime	23196	23195
Heusing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	23198	23197

# ${ m \emptyset}$ 3.0mm Short Boot, Controlled, 9.8N Spring Force, MTP® PRO

Upusing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18527	18526
Heather Violet	18529	18528
Lime	19523	19522
Housing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18531	18530

# $\emptyset$ 3.6mm Short Boot, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18575	18574
Heather Violet	18577	18576
Lime	19257	19526
Housing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18579	18578

# Ø 4.0mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO

Hausian Calan	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18611	18610
Heather Violet	18613	18612
Lime	20949	20948
Heuring Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18615	18614

# Ø 4.5mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18635	18634
Heather Violet	18637	18636
Lime	20951	20950
Housing Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18639	18638

# Ø 5.0mm, Controlled, 9.8N Spring Force, MTP® PRO

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18659	18658
Heather Violet	18661	18660
Lime	20953	20952
Heusing Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18663	18662

# Ø 5.5mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO

Heuring Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18683	18682
Heather Violet	18685	18684
Lime	20955	20954
Housing Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	19687	18686



# $\emptyset$ 3.0mm Short Boot, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18533	18532
Heather Violet	18535	18534
Lime	20983	20982
Heuring Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18537	18539

# $\emptyset$ 3.6mm Short Boot, Controlled, 20N Spring Force, MTP® PRO

Hausing Calar	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18581	18580
Heather Violet	18583	18582
Lime	20987	20986
Housing Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18585	18584

### Ø 4.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18617	18616
Heather Violet	18619	18618
Lime	20957	20956
Housing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18621	18620

# Ø 4.5mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO

	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18641	18640
Heather Violet	18643	18642
Lime	20959	20958
Liousing Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18645	18644

# Ø 5.0mm, Controlled, 20N Spring Force, MTP® PRO

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18665	18664
Heather Violet	18667	18666
Lime	20961	20960
Housing Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18669	18668

# $\emptyset$ 5.5mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO

Heusing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18689	18688
Heather Violet	18691	18690
Lime	20963	20962
Housing Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18693	18692



### Ø 3.0mm, Controlled, 9.8N Spring Force, MTP® PRO Angled

Housing Color	Multimode MTP Elite®	
	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18551	18550
Heather Violet	18553	18552
Lime	20995	20994
Housing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18555	18554

# Ø 3.6mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO Angled

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18599	18598
Heather Violet	18601	18600
Lime	20997	20996
Housing Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18603	18602

### Ø 4.0mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO Angled

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18623	18622
Heather Violet	18625	18624
Lime	20965	20964
Housing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18627	18626

# Ø 4.5mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO Angled

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18647	18646
Heather Violet	18649	18648
Lime	20967	20966
Housing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18651	18650

# Ø 5.0mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO Angled

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18671	18670
Heather Violet	18673	18672
Lime	20969	20868
Heuring Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18675	18674

# Ø 5.5mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO Angled

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18965	18964
Heather Violet	18967	18966
Lime	20971	20970
Housing Color	Single-Mod	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18699	18698



### Ø 3.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO Angled

Heuring Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18557	18556
Heather Violet	18559	18558
Lime	20999	20998
Housing Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18561	18560

# $\emptyset$ 3.6mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO Angled

Hausing Cales	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18605	18604
Heather Violet	18607	18606
Lime	21001	21000
Housing Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18609	18608

### Ø 4.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO Angled

Upusing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18629	18628
Heather Violet	18631	18630
Lime	20973	20972
Heusing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18633	18632

# ${\it \emptyset}$ 4.5mm, Controlled, 20N Spring Force, MTP® PRO Angled

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18653	18652
Heather Violet	18655	18654
Lime	20975	20974
Heusing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18657	18656

# Ø 5.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO Angled

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18677	18676
Heather Violet	18679	18678
Lime	20977	20976
Heuring Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18681	18680

# Ø 5.5mm, Controlled, 20N Spring Force, MTP $^{\circ}$ PRO Angled

Housing Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18701	18700
Heather Violet	18703	18702
Lime	20979	20978
Housing Color	Single-Mod	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18705	18704



# Ø 3.0mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO FLEX

Housing Color	Multimode MTP Elite®	
	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18539	18538
Heather Violet	18541	18540
Lime	21063	21062
Housing Color	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18543	18542

### $\emptyset$ 3.6mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO FLEX

Housing Color	Multimode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Aqua	18587	18586	
Heather Violet	18589	18588	
Lime	21065	21064	
Housing Color	Single-Mode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Green	18591	18590	



# Ø 3.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO FLEX

Housing Color	Multimode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Aqua	18545	18544	
Heather Violet	18547	18546	
Lime	20993	20992	
Housing Color	Single-Mode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Green	18549	18548	

### Ø 3.6mm, Controlled, 20N Spring Force, MTP® PRO FLEX

Heusing Color	Multimode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Aqua	18593	18592	
Heather Violet	18595	18594	
Lime	21003	21002	
Housing Color	Single-Mode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Green	18597	18596	



Bare Ribbon, 9.8N Spring Force, MTP® PRO Connector (Exploded View)

# Bare Ribbon, Controlled, 9.8N Spring Force, MTP® PRO

Housing Color	Multimode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Aqua	18707	18706	
Heather Violet	18709	18708	
Lime	21021	21020	
Housing Color	Single-Mode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Green	18711	18710	

### Bare Ribbon without Boot, Controlled, 9.8N Spring Force, MTP® PRO

Heuring Color	Multimode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Aqua	21025	21024	
Heather Violet	21027	21026	
Lime	21029	21028	
Heuring Color	Single-Mode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Green	21031 21030		



Bare Ribbon, 20N Spring Force, MTP® PRO Connector (Exploded View)

### Bare Ribbon, Controlled, 20N Spring Force, MTP® PRO

Housing Color	Multimode MTP Elite®			
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female		
Aqua	18713	18712		
Heather Violet	18715	18714		
Lime	21023	21022		
Liousing Color	Single-Mode MTP Elite®			
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female		
Green	18717	18716		

# Bare Ribbon without Boot, Controlled, 20N Spring Force, MTP® PRO

Housing Color	Multimode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Aqua	21033	21032	
Heather Violet	21035	21034	
Lime	21037 21036		
Housing Color	Single-Mode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Green	21039	21039 21038	



2 x 3.0mm Round, MTP<sup>®</sup> PRO Connector (Exploded View)

# 2 x Ø 3.0mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> PRO

Housing Color	Single-Mode MTP Elite®		
	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Green	20991	20990	

# MTP<sup>®</sup> PRO | 20N Spring Force 2 x Ø 3.0mm Nominal Cable OD

#### 2 x Ø 3.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup> PRO

Heuring Color	Multimode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Aqua	18719	18718	
Heather Violet	18721	18720	
Lime	20989	20988	
Housing Color	Single-Mode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Green	18723 18722		

# MTP<sup>®</sup> PRO Field Tool and Accessories

 Part Number	Description
18814	MTP® PRO Field Tool
18842	Pin Exchanger, MTP <sup>®</sup> PRO, Male, Aqua = 10 pieces/tube
18256	Pin Exchanger, MTP <sup>®</sup> PRO, Female, Aqua = 10 pieces/tube
18843	Pin Exchanger, MTP <sup>®</sup> PRO, Male - SME, Yellow = 10 pieces/tube
18841	Pin Exchanger, MTP <sup>®</sup> PRO, Female - SME, Yellow = 10 pieces/tube

# MTP<sup>®</sup> PRO Demonstration Tool Kit

	Contents
18963	<ul> <li>MTP<sup>®</sup> PRO Field Tool</li> <li>Mechanical Sample Jumper, MTP<sup>®</sup> PRO, 8-in length</li> </ul>
18916	<ul> <li>Cleaner, MPO II</li> <li>MTP® PRO Field Tool</li> <li>Mechanical Sample Jumper, MTP® PRO, 8-in length</li> <li>Pin Exchanger, MTP® PRO, Female, Aqua (10 pieces/tube)</li> <li>Pin Exchanger, MTP® PRO, Male - SME, Yellow (10 pieces/tube)</li> </ul>



# MTP<sup>®</sup> Connector with DirectConec<sup>™</sup> Push-Pull Boot | 9.8N Spring Force $\emptyset$ 2.0mm – 3.0mm Nominal Cable OD





9.8N Spring Force, MTP<sup>®</sup> Connector with DirectConec<sup>™</sup> Push-Pull Boot (Exploded View)

#### Ø 2.0mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> with DirectConec<sup>™</sup> Boot

Ususing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	24510	24508	24509 24508	
Magenta	24513	24511	24512	24511
Heather Violet	24516	24514	24515 24514	
Munsell Violet	24519	24517	24518	24517
Lime	24522	24520 24521		24520
Upusing Color	Single-Mode MTP Elite®		Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	24524	24523
Yellow	24526	24525	-	-

#### Ø 2.5mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> with DirectConec<sup>™</sup> Boot

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	24556	24554	24555	24554
Magenta	24559	24557	24558	24557
Heather Violet	24562	24560	24561	24560
Munsell Violet	24565	24563	24564	24563
Lime	24568	24566	24567	24566
Housing Color	Single-Mode MTP Elite®		Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	24570	24569
Yellow	24572	24571	-	-

#### Ø 3.0mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> with DirectConec<sup>™</sup> Boot

Multimode MTP Elite®		Multimode	
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
24602	24600	24601	24600
24605	24603	24604	24603
24608	24606	24607	24606
24611	24609	24610	24609
24614	24612	24613	24612
Single-Mode MTP Elite®		Single	-Mode
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
-	-	24616	24615
24618	24617	-	_
	MTP® Kit P/N, Male 24602 24605 24608 24611 24614 Single-Mod MTP® Kit P/N, Male -	MTP* Kit P/N, Male         MTP* Kit P/N, Female           24602         24600           24605         24603           24608         24606           24611         24609           24614         24612           Single-Mode MTP Elite*           MTP* Kit P/N, Male         MTP* Kit P/N, Female	MTP® Kit P/N, Male         MTP® Kit P/N, Female         MTP® Kit P/N, Male           24602         24600         24601           24605         24603         24604           24608         24606         24607           24611         24609         24610           24614         24612         24613           Single-Mode         MTP® Kit P/N, Female         MTP® Kit P/N, Male           MTP® Kit P/N, Male         MTP® Kit P/N, Female         MTP® Kit P/N, Male

# MTP<sup>®</sup> Connector with DirectConec<sup>™</sup> Push-Pull Boot | 20N Spring Force Ø 2.0mm – 3.0mm Nominal Cable OD





20N Spring Force, MTP<sup>®</sup> Connector with DirectConec<sup>™</sup> Push-Pull Boot (Exploded View)

#### Ø 2.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup> with DirectConec<sup>™</sup> Boot

Heuring Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	24533	24531	24532	24531
Magenta	24536	24534	24535	24534
Heather Violet	24539	24537	24538	24537
Munsell Violet	24542	24540	24541	24540
Lime	24545	24543	24544	24543
Housing Color	Single-Mode MTP Elite®		Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	24547	24546
Yellow	24549	24548	-	-

#### Ø 2.5mm, Controlled, 20N Spring Force, MTP<sup>®</sup> with DirectConec<sup>™</sup> Boot

Housing Color	Multimode	Multimode MTP Elite®		Multimode	
	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Aqua	24579	24577	24578	24577	
Magenta	24582	24580	24581	24580	
Heather Violet	24585	24583	24584	24583	
Munsell Violet	24588	24586	24587	24586	
Lime	24591	24589	24590	24589	
Lieusing Color	Single-Mode MTP Elite®		Single	-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Green	-	-	24593	24592	
Yellow	24595	24594	-	-	

# Ø 3.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup> with DirectConec<sup>™</sup> Boot

Housing Color	Multimode MTP Elite®		Multimode	
	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	24625	24623	24624	24623
Magenta	24628	24626	24627	24626
Heather Violet	24631	24629	24630	24629
Munsell Violet	24634	24632	24633	24632
Lime	24637	24635	24636	24635
Usersian Calan	Single-Mode MTP Elite <sup>®</sup>		Single	e-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Femal
Green	-	-	24639	24638
Yellow	24641	24640	-	-

# MTP<sup>®</sup> Connector Short Boot | 9.8N Spring Force $\emptyset$ 2.0mm – 3.6mm Nominal Cable OD





#### 9.8N Spring Force, MTP<sup>®</sup> Connector with Short Boot (Exploded View)

# $\emptyset$ 2.0mm Short Boot, Controlled, 9.8N Spring Force

Upusing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	23163	23161	23162	23161
Magenta	23166	23164	23165	23164
Heather Violet	23169	23167	23168	23167
Munsell Violet	23172	23170	23171	23170
Lime	23175	23173	23174	23173
Heusing Color	Single-Mode MTP Elite®		Single-	Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	23177	23176
Yellow	23179	23178	-	-

### $\emptyset$ 3.0mm Short Boot, Controlled, 9.8N Spring Force

Multimode MTP Elite®		Multimode	
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
20211	20209	20210	20209
20214	20212	20213	20212
20217	20215	20216	20215
20220	20218	20219	20218
20223	20221	20222	20221
Single-Mode MTP Elite®		Single	-Mode
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
-	-	20225	20224
20227	20226	-	-
	MTP® Kit P/N, Male 20211 20214 20217 20220 20223 Single-Mod MTP® Kit P/N, Male -	MTP® Kit P/N, Male         MTP® Kit P/N, Female           20211         20209           20214         20212           20217         20215           20220         20218           20223         20221           Single-Mode MTP Elite®           MTP® Kit P/N, Male         MTP® Kit P/N, Female           -         -	MTP* Kit P/N, Male         MTP* Kit P/N, Female         MTP* Kit P/N, Male           20211         20209         20210           20214         20212         20213           20217         20215         20216           20220         20218         20219           20223         20221         20222           Single-Mode         MTP* Kit P/N, Female         MTP* Kit P/N, Male           MTP* Kit P/N, Male         MTP* Kit P/N, Female         MTP* Kit P/N, Male

### $\emptyset$ 3.6mm Short Boot, Controlled, 9.8N Spring Force

Heusing Color	Multimode	MTP Elite <sup>®</sup>	Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20402	20400	20401	20400
Magenta	20405	20403	20404	20403
Heather Violet	20408	20406	20407	20406
Munsell Violet	20411	20409	20410	20409
Lime	20414	20412	20413	20412
	Single-Mod	Single-Mode MTP Elite®		-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20416	20415
Yellow	20418	20417	-	-

# MTP<sup>®</sup> Connector Short Boot | 20N Spring Force Ø 3.0mm – 3.6mm Nominal Cable OD

# $\emptyset$ 3.0mm Short Boot, Controlled, 20N Spring Force

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20234	20232	20233	20232
Magenta	20237	20235	20236	20235
Heather Violet	20240	20238	20239	20238
Munsell Violet	20243	20241	20242	20241
Lime	20246	20244	20245	20244
Housing Color	Single-Mode MTP Elite®		Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20248	20247
Yellow	20250	20249	-	-

#### Ø 3.6mm Short Boot, Controlled, 20N Spring Force

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20425	20423	20424	20423
Magenta	20428	20426	20427	20426
Heather Violet	20431	20429	20430	20429
Munsell Violet	20434	20432	20433	20432
Lime	20437	20435	20436	20435
Housing Color	Single-Mode MTP Elite <sup>®</sup>		Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20439	20438
Yellow	20441	20440	-	-



# $\emptyset$ 3.6mm, Controlled, 9.8N Spring Force

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20356	20354	20355	20354
Magenta	20359	20357	20358	20357
Heather Violet	20362	20360	20361	20360
Munsell Violet	20365	20363	20364	20363
Lime	20368	20366	20367	20366
Universide Color	Single-Mode	e MTP Elite®	Single-	Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20370	20369
Yellow	20372	20371	-	-

# $\emptyset$ 4.0mm, Controlled, 9.8N Spring Force

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20554	20552	20553	20552
Magenta	20557	20555	20556	20555
Heather Violet	20560	20558	20559	20558
Munsell Violet	20563	20561	20562	20561
Lime	20566	20564	20565	20564
Heusing Color	Single-Mode MTP Elite®		Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20568	20567
Yellow	20570	20569	-	-
	20570	20569	-	

# $\emptyset$ 4.5mm, Controlled, 9.8N Spring Force

Housing Color	Multimode MTP Elite®		Multimode	
	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20649	20647	20648	20647
Magenta	20652	20650	20651	20650
Heather Violet	20655	20653	20654	20653
Munsell Violet	20658	20656	20657	20656
Lime	20661	20659	20660	20659
Lauring Color	Single-Mode MTP Elite®		Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20663	20662
Yellow	20665	20664	-	-

# $\emptyset$ 5.0mm, Controlled, 9.8N Spring Force

Multimode MTP Elite®		Multimode	
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
20742	20740	20741	20740
20745	20743	20744	20743
20748	20746	20747	20746
20751	20749	20750	20749
20754	20752	20753	20752
Single-Mode MTP Elite®		Single-Mode	
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
-	-	20756	20755
20758	20757	-	-
	MTP® Kit P/N, Male 20742 20745 20748 20751 20754 Single-Mod MTP® Kit P/N, Male	MTP* Kit P/N, Male         MTP* Kit P/N, Female           20742         20740           20745         20743           20748         20746           20751         20749           20754         20752           Single-Mode         Elite*           MTP* Kit P/N, Male         MTP* Kit P/N, Female	MTP* Kit P/N, Male         MTP* Kit P/N, Female         MTP* Kit P/N, Male           20742         20740         20741           20745         20743         20744           20748         20746         20747           20751         20752         20750           20754         20752         20753           Single-Mode         MTP* Kit P/N, Female         MTP* Kit P/N, Male           MTP* Kit P/N, Male         MTP* Kit P/N, Female         MTP* Kit P/N, Male

# $\emptyset$ 5.5mm, Controlled, 9.8N Spring Force

Housing Color	Multimode MTP Elite <sup>*</sup>		Multimode	
	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20834	20832	20833	20832
Magenta	20837	20835	20836	20835
Heather Violet	20840	20838	20839	20838
Munsell Violet	20843	20841	20842	20841
Lime	20846	20844	20845	20844
Hausian Calan	Single-Mode MTP Elite®		Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20848	20847
Yellow	20850	20849	-	-



# $\emptyset$ 3.6mm, Controlled, 20N Spring Force

Housing Color	Multimode MTP Elite®		Multimode	
	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20379	20377	20378	20377
Magenta	20382	20380	20381	20380
Heather Violet	20385	20383	20384	20383
Munsell Violet	20388	20386	20387	20386
Lime	20391	20389	20390	20389
Housing Color	Single-Mode MTP Elite <sup>®</sup>		Single-Mode	
	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20393	20392
Yellow	20395	20394	-	-

# Ø 4.0mm, Controlled, 20N Spring Force

Heusing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20577	20575	20576	20575
Magenta	20580	20578	20579	20578
Heather Violet	20583	20581	20582	20581
Munsell Violet	20586	20584	20585	20584
Lime	20589	20587	20588	20587
Heusing Color	Single-Mode MTP Elite®		Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20591	20590
Yellow	20593	20592	-	-
#### $\emptyset$ 4.5mm, Controlled, 20N Spring Force

Heuring Color	Multimode	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Aqua	20672	20670	20671	20670	
Magenta	20675	20673	20674	20673	
Heather Violet	20678	20676	20677	20676	
Munsell Violet	20681	20679	20680	20679	
Lime	20684	20682	20683	20682	
Housing Color	Single-Mod	Single-Mode MTP Elite®		-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Green	-	-	20686	20685	
Yellow	20688	20687	-	-	

#### $\emptyset$ 5.0mm, Controlled, 20N Spring Force

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20765	20763	20764	20763
Magenta	20768	20766	20767	20766
Heather Violet	20771	20769	20770	20769
Munsell Violet	20774	20772	20773	20772
Lime	20777	20775	20776	20775
Heuring Color	Single-Mod	e MTP Elite®	Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20779	20778
Yellow	20781	20780	-	_

#### Ø 5.5mm, Controlled, 20N Spring Force

Heusing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20857	20855	20856	20855
Magenta	20860	20858	20859	20858
Heather Violet	20863	20861	20862	20861
Munsell Violet	20866	20864	20865	20864
Lime	20869	20867	20868	20867
Heusing Color	Single-Mode MTP Elite®		Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20871	20870
Yellow	20873	20872	-	-

## MTP<sup>®</sup> Connector Angled | 9.8N Spring Force Ø 3.0mm – 5.5mm Nominal Cable OD





#### $\emptyset$ 3.0mm, Controlled, 9.8N Spring Force, Angled

Housing Color	Multimode MTP Elite®		Multimode	
	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20304	20302	20303	20302
Magenta	20307	20305	20306	20305
Heather Violet	20310	20308	20309	20308
Munsell Violet	20313	20311	20312	20311
Lime	20316	20314	20315	20314
Housing Color	Single-Mode	e MTP Elite®	Single-	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20318	20317
Yellow	20320	20319	-	-

#### $\emptyset$ 3.6mm, Controlled, 9.8N Spring Force, Angled

Haveina Calan	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20494	20492	20493	20492
Magenta	20497	20495	20496	20495
Heather Violet	20500	20498	20499	20498
Munsell Violet	20503	20501	20502	20501
Lime	20506	20504	20505	20504
Haveina Calan	Single-Mode MTP Elite®		Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20508	20507
Yellow	20510	20509	-	-

#### $\emptyset$ 4.0mm, Controlled, 9.8N Spring Force, Angled

Heusing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20600	20598	20599	20598
Magenta	20603	20601	20602	20601
Heather Violet	20606	20604	20605	20604
Munsell Violet	20609	20607	20608	20607
Lime	20612	20610	20611	20610
	Single-Mod	e MTP Elite®	Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20614	20613
Yellow	20616	20615	-	-

#### $\emptyset$ 4.5mm, Controlled, 9.8N Spring Force, Angled

	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20695	20693	20694	20693
Magenta	20698	20696	20697	20696
Heather Violet	20701	20699	20700	20699
Munsell Violet	20704	20702	20703	20702
Lime	20707	20705	20706	20705
Heusing Color	Single-Mode MTP Elite®		Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20709	20708
Yellow	20711	20710	-	-

#### $\emptyset$ 5.0mm, Controlled, 9.8N Spring Force, Angled

Lieusing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20788	20786	20787	20786
Magenta	20791	20789	20790	20789
Heather Violet	20794	20792	20793	20792
Munsell Violet	20797	20795	20796	20795
Lime	20800	20798	20799	20798
Usuaina Calan	Single-Mode MTP Elite®		Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20802	20801
Yellow	20804	20803	-	-

#### $\emptyset$ 5.5mm, Controlled, 9.8N Spring Force, Angled

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20880	20878	20879	20878
Magenta	20883	20881	20882	20881
Heather Violet	20886	20884	20885	20884
Munsell Violet	20889	20887	20888	20887
Lime	20892	20890	20891	20890
Heusing Color	Single-Mod	e MTP Elite®	Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20894	20893
Yellow	20896	20895	-	-

# MTP<sup>®</sup> Connector Angled | 20N Spring Force Ø 3.0mm – 5.5mm Nominal Cable OD



#### Ø 3.0mm, Controlled, 20N Spring Force, Angled

Llousing Color	Multimode	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Aqua	20327	20325	20326	20325	
Magenta	20330	20328	20329	20328	
Heather Violet	20333	20331	20332	20331	
Munsell Violet	20336	20334	20335	20334	
Lime	20339	20337	20338	20337	
Haveina Calan	Single-Moc	Single-Mode MTP Elite®		-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Green	-	-	20341	20340	
Yellow	20343	20342	-	-	

\* Ferrules sold separately

#### $\emptyset$ 3.6mm, Controlled, 20N Spring Force, Angled

Hausing Calar	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20517	20515	20516	20515
Magenta	20520	20518	20519	20518
Heather Violet	20523	20521	20522	20521
Munsell Violet	20526	20524	20525	20524
Lime	20529	20527	20528	20527
Housing Color	Single-Mod	e MTP Elite®	Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20531	20530
Yellow	20533	20532	-	-

#### Ø 4.0mm, Controlled, 20N Spring Force, Angled

Multimode MTP Elite®		Multimode	
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
20623	20621	20622	20621
20626	20624	20625	20624
20629	20627	20628	20627
20632	20630	20631	20630
20635	20633	20634	20633
Single-Mode MTP Elite®		Single	-Mode
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
-	-	20637	20636
20639	20638	-	-
	MTP® Kit P/N, Male 20623 20626 20629 20632 20635 Single-Mod MTP® Kit P/N, Male -	MTP® Kit P/N, Male      MTP® Kit P/N, Female        20623      20621        20626      20624        20629      20627        20632      20630        20635      20633        Single-Mode MTP Elite®        MTP® Kit P/N, Male      MTP® Kit P/N, Female	MTP® Kit P/N, Male      MTP® Kit P/N, Female      MTP® Kit P/N, Male        20623      20621      20622        20626      20624      20625        20629      20627      20628        20635      20633      20631        Single-Mode MTP Elite®      Single        MTP® Kit P/N, Male      MTP® Kit P/N, Female

#### $\emptyset$ 4.5mm, Controlled, 20N Spring Force, Angled

Multimode	e MTP Elite®	Multi	mode
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
20718	20716	20717	20716
20721	20719	20720	20719
20724	20722	20723	20722
20727	20725	20726	20725
20730	20728	20729	20728
Single-Mod	e MTP Elite®	Single	-Mode
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
-	-	20732	20731
20734	20733	-	-
	MTP® Kit P/N, Male 20718 20721 20724 20727 20730 Single-Mod MTP® Kit P/N, Male -	MTP® Kit P/N, Male      MTP® Kit P/N, Female        20718      20716        20721      20719        20724      20722        20730      20728        Single-Mode MTP Elite®        MTP® Kit P/N, Male      MTP® Kit P/N, Female	MTP® Kit P/N, Male      MTP® Kit P/N, Female      MTP® Kit P/N, Male        20718      20716      20717        20721      20719      20720        20724      20722      20723        20730      20728      20729        Single-Mode      MTP® Kit P/N, Female      MTP® Kit P/N, Male        MTP® Kit P/N, Male      MTP® Kit P/N, Female      Single

Hausing Calar	Multimode	Multimode MTP Elite®		mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20811	20809	20810	20809
Magenta	20814	20812	20813	20812
Heather Violet	20817	20815	20816	20815
Munsell Violet	20820	20818	20819	20818
Lime	20823	20821	20822	20821
Usualiza Calan	Single-Mod	e MTP Elite®	Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20825	20824
Yellow	20827	20826	-	-

#### $\emptyset$ 5.0mm, Controlled, 20N Spring Force, Angled

#### $\emptyset$ 5.5mm, Controlled, 20N Spring Force, Angled

Housing Color	Multimode	Multimode MTP Elite®		mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20903	20901	20902	20901
Magenta	20906	20904	20905	20904
Heather Violet	20909	20907	20908	20907
Munsell Violet	20912	20910	20911	20910
Lime	20915	20913	20914	20913
Housing Color	Single-Mode	e MTP Elite®	Single-	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20917	20916
Yellow	20919	20918	-	-

# MTP® Connector | 9.8N Spring Force 2 x Ø 3.0mm Nominal Cable OD

#### 2 x Ø 3.0mm, Controlled, 9.8N Spring Force

Housing Color	Single-Mode MTP Elite®		
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Yellow	20923 20922		
Heusing Color	Single-Mode		
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Green	20921	20920	

# MTP<sup>®</sup> Connector | 20N Spring Force $2 \times \emptyset$ 3.0mm Nominal Cable OD

#### 2 x Ø 3.0mm, Controlled, 20N Spring Force

Housing Color	Multimode	e MTP Elite®	Multi	mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20930	20928	20929	20928
Magenta	20933	20931	20932	20931
Heather Violet	20936	20934	20935	20934
Munsell Violet	20939	20937	20938	20937
Lime	20942	20940	20941	20940
	Single-Mod	e MTP Elite®	Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20944	20943
Yellow	20946	20945	-	_

# MTP® FLEX Connector | 9.8N Standard Spring Force Ø 3.0mm – 3.6mm Nominal Cable OD

Round, 9.8N Spring Force, MTP® FLEX Connector (Exploded View)

#### $\emptyset$ 3.0mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> FLEX

Heuring Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20257	20255	20256	20255
Magenta	20260	20258	20259	20258
Heather Violet	20263	20261	20262	20261
Munsell Violet	20266	20264	20265	20264
Lime	20269	20267	20268	20267
Hausiaa Calaa	Single-Mod	e MTP Elite®	Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20271	20270
Yellow	20273	20272	-	-

#### $\emptyset$ 3.6mm, Controlled, 9.8N Spring Force, MTP<sup>®</sup> FLEX

Hausing Calan	Multimode	e MTP Elite®	Multi	imode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20448	20446	20447	20446
Magenta	20451	20449	20450	20449
Heather Violet	20454	20452	20453	20452
Munsell Violet	20457	20455	20456	20455
Lime	20460	20458	20459	20458
Usuaina Calan	Single-Mod	e MTP Elite®	Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20462	20461
Yellow	20464	20463	-	-



Round, 20N Spring Force, MTP® FLEX Connector (Exploded View)

#### ${\it \emptyset}$ 3.0mm, Controlled, 20N Spring Force, MTP® FLEX

Multimode	e MTP Elite®	Multi	imode
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
20281	20279	20280	20879
20284	20282	20283	20282
20287	20285	20286	20285
20290	20288	20289	20288
20293	20291	20292	20291
Single-Mod	e MTP Elite®	Single	-Mode
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
-	-	20295	20294
20297	20296	-	-
	MTP® Kit P/N, Male 20281 20284 20287 20290 20293 Single-Mod MTP® Kit P/N, Male -	20281      20279        20284      20282        20287      20285        20290      20288        20293      20291        Single-Mode MTP Elite®        MTP® Kit P/N, Male      MTP® Kit P/N, Female	MTP® Kit P/N, Male      MTP® Kit P/N, Female      MTP® Kit P/N, Male        20281      20279      20280        20284      20282      20283        20287      20285      20286        20290      20288      20289        20293      20291      20292        Single-Mode MTP Elite®      MTP® Kit P/N, Male        MTP® Kit P/N, Male      MTP® Kit P/N, Female

#### $\emptyset$ 3.6mm, Controlled, 20N Spring Force, MTP<sup>®</sup> FLEX

	Multimode	e MTP Elite®	Multi	mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20471	20469	20470	20469
Magenta	20474	20472	20473	20472
Heather Violet	20477	20475	20476	20475
Munsell Violet	20480	20478	20479	20478
Lime	20483	20481	20482	20481
Heusing Color	Single-Mod	e MTP Elite®	Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20485	20484
Yellow	20487	20486	-	-

# MTP<sup>®</sup> Enhanced Performance Connector $\mid$ 9.8N Spring Force $\not 0$ 3.0mm – 3.6mm Nominal Cable OD



#### Ø 3.0mm, MTP<sup>®</sup> Enhanced Performance, 9.8N Spring Force

Housing Color	Multimode MTP Elite®			
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female	
Aqua	13188		13187	
Housing Color	Single-Mode MTP Elite®		Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	12325	12324	15756	12324

#### Ø 3.6mm, MTP<sup>®</sup> Enhanced Performance, 9.8N Spring Force

Housing Color	Multimode MTP Elite®		
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Aqua	22102 22101		
Housing Color	Single-Mode MTP Elite <sup>®</sup>	Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Green	15852	15851	

# MTP® Enhanced Performance Connector $\mid$ 20N Spring Force $\emptyset$ 3.0mm – 3.6mm Nominal Cable OD



#### Ø 3.0mm, MTP<sup>®</sup> Enhanced Performance, 20N Spring Force

Housing Color	Multimode MTP Elite®		
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Aqua	15703	15702	
Usuaine Calan	Single-Mode MTP Elite <sup>®</sup>	Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Green	18148	18147	

#### Ø 3.6mm, MTP<sup>®</sup> Enhanced Performance, 20N Spring Force

Heuring Color	Multimode MTP Elite®		
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Aqua	15705	15704	
Heuring Color	Single-Mode MTP Elite®	Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Green	18150	18149	

#### MTP<sup>®</sup> Connector | 9.8N Spring Force Bare Ribbon



#### Bare Ribbon, Controlled, 9.8N Spring Force

Housing Color	Multimode	Multimode MTP Elite®		mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	19981	19979	19980	19979
Magenta	19984	19982	19983	19982
Heather Violet	19987	19985	19986	19985
Munsell Violet	19990	19988	19989	19988
Lime	19993	19991	19992	19991
	Single-Mode MTP Elite®		Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	19995	19994
Yellow	19997	19996	-	-



Bare Ribbon without Boot, 9.8N Spring Force, MTP® Connector (Exploded View)

#### Bare Ribbon without Boot, Controlled, 9.8N Spring Force

Housing Color	Multimode	Multimode MTP Elite®		imode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20027	20025	20026	20025
Magenta	-	-	20029	20028
Heather Violet	20030	20028	20032	20031
Munsell Violet	20036	20034	20035	20034
Lime	20039	20037	20038	20037
Usersing Color	Single-Mod	e MTP Elite®	Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20041	20040
Yellow	20043	20042	-	_

#### MTP<sup>®</sup> Connector | 20N Spring Force Bare Ribbon



#### Bare Ribbon, Controlled, 20N Spring Force

Multimode	e MTP Elite®	Mult	imode
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
20004	20002	20003	20002
20007	20005	20006	20005
20010	20008	20009	20008
20013	20011	20012	20011
20016	20014	20015	20014
Single-Mod	e MTP Elite®	Single	e-Mode
MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
-	-	20018	20017
20020	20019	-	-
	MTP® Kit P/N, Male 20004 20007 20010 20013 20016 Single-Mod MTP® Kit P/N, Male -	20004      20002        20007      20005        20010      20008        20013      20011        20016      20014        Single-Mode MTP Elite®        MTP® Kit P/N, Male      MTP® Kit P/N, Female	MTP* Kit P/N, Male      MTP* Kit P/N, Female      MTP* Kit P/N, Male        20004      20002      20003        20007      20005      20006        20010      20008      20009        20013      20011      20012        20016      20014      20015        Single-Mode MTP Elite*      Single        MTP* Kit P/N, Male      MTP* Kit P/N, Female        -      -      20018



Bare Ribbon without Boot, 20N Spring Force, MTP® Connector (Exploded View)

#### Bare Ribbon without Boot, Controlled, 20N Spring Force

Housing Color	Multimode	e MTP Elite®	Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20050	20048	20049	20048
Magenta	-	-	20052	20051
Heather Violet	20056	20054	20055	20054
Munsell Violet	20059	20057	20058	20057
Lime	20062	20060	20061	20060
	Single-Mod	e MTP Elite®	Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20064	20063
Yellow	20066	20065	-	-

#### MTP<sup>®</sup> Connector | 9.8N Spring Force Oval



#### Oval, Controlled, 9.8N Spring Force

Heuring Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20073	20071	20072	20071
Magenta	20076	20074	20075	20074
Heather Violet	20079	20077	20078	20077
Munsell Violet	20082	20080	20081	20080
Lime	20085	20083	20084	20083
Hausian Calan	Single-Mode MTP Elite®		Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20087	20086
Yellow	20089	20088	-	-

# MTP<sup>®</sup> Connector | 20N Spring Force Oval

#### Oval, Controlled, 20N Spring Force

Housing Color	Multimode	e MTP Elite®	Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	20096	20094	20095	20094
Magenta	20099	20097	20098	20097
Heather Violet	20102	20100	20101	20100
Munsell Violet	20105	20103	20104	20103
Lime	20108	20106	20107	20106
Housing Color				
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	20110	20109
Yellow	20112	20111	-	-

### MTP<sup>®</sup> Connector | 9.8N Spring Force 900µm



#### 900µm (x12) Controlled, 9.8N Spring Force

Heuring Color	Multimode	Multimode MTP Elite®		mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	15322	15321	15320	15321
Magenta	17061	17060	-	-
Lime	19220	19218	19219	19218
Heuring Color	Single-Mode MTP Elite®		Single	-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	15313	15316
Yellow	15314	15317	-	-

#### 900µm Breakout Kit

Cable Type/Application	Performance	MTP <sup>®</sup> Kit P/N
900µm to Ribbon	Multimode/Single-Mode	15323



# MTP®-16 Connector with DirectConec<sup>™</sup> Push-Pull Boot | 20N Spring Force Ø 2.0mm – 3.0mm Nominal Cable OD WILLING INTERCONDUCTION IN THE INFORMATION INTERVALUE INTERVALUE INFORMATION IN THE INFORMATION IN THE INFORMATION INTERVALUE INTERVALUE INFORMATION INTE

#### Ø 2.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup>-16 with DirectConec<sup>™</sup> Boot

Lauring Color	Multimode	MTP Elite <sup>®</sup>	Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	24644	24642	24643	24642
Magenta	24647	24645	24646	24645
Munsell Violet	24653	24651	24652	24651
Lime	24650	24648	24649	24648
Universide Color	Single-Mode MTP Elite®		Single-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	24652	24651
Yellow	24654	24653	-	-

#### Ø 2.5mm, Controlled, 20N Spring Force, MTP<sup>®</sup>-16 with DirectConec<sup>™</sup> Boot

Housing Color	Multimode	Multimode MTP Elite®		imode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	24657	24655	24656	24655
Magenta	24660	24658	24659	24658
Munsell Violet	24666	24664	24665	24664
Lime	24663	24661	24662	24661
Usuaina Calan	Single-Mode MTP Elite®		Single	e-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	24665	24664
Yellow	24667	24666	-	-

#### Ø 3.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup>-16 with DirectConec<sup>™</sup> Boot

Housing Color	Multimode	e MTP Elite®	Mult	imode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	24670	24668	24669	24668
Magenta	24673	24671	24672	24671
Munsell Violet	24679	24677	24678	24677
Lime	24676	24674	24675	24674
Heusing Color	Single-Mod	Single-Mode MTP Elite®		e-Mode
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Green	-	-	24678	24677
Yellow	24680	24679	-	-

#### MTP<sup>®</sup>-16 Connector Short Boot | 20N Spring Force Ø 2.0mm – 3.6mm Nominal Cable OD





Round, 20N Spring Force, MTP®-16 Connector with Short Boot (Exploded View)

#### Ø 2.0mm Short Boot, Controlled, 20N Spring Force, MTP®-16

Heuring Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	23182	23180	23181	23180
Magenta	23185	23183	23184	23183
Lime	23188	23186	23187	23186
Universide Color		Single	-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male MTP <sup>®</sup> Kit P/N, Female		/N, Female	
Green	23:	190	23189	

#### Ø 3.0mm Short Boot, Controlled, 20N Spring Force, MTP<sup>®</sup>-16

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	21176	21174	21175	21174
Magenta	21179	21177	21178	21177
Lime	21182	21180	21181	21180
Hausing Calan		Single	-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female	
Green	21:	184	21	183

#### Ø 3.6mm Short Boot, Controlled, 20N Spring Force, MTP<sup>®</sup>-16

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	21189	21187	21188	21187
Magenta	21192	21190	21191	21190
Lime	21195	21193	21194	21193
Usuaine Calan	Single-Mode			
Housing Color	MTP® Kit	MTP <sup>®</sup> Kit P/N, Male MTP <sup>®</sup> Kit P/N, Fer		/N, Female
Green	21	197	21196	



#### ${\it \emptyset}$ 3.6mm, Controlled, 20N Spring Force, MTP®-16

Housing Color	Multimode	Multimode MTP Elite®		Multimode	
	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Aqua	16529	16528	18030	16528	
Magenta	16531	16530	18031	16530	
Lime	19238	19236	19237	19236	
	Single-Mode				
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female		
Green	194	104	19403		

#### Ø 4.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup>-16

Upusing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	17788	17787	18032	17787
Magenta	17790	17789	18033	18089
Lime	19241	19239	19240	19239
Housing Color				
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female	
Green	19406		19	405

#### Ø 4.5mm, Controlled, 20N Spring Force, MTP®-16

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	18009	18008	18034	18008
Magenta	18011	18010	18035	18010
Lime	19244	19242	19243	19242
Usualiza Calan		Single	Mode	
Housing Color	MTP® Kit	MTP <sup>®</sup> Kit P/N, Male		/N, Female
Green	19	408	19407	

#### $\emptyset$ 5.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup>-16

Heusing Color	Multimode	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Aqua	17689	17688	18036	17688	
Magenta	17691	17690	18037	17690	
Lime	19247	19245	19246	19245	
Heusing Color		Single	-Mode		
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female		
Green	19	19410		409	

#### Ø 5.5mm, Controlled, 20N Spring Force, MTP<sup>®</sup>-16

Housing Color	Multimode MTP Elite®		Multimode	
	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	18013	18012	18038	18012
Magenta	18015	18014	18039	18014
Lime	19249	19248	19249	19248
Heusing Color				
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female	
Green	19	412	19	411

### MTP<sup>®</sup>-16 Connector | 20N Spring Force 2 x Ø 3.0mm Nominal Cable OD 00000000 2 x 3.0mm Round, 20N Spring Force, MTP®-16 Connector (Exploded View)

#### 2 x Ø 3.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup>-16

Housing Color	Multimode	MTP Elite <sup>®</sup>	Multimode		
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Aqua	17101	17100	18040	17100	
Magenta	17103	17102	18041	17101	
Lime	19253	19251	19252	19251	
Housing Color	Single-Mode				
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female		
Green	194	16	19415		

#### MTP<sup>®</sup>-16 Connector | 20N Spring Force Oval



Oval, 20N Spring Force, MTP®-16 Connector (Exploded View)

#### Oval, Controlled, 20N Spring Force, MTP®-16

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	21053	21051	21052	21051
Magenta	21056	21054	21055	21054
Lime	21059	21057	21058	21057
Heusing Color	Single-Mode			
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female	
Green	21	061	21060	

Connectors

# MTP<sup>®</sup>-16 Connector | 20N Spring Force Bare Ribbon



Bare Ribbon, 20N Spring Force, MTP®-16 Connector (Exploded View)

#### Bare Ribbon, Controlled, 20N Spring Force, MTP®-16

	Multimode MTP Elite®		Multimode		
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Aqua	17865	17864	18043	17864	
Magenta	17867	17866	18044	17866	
Lime	19256	19254	19255	19254	
Hausing Calan	Single-Mode				
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female		
Green	194	414	19413		

#### Bare Ribbon without Boot, Controlled, 20N Spring Force, MTP®-16

Housing Color	Multimode MTP Elite®		Multimode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female
Aqua	21042	21040	21041	21040
Magenta	21045	21043	21044	21043
Lime	21048	21046	21047	21046
	Single-Mode			
Housing Color	MTP <sup>®</sup> Kit P/N, Male MTP <sup>®</sup> Kit P/N,		/N, Female	
Green	21	050	21	049

#### Secure Key MTP<sup>®</sup> Solutions

US Conec's MTP<sup>®</sup> Secure Key Connectors offer the ability to physically control connections of multi-fiber trunk and patching cable assemblies through the use of color coded and uniquely keyed connector housings and flanged and reduced flange adapters. The MTP<sup>®</sup> Secure Key Connectors enhance network reliability by eliminating the possibility of misaligned interconnections.



#### **Features**

- For use with US Conec multimode, standard single-mode, and MT Elite® low-loss single-mode MT ferrules
- Will only mate with MTP<sup>®</sup> Secure Keyed connectors and adapters that have the same key
- Color code specific key for each notch
- Meets requirements IEC 61754-7 and TIA 604-5 Type MPO
- Available in fiber counts 4 through 72 fibers
- Compatible with bare ribbon and most oval or round cabling constructions
- Connectors and adapters in red, blue, yellow and green keying schemes are available as stock items\*\*
  \*\* Additional keying schemes available

#### **Applications**

- High density interconnects in large volume traffic areas that are accessed by multiple people
- Centralized interconnect zones with trunk cable assemblies where multiple protocols exist
- Physical layer routing of secure or dedicated fiber lines
- Common transition points for trunk cable assemblies that fan out to multiple processes

#### **Benefits**

- Makes routing and identification of assemblies easy
- Reduces network downtime by preventing misaligned patching
- Prevents unauthorized connections in multiple access locations
- Superior mechanical and optical performance that comes only from the MTP® Brand Keyed Connectors

#### **Keyed Examples**



#### **Color Options**

Inner Housing & Adapter Colors	Outer Housing Colors
Red	Beige
Yellow	Green
Green	Yellow
Blue	Aqua
Rose	
Aqua	
Brown	
Violet	
Orange	
Dark Gray	

\*Please contact US Conec Customer Service for ordering information

#### MTP® Adapters | Standard Footprint

Full FlangeOpposedBlackMTP-ADPTMTP-ADPOpposedBeige64969220OpposedGreen78688852OpposedAqua78699218OpposedBlue65319135	
OpposedBeige64969220OpposedGreen78688852OpposedAqua78699218	
Opposed Aqua 7869 9218	
Opposed Blue 6531 9135	
Opposed Red 17872 17873	3
Opposed Magenta 13770 13771	1
Opposed Yellow 17852 17853	3
Opposed Heather Violet 16697 16698	3
Opposed Munsell Violet 16772 16773	3
Opposed Lime 19451 19452	2
Opposed White 19925 19926	5
Aligned Gray 5306 12196	<u>5</u>
Flange Type Key Orientation Color Part Number (with 1 dust plug) Part Number (with	n 2 dust plugs)
Opposed Black MTP-RF-ADPT 12075	5
Reduced Flange Opposed Beige 12197 12202	2
Opposed Green 12198 12203	3
Opposed Aqua 9574 12204	1
	5
Opposed Blue 12200 12205	
Opposed      Blue      12200      12205        Opposed      Red      17874      17875	5
Opposed Red 17874 17875	1
Opposed      Red      17874      17875        Opposed      Magenta      13850      13851	5
OpposedRed1787417875OpposedMagenta1385013851OpposedYellow1785417855	1 5 3
OpposedRed1787417875OpposedMagenta1385013851OpposedYellow1785417855OpposedHeather Violet1670116703	1 5 3 5
OpposedRed1787417875OpposedMagenta1385013851OpposedYellow1785417855OpposedHeather Violet1670116705OpposedMunsell Violet1677516776	L 5 3 5 4

#### MTP® Adapters | SC Footprint | Full Flange

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
Full Flange	Opposed	Black	12036	12216
	Opposed	Beige	12212	12217
	Opposed	Green	12213	12218
	Opposed	Aqua	12214	12219
	Opposed	Blue	12215	12220
	Opposed	Red	17876	17877
	Opposed	Magenta	13772	13773
	Opposed	Yellow	17856	17857
	Opposed	Heather Violet	16706	16707
	Opposed	Munsell Violet	16779	16780
	Opposed	Lime	19457	19458
	Opposed	White	19929	19930
	Aligned	Gray	12037	12221

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plug
	Opposed	Black	12041	12226
Reduced Flange	Opposed	Beige	12222	12227
A	Opposed	Green	12223	12228
	Opposed	Aqua	12224	12229
	Opposed	Blue	12225	12230
	Opposed	Red	17878	17879
	Opposed	Magenta	13852	13853
	Opposed	Yellow	17858	17859
	Opposed	Heather Violet	16709	16710
	Opposed	Munsell Violet	16782	16783
-	Opposed	Lime	19459	19460
	Opposed	White	19931	19932
	Aligned	Gray	12042	12231

#### MTP® Adapters | SC Footprint | Reduced Flange

Flange Type	Key Orientation	Color	Part Number (with 2 dust plugs)	Part Number (with 4 dust plugs)
Full Flange	Opposed	Black	14974	14992
	Opposed	Beige	14975	14993
	Opposed	Green	14977	14994
	Opposed	Aqua	14978	14995
	Opposed	Blue	14979	14996
	Opposed	Red	14981	14998
	Opposed	Magenta	14982	15000
	Opposed	Yellow	16495	16496
	Opposed	Heather Violet	16712	16713
	Opposed	Munsell Violet	16785	16786
	Opposed	Lime	19646	19647
	Opposed	White	19933	19934
	Aligned	Gray	14980	14997
Flange Type	Key Orientation	Color	Part Number (with 2 dust plugs)	Part Number (with 4 dust plugs)
	Key Orientation Opposed	Color Black	Part Number (with 2 dust plugs) 14983	Part Number (with 4 dust plugs) 15001
Flange Type Reduced Flange				
	Opposed	Black	14983	15001
	Opposed Opposed	Black Beige	14983 14984	15001 15002
	Opposed Opposed Opposed	Black Beige Green	14983 14984 14985	15001 15002 15003
	Opposed Opposed Opposed Opposed	Black Beige Green Aqua	14983 14984 14985 14986	15001 15002 15003 15004
	Opposed Opposed Opposed Opposed Opposed	Black Beige Green Aqua Blue	14983 14984 14985 14986 14987	15001 15002 15003 15004 15005
	Opposed Opposed Opposed Opposed Opposed Opposed	Black Beige Green Aqua Blue Red	14983 14984 14985 14986 14987 14989	15001 15002 15003 15004 15005 15007
	Opposed Opposed Opposed Opposed Opposed Opposed Opposed	Black Beige Green Aqua Blue Red Magenta	14983 14984 14985 14986 14987 14989 14990	15001 15002 15003 15004 15005 15007 15008
	Opposed Opposed Opposed Opposed Opposed Opposed Opposed	Black Beige Green Aqua Blue Red Magenta Yellow	14983 14984 14985 14986 14987 14989 14990 16497	15001      15002      15003      15004      15005      15007      15008      16498
	Opposed Opposed Opposed Opposed Opposed Opposed Opposed Opposed	Black Beige Green Aqua Blue Red Magenta Yellow Heather Violet	14983 14984 14985 14986 14987 14989 14990 16497 16715	15001      15002      15003      15004      15005      15007      15008      16498      16716
	Opposed Opposed Opposed Opposed Opposed Opposed Opposed Opposed Opposed	Black Beige Green Aqua Blue Red Magenta Yellow Heather Violet Munsell Violet	14983 14984 14985 14986 14987 14989 14990 16497 16715 16788	15001 15002 15003 15004 15005 15007 15008 16498 16716 16789
	Opposed Opposed Opposed Opposed Opposed Opposed Opposed Opposed Opposed Opposed Opposed	Black Beige Green Aqua Blue Red Magenta Yellow Heather Violet Munsell Violet Lime	14983 14984 14985 14986 14987 14987 14989 14990 16497 16715 16788 19648	15001      15002      15003      15004      15005      15007      15008      16498      16716      16789      19649

\*Opposed: Key Option 1, TIA 604-5D \*Aligned: Key Option 2, TIA 604-5D

#### MTP<sup>®</sup> Shuttered Adapters

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)
	Opposed	Aqua	23644
Reduced Flange	Opposed	Black	24484
	Opposed	Beige	24485
	Opposed	Magenta	24486
	Opposed	Heather Violet	24487
	Opposed	Munsell Violet	24488
	Opposed	Lime	24489
	Opposed	Green	24490
	Opposed	Yellow	24491
	Opposed	Red	24492
	Opposed	Mustard	24493
	Opposed	Blue	24494
	Opposed	White	24495
	Opposed	Orange	24496
	Opposed	Slate	24497
	Opposed	Brown	24498
	Opposed	Rose	24499
	Opposed	Gray	23645

#### MTP<sup>®</sup> Specialty Adapters | Ganged

Туре	Flange Type	Key Orientation Color	Color	Part Number
Ganged	Ganged 1 x 4 Straight	Opposed	Black	9578
	Ganged 1 x 6 Straight	Opposed	Black	12697
	Ganged 2 x 8 Straight	Opposed	Black	12698
	Ganged 1 x 2 Angled	Opposed	Black	12278
	Ganged 1 x 4 Angled	Opposed	Black	9299



Ganged 1x4 Straight Adapter



Ganged 1x6 Straight Adapter



Ganged 2x8 Straight Adapter



Ganged 1x2 Angled Adapter



Ganged 1x4 Angled Adapter

Full FlangeOpposedBlack1701117012OpposedBeige1701317014OpposedGreen1701517016OpposedAqua1701717018OpposedBlue1701917020OpposedRed1702317024OpposedMagenta1702517026OpposedYellow1702717028	Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
OpposedBeige1701317014OpposedGreen1701517016OpposedAqua1701717018OpposedBlue1701917020OpposedRed1702317024OpposedMagenta1702517026		Opposed	Black	17011	17012
OpposedAqua1701717018OpposedBlue1701917020OpposedRed1702317024OpposedMagenta1702517026	Full Flange	Opposed	Beige	17013	17014
OpposedBlue1701917020OpposedRed1702317024OpposedMagenta1702517026		Opposed	Green	17015	17016
OpposedRed1702317024OpposedMagenta1702517026	KA .	Opposed	Aqua	17017	17018
Opposed Magenta 17025 17026		Opposed	Blue	17019	17020
		Opposed	Red	17023	17024
Opposed Yellow 17027 17028		Opposed	Magenta	17025	17026
		Opposed	Yellow	17027	17028
Opposed Heather Violet 17029 17030		Opposed	Heather Violet	17029	17030
Opposed Munsell Violet 17031 17032		Opposed	Munsell Violet	17031	17032
Aligned Gray 17021 17022		Aligned	Gray	17021	17022

#### MTP® Specialty Adapters | Angled

#### MTP<sup>®</sup> Specialty Adapters | Shuttered

Flange Type	Key Orientation	Color	Part Number
Shuttered	Opposed	Black	8835
	Opposed	Aqua	12431
	Opposed	Magenta	15333
	Aligned	Gray	9518

#### MTP® Specialty Adapters | EMI

Туре	Flange Type	Key Orientation	Color	Part Number
EMI	Full Flange	Opposed	Silver	5702
	Reduced Flange	Opposed	Silver	6156

#### MTP®-16 Adapters | Standard Footprint | Full Flange

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
Full Flange	Opposed	Black	17717	17718
	Opposed	Aqua	17719	17720
	Opposed	Magenta	17723	17724
	Opposed	Green	21266	21267
	Opposed	Heather Violet	21268	21269
	Opposed	Lime	21325	21326
	Aligned	Gray	17721	17722

#### MTP®-16 Adapters | Standard Footprint | Reduced Flange

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
Reduced Flange	Opposed	Black	17725	17726
	Opposed	Aqua	17727	17728
	Opposed	Magenta	17731	17732
	Opposed	Green	21262	21263
•	Opposed	Heather Violet	21264	21265
	Opposed	Lime	21323	21324
	Aligned	Gray	17729	17730

#### MTP®-16 Adapters | SC Footprint | Full Flange

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
Full Flange	Opposed	Black	16920	16921
	Opposed	Aqua	17137	17138
	Opposed	Magenta	17141	17142
	Opposed	Green	21258	21259
	Opposed	Heather Violet	21260	21261
	Opposed	Lime	21321	21322
	Aligned	Gray	16922	16923

\*Opposed: Key Option 1, TIA 604-5D \*Aligned: Key Option 2, TIA 604-5D

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
Reduced Flange	Opposed	Black	16926	16927
	Opposed	Aqua	17139	17140
	Opposed	Magenta	17143	17144
	Opposed	Green	21254	21255
	Opposed	Heather Violet	21256	21257
	Opposed	Lime	21318	21319
	Aligned	Gray	16928	16929

#### MTP<sup>®</sup>-16 Adapters | SC Footprint | Reduced Flange

#### MTP®-16 Adapters | SC Duplex Footprint | Full Flange

Flange Type	Key Orientation	Color	Part Number (with 2 dust plugs)	Part Number (with 4 dust plugs)
E.U. Flamma	Opposed	Black	21681	21682
Full Flange	Opposed	Aqua	21683	21684
	Opposed	Magenta	21689	21690
	Opposed	Green	21685	21686
	Opposed	Heather Violet	21691	21692
	Opposed	Lime	21695	21696
	Opposed	Yellow	21687	21688
	Opposed	Munsell Violet	21693	21694
	Opposed	White	22216	22217
	Aligned	Gray	21697	21698

#### MTP®-16 Adapters | SC Duplex Footprint | Reduced Flange

Flange Type	Key Orientation	Color	Part Number (with 2 dust plugs)	Part Number (with 4 dust plugs)
Reduced Flange	Opposed	Black	21663	21664
Reduced Flange	Opposed	Aqua	21665	21666
	Opposed	Magenta	21671	21672
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Opposed	Green	21667	21668
	Opposed	Heather Violet	21673	21674
	Opposed	Lime	21677	21678
	Opposed	Yellow	21669	21670
	Opposed	Munsell Violet	21675	21676
	Opposed	White	21679	21680
	Aligned	Gray	22214	22215

#### **MTP<sup>®</sup> Push-Pull Tabs**

The Push-Pull Tabs greatly simplify the use of MPO connectivity when manual access to the release slider and rear portion of the connector is restricted. This novel accessory for the expanding MTP<sup>®</sup> brand product family enables easy insertion and extraction of MTP<sup>®</sup> brand plugs in dense applications by providing a flexible extension tab which can be used to extract as well as insert the plug into the adapter port.

The MTP<sup>®</sup> brand Push-Pull Tab is compatible with all round MTP<sup>®</sup> brand connector hardware versions including the 3.0mm - 5.5mm round MTP<sup>®</sup> connector hardware. It can be installed in the factory or in the field after cable assemblies are produced.

 Part Number	Description
16654	MTP <sup>®</sup> Brand Push-Pull Tab

#### **MTP® Loopback Casings**

The MTP<sup>®</sup> Loopback Casing utilizes the novel MTP<sup>®</sup> Push-Pull Tab mechanism to provide for a simple, elegant method to encapsulate optical fibers in loopback test assemblies. The interaction of this accessory with standard US Conec MTP<sup>®</sup> connector hardware greatly simplifies use of the loopback assembly by eliminating the need to manually access the release slider during extraction from an MTP<sup>®</sup> port.



#### **MT Ferrule Dust Caps**

The US Conec MT ferrule caps are designed from a dissipative, non-outgassing, engineering thermoplastic. The unique geometry of the MT ferrule cap provides for a non-debris generating true dust seal around the endface on male or female MT Ferrules. The cap can be used on a stand-alone ferrule assembly or in conjunction with US Conec MTP<sup>®</sup> brand connector hardware.

 Part Number	Description
21577	Ferrule cap, MT, MT-16, and PMT ferrules, Grey
21578	Ferrule cap, MT, MT-16, and PMT ferrules, Red
7721	Dust Cap, MTP <sup>®</sup> /MT Ferrule
17242	Dust Cap, MTP®

#### **Dust Plugs**

The US Conec MTP<sup>®</sup> dust plugs are designed from a dissipative, non-outgassing, engineering thermoplastic. The 'permanent', which can be inserted into unused adapter ports, the low-profile latching, and the adapter dust plugs are compatible with any MPO compliant adapters and are optimized for the Secure Keyed MTP<sup>®</sup> Adapter product.

	Part Number	Description
-	16450	Dust Plug, MTP <sup>®</sup> , Permanent
	9817	Dust Plug, MTP®, Adapter

#### **MTP® FLEX Boots**

A bendable strain-relief boot, featuring a tight bend radius to support cable routing in highly dense areas. The advanced design offers flexible positioning from 0° to 90°, enduring multiple bends with minimal impact on performance. Where access to optical front panels may be a challenge, the MTP<sup>®</sup> FLEX boot enables ease of access and installation with the capability to maneuver fiber cable in any direction.

Part Number	Description
 15960	3.0mm Round MTP® FLEX Boot
 17065	3.6mm Round MTP® FLEX Boot

#### Fast-Track<sup>™</sup> MTP<sup>®</sup> Connector Solutions

US Conec's Fast-Track<sup>™</sup> MTP<sup>®</sup> connector system is an innovative addition to the proven MTP<sup>®</sup> product portfolio for very high fiber count pre-terminated cabling applications. Fast-Track<sup>™</sup> MTP<sup>®</sup> connectors offer an ultra-compact, MTP<sup>®</sup> compatible fiber termination solution for cable designs which incorporate multiple ribbons or arrayed fiber bundles. Each miniature, pre-terminated Fast-Track<sup>™</sup> MTP<sup>®</sup> sub-assembly is factory verified for polarity management and MT Elite<sup>®</sup> insertion loss performance for optimal deployment speed in pre-terminated data center inter and intra connect applications.



- SM MTP<sup>®</sup> Elite insertion loss performance (0.25dB 97% random intermate)
- Ultra-compact pre-terminated plug
- GR-1435 compliant
- Supports MT and MT-16
- 10N and 20N MPO spring force applications
- Compatible with 250, 200 and 165 micron optical fibers
- Tested to Telcordia GR-1435
- Intermateable with standard MPO and MPO-16 cabling

#### Fast-Track<sup>™</sup> MTP<sup>®</sup> Connector Kit, Adapter + Ferrule Push

	Single-Mode MTP Elite®	
Housing Color	MTP <sup>®</sup> Kit P/N, Male	
Green	24830	
Yellow	24831	
Mustard	24341	

#### Fast-Track<sup>™</sup> MTP<sup>®</sup> Connector Kit, Ferrule Push

	Single-Mode MTP Elite®		
Housing Color	MTP <sup>®</sup> Fast-Track™ Kit P/N, Male	MTP <sup>®</sup> Fast-Track <sup>™</sup> Kit P/N, Female	
Yellow	24148	24147	

#### **Standard MT Ferrule Technology**

Fast-Track<sup>™</sup> MTP<sup>®</sup> connectors are compatible with all US Conec MT footprint ferrule designs.

- 1x12 MT
- 2x12 MT
- 1x16 MT
- 2x16 MT
- All standardized mating forces for ensured fiber tip physical contact for lowest insertion loss applications
- Terminated plug footprint cross section equivalent to MT ferrule



# Connectors

#### **Pre-Engineered Efficiency**

Fast-Track<sup>™</sup> MTP<sup>®</sup> solutions are pre-engineered in the factory for simple, quick deployments.

- Fast-Track sub assembly keyed for polarity management
- Pre-populated Fast-Track<sup>™</sup> MTP<sup>®</sup> housing in adapter panel



#### **Backwards Compatibility**

Fast-Track<sup>™</sup> MTP<sup>®</sup> connectors mate with industry standard MPO cabling infrastructure.

- GR-1435 compliant interface
- Functions as standard, patchable MTP<sup>®</sup> connector after initial rapid installation



#### **MMC Connectors**

US Conec's MMC connector is a Very Small Form Factor (VSFF) multi-fiber optical connector designed for termination of single-mode and multimode fiber cables up to 2.5mm in diameter. The MMC connector employs novel TMT ferrule technology harmonized with the MT or MT-16 alignment structure. Individual connector access in the most extremely dense connector environments is easily accomplished using revolutionary DirectConec<sup>™</sup> push-pull boot technology.



**Features:** 

- 3x cabling port density over the MPO format
- Utilizes proven MT or MT-16 mechanical and fiber alignment structures
- Compatible with standard 250 micron OD and pitch optical fibers
- TMT Elite<sup>™</sup> low-loss, IEC Grade B insertion loss performance (0.25dB 97% random intermate)
- APC for both SM and MM applications
- Available in 1x12, 1x16 and 2x12 variants
- Tested to Telcordia GR-1435 and TIA-568
- Standard cabling industry infrastructure support including IBC cleaners, polishers, interferometers, and optical testing equipment

#### **TMT Ferrules**

US Conec manufactures durable, composite, Polyphenylene Sulfide (PPS) based thermoplastic ferrules that terminate 125 micrometer optical fiber. As in MT ferrules, the alignment mechanism consists of two stainless steel guide pins that fit into precisely molded alignment holes. The overall footprint of the TMT is reduced in comparison to a traditional MT ferrule. The length is half of a traditional MT ferrule, and the height is reduced by over 30% of an MT. These ferrules are used in conjunction with the MMC connector, but they are also suitable for custom designed passive or active fiber coupling packages. Similar to the MT ferrule, US Conec offers TMT ferrules with low insertion loss performance that aligns with IEC's 61755-1 Grade B performance definition.

#### Features:

- 250 micron pitch
- Compatible with 250, 200, and 165 micron fibers
- Intermateable with corresponding MT and MT-16 formats
- Low insertion loss for SM APC and MM APC applications

#### TMT, Multimode MT Ferrules

Part Number	Description
24919	12-Fiber, Multimode TMT Elite® (1x12 Footprint)
24920	16-Fiber, Multimode TMT Elite® (1x16 Footprint)
24922	24-Fiber, Multimode TMT Elite® (2x12 Footprint)

#### TMT, Single-mode MT Ferrules

Part Number	Description
24918	12-Fiber, Single-mode TMT Elite <sup>®</sup> (1x12 Footprint)
23372	16-Fiber, Single-mode TMT Elite <sup>®</sup> (1x16 Footprint)
23821	24-Fiber, Single-mode TMT Elite <sup>®</sup> (2x12 Footprint)

#### Epoxy (For use with TMT Ferrules)

Part Number	Description
24689	Epoxy, 353ND, 4g Pack



#### Ø 2.0mm, Controlled, MMC Connector with 28mm DirectConec<sup>™</sup> Boot

Housing Color	Single-Mode Elite	
	MMC Kit P/N, Male	MMC Kit P/N, Female
Green	24890	24889

#### Ø 2.3mm, Controlled, MMC Connector with 28mm DirectConec<sup>™</sup> Boot

Housing Color	Single-Mode Elite	
	MMC Kit P/N, Male	MMC Kit P/N, Female
Green	24892	24891

#### Ø 2.5mm, Controlled, MMC Connector with 28mm DirectConec™ Boot

Housing Color	Single-Mode Elite	
	MMC Kit P/N, Male	MMC Kit P/N, Female
Green	24894	24893

#### Bare Ribbon, Controlled, MMC Jr. Connector

Housing Color	Single-Mode Elite	
	MMC Kit P/N, Male	
Green	24895	

#### Ø 2.0mm, Controlled, MMC-16 Connector with 28mm DirectConec<sup>™</sup> Boot

Housing Color	Single-Mode Elite	
	MMC Kit P/N, Male	MMC Kit P/N, Female
Green	24897	24896

#### Ø 2.3mm, Controlled, MMC-16 Connector with 28mm DirectConec™ Boot

Housing Color	Single-Mode Elite	
Housing Color	MMC Kit P/N, Male	MMC Kit P/N, Female
Green	24899	24898

#### Ø 2.5mm, Controlled, MMC-16 Connector with 28mm DirectConec<sup>™</sup> Boot

Housing Color	Single-Mode Elite	
	MMC Kit P/N, Male	MMC Kit P/N, Female
Green	24901	24900

#### Bare Ribbon, Controlled, MMC-16 Jr. Connector

	Single-Mode Elite
Housing Color	MMC Kit P/N, Male
Green	24902
# MMC 1-Port Adapters

	Color	Mating Connectors (Front/Back)	Dust Plugs	Part Number
	Green	MMC/MMC	0	24925
1	Green	MMC/MMC	1	25156
	Green	MMC/MMC	2	25164

### MMC 2-Port Adapters

	Color	Mating Connectors (Front/Back)	Dust Plugs	Part Number
	Green	MMC/MMC	0	24188
-	Green	MMC/MMC	2	24196
	Green	MMC/MMC	4	24204

### MMC 4-Port Adapters

	Color	Mating Connectors (Front/Back)	Dust Plugs	Part Number
and the second s	Green	MMC/MMC	0	24245
N: 17	Green	MMC/MMC	4	24253
	Green	MMC/MMC	8	24261
	Color	Mating Connectors (Front/Back)	Dust Plugs	Part Number
··· · · · · · · · · · · · · · · · · ·	Green	MMC/MMC Jr.	0	24171
	Green	MMC/MMC Jr.	4	24287

#### MMC 6-Port Adapters

	Color	Mating Connectors (Front/Back)	Dust Plugs	Part Number
····	Green	MMC/MMC Jr.	0	25003
	Green	MMC/MMC Jr.	6	25004

# MMC Connector Tools

Part Number	Description
21708	Crimp Die
22322	Crimp Die Guide
25046	Crimp Die Set with Crimp Die Guide
24868	MMC Shroud Removal and Spring Compression Tool
25238	MMC Spring Compression Tool

#### **MXC®** Connectors

The MXC<sup>®</sup> connector platform is a versatile, cost effective, next generation connectivity solution optimized for direct interface to equipment densely populated with mid-board mounted, multimode or single-mode optical modules. Supporting a varied selection of link designs, the MXC<sup>®</sup> package is optimized for expanded beam PRIZM<sup>®</sup> MT ferrules providing for a more robust and debris insensitive interface compared to traditional physical contact solutions. The unique, streamlined external plug recesses the multi-fiber ferrule protecting the lensed interface while providing maximum port density. Designed specifically for intra-rack and inter-rack point to point links, the MXC<sup>®</sup> solution combines the bulkhead adapter and on-card plug into a single component, minimizing PCB space consumption on the inside of the equipment.

The MXC<sup>®</sup> connector platform also supports blind-mating of the optical fiber demarcation point for true optical backplane or mid-plane architectures. Utilizing the same external cable plugs for front panel and backplane applications, novel X, Y & Z floating mechanisms allow for generous mismatch between the card mounted and rack mounted connector components.



#### **Features:**

- Optimized for point to point, equipment card interface applications
- Debris insensitive resulting in high reliability
- Supports a wide variety of link designs in both multimode and single-mode
- Reduced complexity plug BOP
- Fewer components with traditional adapter eliminated
- Optimized for US Conec's expanded beam PRIZM<sup>®</sup> MT ferrule technology

#### **Applications**

- Bulkhead fiber demarcation point for embedded single-mode and multimode Tx/Rx architectures
- Front panel and backplane\* multi-fiber point to point links
  - High performance computing
  - Switching/routing fabrics
  - Switch to server interconnects
  - Switch to switch interconnects



PRIZM® MT Alignment Post



Color	Kit Part Number	Description
	15752	Receptacle, MXC <sup>®</sup>
1	15899	Kit, Receptacle w/Heatshrink Attachment, MXC®
Aqua	15900	Kit, Receptacle w/Dust Plug, MXC <sup>®</sup>
	15901	Kit, Receptacle w/Heatshrink Attachment & Plug, MXC®

The MXC® receptacle is compatible with the PRIZM® MT Ferrule (sold separately).

### MXC<sup>®</sup> Blind Mate Hardware

Kit Part Number	Description
19888	Kit, Plug External, 3.0mm/Ribbon MXC <sup>®</sup> , Bend Relief with Push-Pull Tab, Aqua
19886	Kit, Plug External, Ribbon, Aqua
22184	Kit, Plug Internal, MXC <sup>®</sup> 6 Port Blind Mate, Gray
17096	Blind Mate Assembly, MXC <sup>®</sup> 6 Port Blind Mate
15168	Plug Carrier, MXC <sup>®</sup> 6 Port Blind Mate
15170	Adapter, MXC <sup>®</sup> 6 Port Blind Mate
16607	Mounting Bracket, MXC <sup>®</sup> 6 Port Blind Mate, 1x1
22076	Kit, Plug Internal, MXC <sup>®</sup> Single Port Blind Mate, Gray
21644	Adapter with Shutter, MXC <sup>®</sup> Single Port Blind Mate, Aqua
21280	Mounting Bracket, MXC <sup>®</sup> Single Port Blind Mate, Black

#### **PRIZM® LightTurn® Connector**

Designed as a miniature detachable connector for board mounted parallel optic modules, the PRIZM<sup>®</sup> LightTurn<sup>®</sup> connector solution provides passive alignment and novel retention features allowing multiple re-matings perpendicular to the printed circuit board. The PRIZM® LightTurn® connector consists of a multi-fiber ferrule with a photonic turn TIR lens array accepting cleaved fibers with an accompanying connector housing. The termination is simple and low cost requiring no polishing of fibers and easy testing, yet providing excellent passive coupling to the VCSEL and photodiode array within the parallel optic module for MPO based pluggable transceivers, Active Optical Cables, and on-board mounted optical engines.

The PRIZM<sup>®</sup> LightTurn<sup>®</sup> connector is optimized to be used with US Conec's Mechanical Optical Interface (MOI) which is designed to transmit collimated light between the MOI and PRIZM® LightTurn ferrule. The MOI has the mechanical features which couple directly to the latches on the PRIZM® LightTurn housings. The MOI lens array focuses light to a photodetector array and collimates light from a VCSEL array is therefore suitable for both Tx and Rx applications.

#### **Features:**

- TIR (total internal reflection) lens
- Wavelength independent optical grade material Pre-alignment latches on connector housing
- Bidirectional components
- Integrated alignment pins
- Housing protects TIR lens array

- Ferrule float within the connector
- Keyed for proper mating orientation
- Quick termination, no polishing
- Collimated light at optical interface



PRIZM<sup>®</sup> LightTurn<sup>®</sup> Connector

#### **Specifications**

Material	Performance	
PEI	50 remates	-

### PRIZM<sup>®</sup> LightTurn<sup>®</sup>

	Part Number	Description
	13950	PRIZM® LightTurn® Reduced Window Ferrule
	9771	PRIZM <sup>®</sup> LightTurn <sup>®</sup> Bare Ribbon Housing
(Chan	15215	PRIZM® LightTurn® Mini Housing
	15059	Kit, PRIZM <sup>®</sup> LightTurn <sup>®</sup> Jacketed Cable Housing
	18016	PRIZM® LightTurn® Dust Cap (Charcoal)
	16874	Epoxy AB9320 for PRIZM® Ferrules

# PRIZM® LightTurn® Mechanical Optical Interface (MOI)

The MOI provides the coupling interface between the PRIZM<sup>®</sup> LightTurn<sup>®</sup> connector and the optical transmitter or photodiode array. The MOI is first aligned to the transmitter or photodiode array and permanently attached to the substrate allowing for passive alignment of the PRIZM<sup>®</sup> LightTurn<sup>®</sup> connector. The connector housing latches hold the PRIZM<sup>®</sup> LightTurn<sup>®</sup> connector to the MOI facilitating multiple rematings. A secondary optic is embedded in the MOI to relay light through the system. In a transmit configuration, the output from each transmitter is collimated by the MOI so that it is focused by the PRIZM<sup>®</sup> LightTurn<sup>®</sup> connector TIR lens for coupling into multimode fiber. In a receive configuration the nearly collimated output from the PRIZM<sup>®</sup> MT ferrule TIR lens is focused by the secondary optic onto the detector.

#### **Features:**

- Bidirectional operation; one MOI for both Tx and Rx operation
- Enhanced post features for consistent and stronger bond performance to PCB substrate
- Provides passive alignment and multiple rematings of the PRIZM® LightTurn® connector
- Improved clearance for driver chip sets and wire bonds
- Lower profile to fit into smaller packages like QSFP
- Available in different lens prescriptions and stand-off post heights for optimizing into VCSEL/PD arrays

#### **Specifications**

Interface	Lens Spec	Operation
12-channel	Refractive	850nm



PRIZM<sup>®</sup> LightTurn<sup>®</sup> Connector with MOI in Embedded Module Application

# PRIZM® LightTurn® Mechanical Optical Interface (MOI)

 Part Number	Description
17813	PRIZM <sup>®</sup> Mechanical Optical Interface (MOI) 25+ Gbps

#### **ELiMENT® MDC Connector**

US Conec's ELIMENT<sup>®</sup> MDC connector is a Very Small Form Factor (VSFF) duplex optical connector designed for termination of Multi-mode and Single-mode fiber cables up to 2.0mm in diameter. The MDC connector is designed with DirectConec<sup>™</sup> push-pull boot technology to provide simple connector insertion and extraction in even the densest cabling environments.

#### **Features:**

- Two 1.25mm ferrules in one connector housing
- DirectConec<sup>™</sup> push-pull boot for connector insertion and extraction
- Simple polarity reversal with no exposed fibers
- Meets IEC Grade B insertion loss requirements
- Telcordia GR-326 and TIA-568 compliant
- Designed for cables up to 2.0mm OD
- MM, SM and SM APC available
- 3x fiber cabling density over LC



Performance	Housing Color	Part Number		
	Aqua	22084		
Multimode	Heather Violet	22236		
	Lime	22237		
Single-Mode	Blue	22082		
Single-Mode APC	Green	22083		

#### ELiMENT<sup>®</sup> MDC Jr. Connector

Performance	Housing Color	Part Number		
	Aqua	22087		
Multimode	Heather Violet	22239		
	Lime	22240		
Single-Mode	Blue	22085		
Single-Mode APC	Green	22086		

## ELIMENT<sup>®</sup> MDC Connector Tools

Part Number	Description
21708	Crimp Die
22322	Crimp Die Guide
25046	Kit, Crimp Die & Crimp Die Guide
21299	Curing Clip
22675	Ferrule Rotation Tool
22127	MDC Jr Removal Tool

Flange Type	Key Orientation	Color	Mating Connectors (Front/Back)	Part Number (with 0 dust plugs)	Part Number (with 2 dust plugs)	Part Number (with 4 dust plugs)
	Aligned	Aqua	MDC/MDC	22526	22548	21868
Reduced Flange –	Aligned	Heather Violet	MDC/MDC	22527	22549	21870
	Aligned	Lime	MDC/MDC	22528	22550	21869
	Aligned	Blue	MDC/MDC	22524	22546	21866
-	Aligned	Green	MDC/MDC	22525	22547	21867

# ELIMENT<sup>®</sup> MDC 2-Port Adapters

# ELIMENT<sup>®</sup> MDC 3-Port Adapters

Flange Type	Key Orientation	Color	Mating Connectors (Front/Back)	Part Number (with 0 dust plugs)	Part Number (with 3 dust plugs)
	Aligned	Aqua	MDC/MDC Jr.	21880	21873
No Flange –	Aligned	Heather Violet	MDC/MDC Jr.	21882	21875
	Aligned	Lime	MDC/MDC Jr.	21881	21874
-	Aligned	Blue	MDC/MDC Jr.	21878	21871
	Aligned	Green	MDC/MDC Jr.	21879	21872

# ELIMENT<sup>®</sup> MDC 4-Port Adapters

Flange Type	Key Orientation	Color	Mating Connectors (Front/Back)	Part Number (with 0 dust plugs)	Part Number (with 4 dust plugs)
	Aligned	Aqua	MDC/MDC Jr.	22851	22857
No Flange	Aligned	Heather Violet	MDC/MDC Jr.	22852	22858
	Aligned	Lime	MDC/MDC Jr.	22853	22859
	Aligned	Blue	MDC/MDC Jr.	22849	22855
	Aligned	Green	MDC/MDC Jr.	22850	22856

Flange Type	Key Orientation	Color	Mating Connectors (Front/Back)	Part Number (with 0 dust plugs)	Part Number (with 4 dust plugs)
	Aligned	Aqua	MDC/MDC	23559	23570
Reduced Flange	Aligned	Heather Violet	MDC/MDC	23560	23571
and the second s	Aligned	Lime	MDC/MDC	23561	23572
	Aligned	Blue	MDC/MDC	23557	23568
	Aligned	Green	MDC/MDC	23558	23569
-	Opposed	Aqua	MDC/MDC	23592	23603
	Opposed	Heather Violet	MDC/MDC	23593	23604
	Opposed	Lime	MDC/MDC	23594	23605
	Opposed	Blue	MDC/MDC	23590	23601
	Opposed	Green	MDC/MDC	23591	23602

\*Other configurations are available. Please contact US Conec Customer Service for ordering information.

#### **ELiMENT® Duplex LC Uniboot**

US Conec's ELIMENT<sup>\*</sup> Duplex LC Uniboot is a high performance two-in-one LC connector that provides quick and easy toolless polarity reversal. The Duplex LC Uniboot reduces internal fiber damage by limiting fiber rotation to 180 degrees while eliminating exposed fibers during polarity reversal.

The redesigned low profile housing of the Duplex LC Uniboot is designed for high density applications. When maximizing panel density, the adapters can be stacked and the connector can be disconnected by grasping the sides of the housing or by using the DirectConec<sup>™</sup> push-pull boot. DirectConec<sup>™</sup> push-pull technology provides access to the connector for effortless insertion and extraction.

#### Features:

- PC and APC Uniboot connectors are polished as duplex connectors
- No tool required for polarity change
- Color coded polarity window clearly visible



- Engineered installation tools designed to increase operator output, reduce scrap, and improve first-time yields
- Low profile design and DirectConec<sup>™</sup> push-pull technology for high density applications
- 2mm and 3mm cable options available for MM, SM, and APC applications

#### Ø 1.6 – 2.0mm ELiMENT<sup>®</sup> Duplex LC Uniboot with DirectConec<sup>™</sup> Boot

Performance	LC Plug Color	Housing Color	Heatshrink Color	Boot Color	Part Number
	Black	Aqua	Yellow	Black	22630
	Black	Aqua	White	Black	22631
	Black	Heather Violet	Yellow	Black	22632
Multimode	Black	Heather Violet	White	Black	22633
	Black	Lime	Yellow	Black	22634
	Black	Lime	White	Black	22635
Circle Made	Blue	Blue	Yellow	Black	22626
Single-Mode	Blue	Blue	White	Black	22627
	Green	Green	Yellow	Black	22628
Single-Mode APC	Green	Green	White	Black	22629

Performance	LC Plug Color	Housing Color	Buffer Tube Size	Boot Color	Part Number
	Black	Aqua	900	Black	22752
	Black	Aqua	600	Black	22933
Multimode	Black	Heather Violet	900	Black	22753
Multimode	Black	Heather Violet	600	Black	22934
	Black	Lime	900	Black	22754
	Black	Lime	600	Black	22935
Circle Made	Blue	Blue	900	Black	22750
Single-Mode	Blue	Blue	600	Black	22931
Single Mede ADC	Green	Green	900	Black	22751
Single-Mode APC	Green	Green	600	Black	22932

## Ø 3.0mm ELiMENT<sup>®</sup> Duplex LC Uniboot with DirectConec<sup>™</sup> Boot

# ELiMENT<sup>®</sup> Duplex LC Uniboot Installation Tools

 Part Number	Description
19604	LC Uniboot Curing Fixture
19448	LC Uniboot Gear Installation Tool
19629	LC Uniboot Body Alignment Tool
18354	Crimp Die
18356	Crimp Tool & Die

\*Other configurations including standard boot and push-pull tabs are available. Please contact US Conec Customer Service for ordering information.

#### **ELIMENT® LC Connectors**

US Conec offers a high performance single fiber LC connector that exceeds GR 326-CORE, Issue 4 requirements. US Conec LC ferrules have a flat end face and are fully compliant to TIA/EIA-604-10B, IEC 61754-20, RoHS2, and REACH 169 directives.

#### **Features:**

- MM, SM, and APC
- 900µm and 1.6/2.0mm cable boots
- One-piece tunable connector body
- Yellow and White heat shrink available
- Meets IEC Attenuation Grade B random mating requirements (0.12 dB mean, 0.25 dB maximum for ≥ 97% of the connectors)

### 900µm ELiMENT® LC Connector

Performance	Housing Color	Housing Color Boot Color	
	Aqua	Black	17223
Multimode	Aqua	Aqua	17306
	Heather Violet	Black	17969
Single-Mode	Blue	Black	17225
	Blue	Blue	17302
	Blue	White	17303
Single-Mode APC	Green	Black	17227
	Green	Green	17308

## Ø 2.0mm ELIMENT® LC Connector

Performance	Housing Color	Heatshrink Color	Boot Color	Part Number
	Aqua	White	Black	17224
	Aqua	White	Aqua	17307
Multimode	Aqua	Yellow	Black	17405
Multimode	Aqua	Yellow	Aqua	17406
	Heather Violet	White	Black	17970
	Heather Violet	Yellow	Black	17971
	Blue	White	Black	17226
	Blue	White	Blue	17304
Cingle Mede	Blue	White	White	25556
Single-Mode	Blue	Yellow	Black	17402
	Blue	Yellow	Blue	17403
	Blue	Yellow	White	25557
	Green	White	Black	17228
Single Made ADC	Green	White	Green	17309
Single-Mode APC	Green	Yellow	Black	17407
	Green	Yellow	Green	17408



# ELIMENT® LC Adapters | Duplex | Full Flange

Flange Type	Color	Part Number
Full Flange	Aqua	18241
	Blue	17336
	Green	17253
	Heather Violet	17926

# ELiMENT<sup>®</sup> LC Adapters | Duplex | Reduced Flange

Flange Type	Color	Part Number
Reduced Flange	Aqua	18242
	Blue	18260
	Green	18261
	Heather Violet	17924

# ELIMENT<sup>®</sup> LC Adapters | Quad | Full Flange

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Flange Type	Color	Part Number
Full Flange	Aqua	17929
	Blue	17927
	Green	17928
	Heather Violet	17930

# ELIMENT® LC Adapters | Quad | Reduced Flange

Flange Type	Color	Part Number
Reduced Flange	Aqua	17933
	Blue	17931
	Green	17932
	Heather Violet	17934

# ELIMENT<sup>®</sup> LC Tools & Accessories

Part Number	Description
18354	Crimp Die
18356	Crimp Tool & Die
18900	LC Duplex Clip

#### **ELiMENT® SC Connectors**

US Conec offers a one-piece SC connector that exceeds GR 326-CORE, Issue 4 requirements. US Conec single-mode and multi-mode 2.5mm diameter ferrules have a pre-radiused end face, meet TIA/EIA-604-3B and IEC 61754-4, and are compliant with RoHS2 and REACH 169 directives.

#### **Features:**

- MM, SM, and APC
- 900μm, 2mm, and 3mm cable boots
- One-piece tunable connector body
- Meets IEC Grade B insertion loss requirements
  (0.12 dB mean, 0.25 dB maximum for ≥ 97% of the connectors)

#### 900µm ELiMENT® SC Connector

Performance	Housing Color	Boot Color	Part Number
	Aqua	Black	17257
Multimode	Aqua	Aqua	17361
	Heather Violet	Black	17975
Single-Mode	Blue	Black	17263
	Blue	Blue	17355
	Blue	White	17356
Single-Mode APC	Green	Black	17266
	Green	Green	17364

#### Ø 2.0mm ELiMENT<sup>®</sup> SC Connector

Performance	Housing Color	Boot Color	Part Number
	Aqua	Black	17258
Multimode	Aqua	Aqua	17362
	Heather Violet	Black	17976
Single-Mode	Blue	Black	17264
	Blue	Blue	17357
	Blue	White	17358
Single-Mode APC	Green	Black	17267
	Green	Green	17365

#### Ø 3.0mm ELIMENT<sup>®</sup> SC Connector

Performance	Housing Color	Boot Color	Part Number
	Aqua	Black	17259
Multimode	Aqua	Aqua	17363
	Heather Violet	Black	17977
	Blue	Black	17265
Single-Mode	Blue	Blue	17359
	Blue	White	17360
Single-Mode APC	Green	Black	17268
	Green	Green	17366





# ELiMENT<sup>®</sup> SC Adapters | Simplex | Full Flange

Flange Type	Color	Part Number
Full Flange	Aqua	18262
	Blue	17254
	Green	17337
	Heather Violet	17936

### ELiMENT<sup>®</sup> SC Adapters | Simplex | Reduced Flange

Flange Type	Color	Part Number
Reduced Flange	Aqua	17923
	Blue	17252
	Green	17335
	Heather Violet	17925
•		

# ELIMENT<sup>®</sup> SC Adapters | Duplex | Full Flange

Color	Part Number
Aqua	18263
Blue	17338
Green	17339
Heather Violet	17938
	Aqua Blue Green

# ELiMENT<sup>®</sup> SC Adapters | Duplex | Reduced Flange

Flange Type	Color	Part Number
Reduced Flange	Aqua	18264
	Blue	17437
	Green	17438
	Heather Violet	17940

# ELIMENT<sup>®</sup> SC Connector Tools

Part Number	Description
18355	Crimp Die
18357	Crimp Tool & Die

#### **HEC-DC Hardened Connector Solutions Overview**

US Conec is entering the hardened fiber optic connector (HFOC) space with the revolutionary, smallform-factor HEC-DC connector family. Combining DirectConec<sup>™</sup> push-pull simplicity, GR- and IECcompliant reliability, and available Elite<sup>®</sup> MT ferrule performance, the HEC-DC portfolio is a versatile, IP68rated connector solution enabling high density and high performance for a variety of applications.



The HEC's 20mm adapter diameter allows for much tighter adapter spacing than traditional HFOC's, enabling smaller closures, wall boxes, and terminals. The DirectConec<sup>™</sup> boot and blind-mate alignment features allow users to quickly install the connector, even with gloves on. No tools required, no bayonet or threaded housing to fumble with. The connector securely locks in place with an audible "click", and removing the connector is a simple 40° twist of the boot and pull. The HEC is available in a simplex SC, duplex LC, and 12F MPO format. Unlike other small-form-factor 1.25mm ferrule solutions, the duplex format mates with a traditional duplex LC connector, rather than a proprietary solution.

#### **Features**

- Patented blind-mate ferrule protection features prevent damage & contamination
- DirectConec<sup>™</sup> push-pull boot mechanism provides audible "click" during installation
- Simple twist-boot-and-pull removal
- Class-leading 20mm adapter OD allows tight connector spacing
- IP68-rated and compliant with GR-3120, GR-3152, and IEC 61753-1 OP+ Category A, G, S
- Withstands 450N/100lbf pull force
- SC/APC, SC/UPC, duplex LC/UPC, and 12F MTP variants
- Single mode and multimode
- Dust cap tether can be used to lock housing, preventing unwanted removal
- Available with SM MTP<sup>®</sup> Elite ferrules
- Supports termination on round cables (flat drop versions coming soon)

#### **Applications**

- Telecom
- Broadcast
- Industrial
- Railway
- Oil & Gas
- Military
- Wind

#### **Backwards Compatibilty**

Utilizing US Conec's hybrid bulkhead adapters, the HEC-DC connector family intermates with the industry standard connectors utilized in your closures, wall boxes, and terminals.

- HEC-DC MTP<sup>®</sup> connectors are compatible with industry standard MPO connectors
- HEC-DC LC connectors are compatible with industry standard simplex & duplex LC connectors
- HEC-DC SC connectors are compatible with industry standard SC connectors



## Ø 4.0mm-6.5mm Round, HEC-DC SC Connector

Housing Color	Singlemode APC	Singlemode	Multimode
Black	25376	25377	25378

### Ø 4.0mm-6.5mm Round, HEC-DC Duplex LC Connector

Housing Color	Singlemode	Multimode
Black	25374	25375

# Ø 4.0mm-6.5mm Round, HEC-DC MTP® Connector

	Multimode MTP Elite®		Multimode	
Housing Color	Kit P/N, Male	Kit P/N, Female	Kit P/N, Male	Kit P/N, Female
Black	25381	25382	25416	25415
	Single-Mode MTP Elite®			
	Single-Mode	e MTP Elite®	Single	-Mode
Housing Color	Single-Mode Kit P/N, Male	e MTP Elite® Kit P/N, Female	Single Kit P/N, Male	-Mode Kit P/N, Female



#### HEC-DC Adapters | SC to Standard SC Hybrid | Bulkhead



### HEC-DC Adapters | LC to Standard LC Duplex Hybrid | Bulkhead

	Color	Part Number
20	Black	25357

## HEC-DC Adapters | MTP<sup>®</sup> to Standard MTP<sup>®</sup> Hybrid | Polarity A | Bulkhead

Color	Part Number
Black	25359

### HEC-DC Adapters | MTP<sup>®</sup> to Standard MTP<sup>®</sup> Hybrid | Polarity B | Bulkhead

Color	Part Number
Black	25360

#### HEC-DC Connector Tools & Accessories

Part Number	Description
25417	HEC-DC Dust Cap & Tether (Universal)
25418	HEC-DC Crimp Die (4-6.5 Round)
25419	HEC-DC Assembly Tool - SC
25420	HEC-DC Assembly Tool - LC
25421	HEC-DC Assembly Tool - MTP®

#### **EZ Shuffle™ Fiber Management Solution**

US Conec's compact EZ Shuffle<sup>™</sup> solution facilitates simple fiber routing meshes of up to 256 fibers. The novel design is engineered to aid fiber management in high density applications by offering a unique, compact, and cost effective way to manufacture and store high density shuffles.

**Features:** 

- Supports up to 16 fibers per ribbon and 16 fibers per shuffle
- Manages various configurations of ribbon fiber and round cable
- Maintains shuffle order through precision fiber management slots
- Enables consistent and efficient fiber management of assembly types including shuffles, loopbacks, and daisy chains
- Stackable compact size that can be stored under host PCB or in chassis backplane
- Eliminates tight termination tolerances and capital equipment cost drivers associated with alternate planar optical fiber circuits
- Non-outgassing UL 94 V-0 casing material



#### **Specifications**

Operating Temperature	Flammability	Mechanical
-40°C to 75°C	UL 94V-0	GR-2866

# EZ Shuffle<sup>™</sup> Fiber Management Solution

Part Number	Description	Purpose
18913	EZ Shuffle™ Casing	Engineered key for cost effective way to manufacture and store high density fiber shuffles
19313	EZ Shuffle™ Lid Removal Tool	Tool for removing lid from EZ Shuffle™ casing



Round Cable Configuration



Loopback Configuration



EZ Shuffle™ Lid Removal Tool

#### **Ribbonizing Tool**

This precision machined tool is designed specifically for MT-ferrule and other array termination and is suitable for both factory and field use. The ribbonizing tool is smaller, less expensive, and easier to use than similar products on the market today. Additionally, the process uses commonly available tape as opposed to UV or heat curable liquid adhesives.



Part Number	Description	Purpose
8660	Ribbonizing Tool, 8F	Creating 8F Ribbons for insertion into MT ferrules or fusion splicing.
8040	Ribbonizing Tool, 12F	Creating 12F Ribbons for insertion into MT ferrules or fusion splicing.
15818	Ribbonizing Tool, 16F	Creating 16F Ribbons for insertion into MT ferrules or fusion splicing.
8231	Fiber Stacker	Replacement stacker/spatula with lanyard for ribbonizer part numbers 8040, 8060, and 8062

#### **Disposable Ribbonizing Tool**

The disposable ribbonizing tool utilizes a quick cure cyanoacrylate adhesive to provide a low-cost, robust ribbonization option. This solution is ideal for applications requiring excessive handling and multi-row termination applications.









Disposable 4 Fiber Ribbonizing Tool (Top)

Disposable 8 Fiber Ribbonizing Tool (Top)

Disposable 12 Fiber Ribbonizing Tool (Top)

Disposable 16 Fiber Ribbonizing Tool (Top)

Part Number	Description	Purpose
16764	Disposable Ribbonizer, 4F (Gray)	Creating 4F, adhesive based ribbons for insertion into MT ferrules, 10+ uses
14682	Disposable Ribbonizer, 8F (Purple)	Creating 8F, adhesive based ribbons for insertion into MT ferrules, 10+ uses
14316	Disposable Ribbonizer, 12F (White)	Creating 12F, adhesive based ribbons for insertion into MT ferrules, 10+ uses
15360	Disposable Ribbonizer, 16F (Green)	Creating 16F, adhesive based ribbons for insertion into MT ferrules, 10+ uses

# **Re-Pitch Ribbonizing Tool**

The disposable ribbonizing tool utilizes a quick cure, cyanoacrylate adhesive to provide a low-cost, robust ribbonization option. The ribbonizing tool provides a method to position loose smaller outer diameter coated fibers to the standard 250µm pitch currently being used in deployed architectures. This solution simplifies the termination process of these small fibers for backwards compatible ferrule geometries. The tool supports 165µm and 200µm coated fiber diameters.

Part Number	Description	Purpose
20735	200µm Fiber Ribbonizer, 12F	Creates 12 fiber ribbon with 200 $\mu m$ coated loose fibers at 250 $\mu m$ fiber pitch
21083	165µm Fiber Ribbonizer, 12F	Creates 12 fiber ribbon with 165 $\mu m$ coated loose fibers at 250 $\mu m$ fiber pitch
21081	200µm Fiber Ribbonizer, 16F	Creates 16 fiber ribbon with 200 $\mu$ m coated loose fibers at 250 $\mu$ m fiber pitch

# **Universal Fiber Holders**

The universal fiber holders assist in the termination process by securing ribbon or loose fibers into position for the stripping and cleaving processes. The holders have space to house the spring and ferrule boot during these operations so that risk of damage after cleaving is minimized. For loose fibers used with round cables, a stacking feature is incorporated to eliminate the need for ribbonized fibers in single row fiber array termination. These tools support 8, 12 and 16 fiber counts within an array.

Part Number	Description	Purpose	
21298	Universal Fiber Holder. 8F	Supports up to 8 fiber arrays for ribbon or loose fibers	
21079	Universal Fiber Holder. 12F	Supports up to 12 fiber arrays for ribbon or loose fibers	
21086	Universal Fiber Holder. 16F	Supports up to 16 fiber arrays for ribbon or loose fibers	

#### **Crimp Tools & Dies**

US Conec offers a precision engineered crimp tool for each MTP<sup>\*</sup> connector solution. Crimp dies are sold separately to switch out within an existing crimp frame or to incorporate into an existing manufacturing crimp press.



Crimp Tool



Crimp Die



Closing/Crimp Tool, 900µm

Crimp Tools & Dies

Part Number	Description	Purpose		
8202	Crimp Tool, MTP <sup>®</sup> , 3.0mm	Crimps MTP® 3.0mm hardware; includes the hand tool (400053-01) and crimp die (8173)		
17619	Crimp Tool, MTP <sup>®</sup> , 3.0mm Zipcord	Crimps MTP <sup>®</sup> 3.0mm zipcord hardware; includes the hand tool (400053-01) and crimp die (16835)		
12345	Crimp Tool, MTP <sup>®</sup> , 3.6mm	Crimps MTP® 3.6mm hardware; includes the hand tool (400053-01) and crimp die (12208)		
13473	Crimp Tool, MTP®, 4.5-5.5mm	Crimps MTP $^{\circ}$ 4.5-5.5mm hardware; includes the hand tool (400053-01) and crimp die (13119)		
12245	Crimp Tool, MTP <sup>®</sup> , Oval	Crimps MTP® oval hardware; includes the hand tool (400053-01) and crimp dies (9883)		
7017	Crimp Tool, MTRJ	MTRJ crimp tool with dies included.		
400053-01	Crimp Hand Tool	Crimping tool without dies; compatible with all US Conec crimp dies		
8173	Crimp Die, MTP <sup>®</sup> , Round, 3.0mm	Crimps MTP <sup>®</sup> 3.0mm hardware; crimp die only - no hand tool		
16835	Crimp Die, MTP <sup>®</sup> , Zipcord, 3.0mm	Crimps MTP <sup>®</sup> 3.0mm zipcord hardware; crimp die only - no hand tool		
12208	Crimp Die, MTP <sup>®</sup> , Round, 3.6mm	Crimps MTP <sup>®</sup> 3.6mm hardware; crimp die only - no hand tool		
13119	Crimp Die, MTP <sup>®</sup> , Round, 4.5-5.5mm	Crimps MTP <sup>®</sup> 4.5-5.5mm hardware; crimp die only - no hand tool		
9883	Crimp Die, MTP <sup>®</sup> , Oval	Crimps MTP <sup>®</sup> oval hardware; crimp die only - no hand tool		
17775	Crimp Die, MXC <sup>®</sup> , 3.0 & 3.6mm	Crimp Die, MXC <sup>®</sup> , 3.0 & 3.6mm hardware; crimp die only - no hand tool		
18363	Crimp Tool, MXC <sup>®</sup> , 3.0 & 3.6mm	MXC <sup>®</sup> , 3.0 & 3.6mm hardware; includes the hand tool (400053-01) and crimp die (17775)		
15621	Closing/Crimp Tool, 900µm	n Crimps 900µm; crimp die only - no hand tool		

# MTP<sup>®</sup> Assembly Tools

Part Number	Description	Purpose
5683	Pump, Vacuum, ULVAC	Vacuum pump used in kit MTA-021
5684	Vacuum Tubing, 1'	Plastic tubing used in kit MTA-021
6372	Stripper, Oval Cable Jacket	Jacket removal tool for traditional oval ribbon cable
6383	Replacement Blade for Ribbon Cutter	Replaces carbide blade in p/n MFA-004
8173	Crimp Die, MTP <sup>®</sup> , Round, 3.0	Crimps MTP <sup>®</sup> 3.0mm hardware; crimp die only-no hand tool
8202	Crimp Tool, MTP <sup>®</sup> , 3.0mm	Crimps MTP <sup>®</sup> 3.0mm hardware; includes the hand tool (400053-01) and crimp die (8173)
8541	Stripper, Round Cable Jacket	Adjustable jacket removal tool for round cable
9607	Extraction tool, MTP®	Assists with unmating MTP® plugs in applications where manual access is restricted
9883	Crimp Die, MTP <sup>®</sup> , Oval	Crimps MTP® oval hardware; crimp die only-no hand tool
12208	Crimp Die, MTP <sup>®</sup> , Round, 3.6 mm	Crimps MTP <sup>®</sup> 3.6mm hardware; crimp die only-no hand tool
12245	Crimp Tool, MTP <sup>®</sup> , Oval	Crimps MTP <sup>®</sup> oval hardware; includes the hand tool (400053-01) and crimp dies (9883)
12345	Crimp Tool, MTP <sup>®</sup> , 3.6 mm	Crimps MTP <sup>®</sup> 3.6mm hardware; includes the hand tool (400053-01) and crimp die (12208)
12726	Ribbon Holder, 2 x 3.0mm	Holds ribbon fibers during stripping and cleaving for 2 x 3.0mm zip cord MTP® assembly
13119	Crimp Die, MTP <sup>®</sup> , Round, 4.5-5.5mm	Crimps MTP® 4.5-5.5mm hardware; crimp die only-no hand tool
13473	Crimp Tool, MTP <sup>®</sup> , 4.5-5.5mm	Crimps MTP $^{\circ}$ 4.5-5.5mm hardware; includes the hand tool (400053-01) and crimp die (13119)
13591	Ribbon Holder, 4.5-5.5mm	Holds ribbon fibers during stripping and cleaving for 4.5-5.5mm MTP $^{\circ}$ assembly
13923	Ribbon Holder, 3.0-3.6mm	Holds ribbon fibers during stripping and cleaving for 3.0-3.6mm MTP® assembly
13926	Fiber Holder, 2.0mm, Loose Fiber	Holds loose fibers during stripping and cleaving for 2.0mm MTP <sup>®</sup> and PRIZM <sup>®</sup> LightTurn <sup>®</sup> assemblies; eliminates the need for ribbonizing
14316	Disposable Ribbonizer, 12F	Creating 12F, adhesive based ribbons for insertion into MT ferrules, 10+ uses
14682	Disposable Ribbonizer, 8F (Purple)	Creating 8F, adhesive based ribbons for insertion into MT ferrules, 10+ uses
15173	Ribbon Holder, 900µm	Holds fibers during stripping and cleaving for 900µm
15360	Disposable Ribbonizer, 16F (Green)	Creating 16F, adhesive based ribbons for insertion into MT ferrules, 10+ uses
17147	Ribbon Holder, 3.0mm, 3.6mm, and 4.0mm, MTP <sup>®</sup> -16 (1 x 16F)	Holds ribbon fibers during stripping and cleaving for 3.0mm, 3.6mm, and 4.0mm MTP-16™ assembly
17684	Fiber Holder, 4.0-5.5mm, Loose Fiber, MTP®-16 (16F)	Holds loose fibers during stripping and cleaving for 4.0-5.5mm MTP-16™ assembly; eliminates the need for ribbonizing
19798	Fiber Holder, 3.0-3.6mm, Loose Fiber	Holds loose fibers during stripping and cleaving for 3.0-3.6mm MTP <sup>®</sup> assembly; eliminates the need for ribbonizing
23820	Spring Compression Tool	Aids assembly process by compressing loose spring into spring push

# **MTP®** Assembly Tools (continued)

Part Number	Description	Purpose
15621	Closing/Crimp Tool, 900µm	Crimps 900µm; crimp die only - no hand tool
16764	Disposable Ribbonizer, 4F	Creating 4F, adhesive based ribbons for insertion into MT ferrules, 10+ uses
24689	Epoxy, 353ND, MT ferrules	Secures fiber to MT ferrules
2104076-01	Scribe, Diamond	Diamond tip scribe used to etch the fiber
400025-01	Nozzle, Vacuum, MT	MTP <sup>®</sup> nozzle used in vacuum pump kit MTA-021
400053-01	Crimp Hand Tool	Crimping tool without dies; compatible with all US Conec crimp dies
MTA-001	MT Spring Clip Tool	Engages and disengages MT Ferrule compression clips during lab testing of MT assemblies
MTA-021	Vacuum Pump Kit, w/Nozzles, Tubing 110V	Complete vacuum kit for pulling epoxy through ferrule microholes, 110v
18490	Vacuum Pump Kit, w/Nozzles, Tubing 220V	Complete vacuum kit for pulling epoxy through ferrule microholes, 220v
18476	Universal Housing Removal Tool, MTP®	Used to disassemble MTP®, MTP®-16, and MTP® PRO plugs for gender changes and ferrule access
18286	Nylon Tube Brush 0.02, MTP <sup>®</sup> -16	Brush to assist in cleaning of MT guide pin holes for MTP®-16
17150	Ferrule Insertion Cap, MTP®-16	Aligns ferrule into the housing, MTP®-16
18472	Ferrule Insertion Cap, MTP® and MTP® PRO	Aligns ferrule into the housing, MTP <sup>®</sup> and MTP <sup>®</sup> PRO
23820	Spring Compression Tool, Universal MTP®	Aids MTP® assembly process by compressing loose spring into spring push



**18476** Universal Housing Removal Tool, MTP®



13923 Ribbon Holder, 3.0-3.6mm



**17150** Ferrule Insertion Cap, MTP<sup>®</sup>-16



Extraction tool, MTP<sup>®</sup>



13926 Fiber Holder, 2.0mm, Loose Fiber



6372 Stripper, Oval Cable Jacket



13591 Ribbon Holder, 4.5-5.5mm



**19798** Fiber Holder, 3.0-3.6mm, Loose Fiber



**15173** Ribbon holder for 900μm



MTA-021 Vacuum Pump Kit, w/Nozzles, Tubing

Fiber



23820 Spring Compression Tool, Universal MTP®



**18472** Ferrule Insertion Cap, MTP<sup>®</sup> and MTP<sup>®</sup> PRO

# PRIZM<sup>®</sup> MT Assembly Tools

Part Number	Description	Purpose	
13923	Ribbon Holder, 3.0-3.6mm	Holds ribbon fibers during stripping and cleaving for 3.0-3.6mm MTP® assembly	
14316	Disposable Ribbonizer, 12F	Creating 12F, adhesive based ribbons for insertion into MT ferrules, 10+ uses	
14375	LOCTITE <sup>®</sup> 4861 Instant Adhesive	Cyanoacrylate for use with disposable ribbonizers	
14682	Disposable Ribbonizer, 8F (Purple)	Creating 8F, adhesive based ribbons for insertion into MT ferrules, 10+ uses	
15278	PRIZM <sup>®</sup> MT Ferrule Curing Guide	Protects ferrule during curing	
15360	Disposable Ribbonizer, 16F (Green)	Creating 16F, adhesive based ribbons for insertion into MT ferrules, 10+ uses	
15642	MXC <sup>®</sup> Detector Adapter, 10mm OD	Test adapter for large area detector	
15708	PRIZM <sup>®</sup> MT Jacketed Handler, 8F Assembly	Holds ribbon fiber during stripping and cleaving for 8F, PRIZM® MT	
15710	PRIZM <sup>®</sup> MT Jacketed Handler, 12F Assembly	Holds ribbon fiber during stripping and cleaving for 12F, PRIZM® MT	
15712	PRIZM <sup>®</sup> MT Jacketed Handler, 16F Assembly	Holds ribbon fiber during stripping and cleaving for 16F, $\ensuremath{PRIZM}^{\otimes}\ensuremath{MT}$	
15871	MXC <sup>®</sup> Detector Adapter, 5mm OD	Test adapter for 5mm detector	
15990	MXC <sup>®</sup> Cleaner	Cleans PRIZM® MT ferrules in MXC® plug or MXC® receptacle	
16235	Tray for Epoxy Cure Oven, PRIZM <sup>®</sup> MT	Supports ferrule and fiber during epoxy curing	
16385	Torque-Limiting Screwdriver, PRIZM <sup>®</sup> MT	Pre-set torque used for tightening PRIZM® MT handlers	
16386	Torx Insert Bit, Size T6	Used in Torque-Limiting Screwdriver	
16512	PRIZM <sup>®</sup> MT Ribbon Handler, 8F Assembly	Holds ribbon during stripping and cleaving for 8F ribbons	
16513	PRIZM® MT Ribbon Handler, 12F Assembly	Holds ribbon during stripping and cleaving for 12F ribbons	
16514	PRIZM® MT Ribbon Handler, 16F Assembly	Holds ribbon during stripping and cleaving for 16F ribbons	
16728	US Conec Laser Cleave Insert	Supports and manages fibers during cleaving process	
16832	US Conec Alignment Insert	Aligns ribbons during termination	
16874	Epoxy, AB9320, for PRIZM <sup>®</sup> ferrules	Secures fiber to PRIZM® MT ferrules	
13923	12 Fiber Stripping Holder	Holds 12 fiber ribbon during thermal stripping	
17147	16 Fiber Stripping Holder	Holds 16 fiber ribbon during thermal stripping	
18754	Ferrule Insertion Cap, PRIZM® MT	Aligns ferrule into the housing, PRIZM® MT	
20642	Laser Fiber Cleaver for PRIZM <sup>®</sup> , Class 1 Laser Product	Fiber preparation for PRIZM <sup>®</sup> MT	
21547	US Conec PRIZM <sup>®</sup> Connector Custom Inspection Reticle	Provides inspection guidance for allowable defects	
21910	MXC <sup>®</sup> Removal Tool	Removes Single Port Blind Mate Internal Plug from Bracket	





13923 Ribbon Holder, 3.0-3.6mm



Ferrule Curing Guide (5.3P)

# PRIZM<sup>®</sup> LightTurn<sup>®</sup> Assembly Tools

Part Number	Description	Purpose
13926	Fiber Holder, 2.0mm, Loose Fiber	Holds loose fibers during stripping and cleaving for 2.0mm MTP <sup>®</sup> and PRIZM <sup>®</sup> LightTurn <sup>®</sup> assemblies; eliminates the need for ribbonizing
14316	Disposable Ribbonizer, 12F	Creating 12F, adhesive based ribbons for insertion into MT ferrules, 10+ uses
21547	US Conec PRIZM <sup>®</sup> Connector Custom Inspection Reticle	Provides inspection guidance for allowable defects
14554	Cleaner, Cassette PRIZM <sup>®</sup> LightTurn <sup>®</sup>	Cleaner for PRIZM <sup>®</sup> LightTurn <sup>®</sup>
14555	Refill for Cassette Cleaner 14554, PRIZM® LightTurn®	Refill for Cleaner 14554, PRIZM® LightTurn®
16874	Epoxy, AB9320, for PRIZM <sup>®</sup> ferrules	Secures fiber to PRIZM® MT ferrules
20642	Laser Fiber Cleaver for PRIZM <sup>®</sup> , Class 1 Laser Product	Fiber preparation for PRIZM® LightTurn®
23029	Removal Tool, Table Top, MXC <sup>®</sup> Blind Mate Plug	Table top removal tool for MXC <sup>®</sup> Blind Mate Plug



14554 NEOCLEAN PZ Refillable Cassette Cleaner



13926 Fiber Holder, 2.0mm, Loose Fiber



14316 Disposable 12 Fiber Ribbonizing Tool

## **IBC<sup>™</sup> Brand Single Fiber Cleaning Tools**

The US Conec IBC<sup>™</sup> Brand of single fiber cleaners can be used to effectively clean various single fiber connectors such as MDC, LC Duplex, LC and SC both residing in an adapter or faceplate and unmated. They feature a novel dry cleaning strand to gently sweep and lift away dust and debris from the connector end face that eliminates the need to use solvents for an effective clean. A simple pushing motion to engage the tool, an audible CLICK to alert the operator that the tool is fully engaged, a dust cap attached by a lanyard to prevent losing it, over 525 cleaning engagements per tool and the effectiveness of the cleaner to remove such contaminants as graphite, hand lotions, skin oils and Arizona road dust are just a few of the features of the US Conec's IBC brand of single fiber cleaning tools. All IBC brand single fiber cleaners are RoHS compliant.

The IBC™ Brand Cleaners are effective at removing the following contaminates:				
• Arizona Road Dust (ISO 12103-1)	Skin Oil Residue	Salt Water Residue		
Alcohol Residue	Vegetable Residue	Hand Lotion		
Distilled Water Residue	Graphite	• T-shirt Lint		

# IBC<sup>™</sup> Brand Cleaning Tools for 1.25mm Based Connectors

	Part Number	Model	Cleans Connector Types	Additional Information
	9393	LC	LC, MU	The most popular single fiber cleaner for LC, MU and other 1.25mm based optical connectors
	24366	LC PLUS	LC	Unique nozzle design cleans connector end faces through bulkhead adapters and when connectors are accessible. Over 775 cleans per cleaner
MAAC ma	22046	MDC	MDC	Dual ferrule endface cleaner for VSFF MDC connectors. Cleans 525 MDC connectors (1,050+ ferrule endfaces)
STOC -	12910	H125	LC, MU	Cleans harsh environment 1.25 mm based connector systems - ARINC 800, ODC series, MXL38999, LuxCis series, MIL PRF 64266 [NGCON], Neutrik opticalCON
	22277	QM125	Q-ODC-2 Mini	Cleans harsh environment 1.25mm based connector systems
	13965	Zi125	LC, MU	Compact size; includes retractable zipcord
0.000	14303	LC <sup>2</sup>	LC	Dual ferrule endface cleaner for LC duplex connectors. Cleans 525+ LC duplex connectors (1,050+ ferrule endfaces)
C MC C	14649	ZiA125	LC , MU	Cleans harsh environment 1.25 mm based connector systems - ARINC 800, ODC series, MXL38999, LuxCis series, MIL PRF 64266 [NGCON], Neutrik opticalCON; includes retractable zipcord, Compact size

	Part Number	Model	Cleans Connector Types	Additional Information
- TOP	9392	SC	SC, ST, FC, E2000	The most popular single fiber cleaner for SC, FC, ST and other 2.5mm based optical connectors
	24367	SC PLUS	SC	Unique nozzle design cleans connector end faces through bulkhead adapters and when connectors are accessible. Over 775 cleans per cleaner
Retar Ho	9394	HC	OptiTap®	Cleans OptiTap <sup>®</sup> and OptiTap <sup>®</sup> compatible connectors. Used in FTTx applications
	13310	M250	SC, ST, FC, TFOCA	1.8 mm cleaning region
	13964	Zi25	SC, ST, FC, E2000	Compact size; includes retractable zipcord

# IBC<sup>™</sup> Brand Cleaning Tools for 2.5mm Based Connectors

# IBC<sup>™</sup> Brand Cleaning Tools for Specialty Connectors

	Part Number	Model	Cleans Connector Types	Additional Information
D'AL FEES	12926	M20	SMPTE 304M, SMPTE 358M, MIL PRF 28876	Cleans harsh environment 2.0 mm based connector systems
COVO mana	13309	M16	M38999	Cleans harsh environment 1.6 mm based connector systems
	14829	GA16	M38999	Cleans harsh environment 1.6 mm based connector systems; Cleans through Glenair M38999 test adapters; compact size; includes retractable zipcord
	15523	G1000	Glenair Mighty Mouse 20 series	Compact size; can be used to clean MIL/AERO 1.0 mm connectors; includes retractable zipcord

# **IBC<sup>™</sup> Brand Multi-fiber Cleaning Tools**

When the application calls for cleaning multi-fiber connectors, US Conec offers a variety of cleaners for the job. The IBC<sup>™</sup> Brand of multi-fiber cleaning tools is designed for cleaning the MT and TMT based connector systems loaded in a bulkhead adapter, on the card edge, on a backplane and can even be used to clean unmated cable assemblies using the alignment cap. The design of the IBC Brand of multi-fiber cleaning tools allows it to clean both the female [no guide pins] and male [with guide pins] connectors. These cleaners will provide over 525 cleaning engagements per tool and will clean both flat and angled ferrules. The US Conec multi-fiber cleaners feature a nozzle that is keyed for precise alignment of the cleaning tip to the fiber array. All IBC brand multi-fiber cleaners are RoHS compliant.

The IBC™ Brand Cleaners are effec	tive at removing the following conta	aminates:
• Arizona Road Dust (ISO 12103-1)	• Skin Oil Residue	Salt Water Residue
Alcohol Residue	Vegetable Residue	Hand Lotion
Distilled Water Residue	• Graphite	• T-shirt Lint

# IBC<sup>™</sup> Brand Cleaning Tools for MT Based Connectors

	Part Number	Model	Cleans Connector Types	Additional Information
	7104	MPO II	МРО	Cleans flat and angled MT ferrules
	17669	MTP®-16	MTP®-16, TIA-604-5 compliant MPO connectors only	Cleans flat and angled MT-16™ ferrules
-	23121	ММС	ММС	Cleans MMC connectors/TMT ferrules
	24903	MMC-16	MMC-16	Cleans MMC-16 connectors/TMT-16 ferrules
	8037	HBMT	Molex HBMT™, 1x8 ARRAY, 1x6 ARRAY, 1x3 Circular MT, MPO	Additional special adapters available
	9959	HBMT EN	Molex HBMT™, 1x8 ARRAY, 1x6 ARRAY, 1x3 Circular MT, MPO	Additional special adapters available; extended nozzle length of 224mm
	15639	OptiTip <sup>®</sup> II	OptiTip®	Cleans OptiTip <sup>®</sup> connectors. Requires attached lanyard of adapters
	15549	HQMT	Q-ODC-12/24	Cleans MT-based harsh environment connectors
	15546	MT38 II	MT based D38999	Requires special adapters

## Multi-fiber Cleaning Adapters

	Part Number	Model	Cleans Connector Types	US Conec Cleaner Used	Additional Information
	7907	ARRAY 1 x 6	Molex ARRAY6 connections	8037	Cleans plug and socket Molex ARRAY6 connections; Clean ferrules 1, 3, and 5 then flip and clean ferrules 2, 4, and 6
	8035	HBMT Card Edge	Molex HBMT card edge connections	8037	Cleans plug and socket Molex HBMT card edge connections
	8097	HBMT Backplane	Molex HBMT backplane connections	8037	Cleans plug and socket Molex HBMT backplane connections
•	8802	Circular 1 x 3 Receptacle	Molex 1 x 3 circular connections	8037	Cleans receptacle on Molex 1 x 3 circular connections
	8803	Circular 1 x 3 Connector	Molex 1 x 3 circular connections	8037	Cleans connector on Molex 1 x 3 circular connections
	13463	MT38999 Quad	MT ferrules in Quad MT D38999 connectors	15546	Will align cleaner part number onto protruding MT ferrules in Quad MT D38999 connectors from Amphenol Aerospace
	13464	MT 38999 Single	MT ferrules in Single MT D38999 connectors	15546	Will align cleaner part number onto protruding MT ferrules in Single MT D38999 connectors from Amphenol Aerospace

# **IBC<sup>™</sup> Brand Eliminator<sup>™</sup> Cleaning Fluid**

US Conec's IBC<sup>™</sup> Brand Eliminator<sup>™</sup> Cleaning Fluid is designed specifically for fiber optic connector endface cleaning. It is a non-flammable, low odor cleaning fluid that helps to dissolve the stubborn debris found on some optical connector endfaces. The fluid also eliminates static-born debris common in dry environments.

Eliminator<sup>™</sup> Cleaning Fluid is easy to apply and quick to dry, leaving no residue like alcohol and other similar cleaners. The cleaning fluid does not have a shelf life and is safe for any shipping method, including air transportation. Eliminator<sup>™</sup> Cleaning Fluid can also be used for cleaning fibers in preparation for fusion splicing or other connectorization applications.

### Eliminator™ Cleaning Fluid

 Part Number	Size	Additional Information
21098	3 oz can	Contains fluid for more than 650 individual cleans

# **Cleaning Tools for PRIZM® MT Based Connectors**

The PRIZM<sup>®</sup> MT cleaning tool is designed specifically for use with US Conec's PRIZM<sup>®</sup> MT lensed ferrule technology. The simple, one-push style with guide cap cleans bulkhead-mounted MXC receptacles and/or cabled MXC plugs. US Conec also offers a version that can be used to clean the PRIZM<sup>®</sup> MT in an MTP<sup>®</sup> format. The cleaners will provide over 150 cleaning engagements per tool.

# PRIZM<sup>®</sup> MT Cleaning Tools

 Part Number	Model	Cleans Connector Types	Additional Information
 15990	MXC®	MXC <sup>®</sup> plug, MXC <sup>®</sup> receptacle, MXC <sup>®</sup> back plane	Adapter available for MXC <sup>®</sup> back plane connectors
16899	PRIZM® MTP®	MTP <sup>®</sup> connector with PRIZM <sup>®</sup> MT ferrules	Cleans unmated cables and cables loaded in a bulkhead adapter

# PRIZM<sup>®</sup> MT Cleaning Tool Adapters

	Part Number	Model	Cleans Connector Types	US Conec Cleaner Used	Additional Information
<b>' TTT</b> '	16824	MXC®	MXC <sup>®</sup> back plane	15990	Cleans blind mate MXC <sup>®</sup> external plugs when not installed in the backplane
	18904	MXC®	MXC <sup>®</sup> back plane	15990	Cleans blind mate MXC <sup>®</sup> external plugs when installed in the backplane

#### **NEOCLEAN PZ Refillable Cassette Cleaner**

The NEOCLEAN PZ is a cassette style fiber optic cleaner system designed specifically for the PRIZM<sup>®</sup> LightTurn<sup>®</sup> connector. This refillable cassette cleaner uses a microfiber fabric to remove harmful contaminates off of the ferrule end face. The anti-static cleaning material used in the cassette produces a pristine optical window and minimizes contaminant attraction. The cleaning material is pre-washed making it excellent for use in any production environment, including clean rooms. The NEOCLEAN PZ cassette cleaning tool will accommodate both bare ribbon and jacketed PRIZM<sup>®</sup> LightTurn<sup>®</sup> cable assemblies. The cleaning tool and refill cassette will provide over 500 cleaning engagements.



Placing PRIZM<sup>®</sup> LightTurn<sup>®</sup> connector into cleaner



Cleaning PRIZM® LightTurn® connector

### NEOCLEAN PZ Refillable Cassette Cleaner

 US Conec Part Number	Model	Cleans Connector Types	NTT-AT Part Number	Additional Information
14554	NEOCLEAN-PZ Cassette	PRIZM <sup>®</sup> LightTurn <sup>®</sup>	ATC-NE-PZ	Cleans bare ferrules, ribbon assemblies and jacketed assemblies
14555	NEOCLEAN-PZ Refill	-	ATC-NE-PZS	5 pack

#### **OPTIPOP R Refillable Cassette Cleaners**

The OPTIPOP R is a fiber optic cleaning cassette that can be refilled to help reduce the cost per clean, making it a great cleaner to use in production facilities, data center installations and other applications where unmated fiber optic connectors are used. This cleaner offers multiple versions for cleaning various types of connector end faces from single fiber like the SC and LC to multi-fiber such as the MTP<sup>®</sup> Brand, MPO and MTRJ connectors. The anti-static cloth material used in these cassettes produces a pristine fiber end face and minimizes contaminant attraction. The cleaning fabric is pre-washed and produces less than 70 pieces per CFM of particles that are > 1mm in size, making this an excellent cleaning cassette for use in any production setting including clean rooms. A great feature of this cassette is that all versions utilize the same replacement reel part number. The replacement reels are easy to install and offer 400+ cleanings per reel.



OPTIPOP R Refillable Cassette Cleaner

# **OPTIPOP R Refillable Cassette Cleaners**

 US Conec Part Number	Model	Cleans Connector Types	Number of Slots	NTT-AT Reference
6338	Single Slot	SC, ST, FC, E2000, LC, MU, Female MPO, MTRJ, Female MMC/TMT	One	ATC-RE-01
6437	Two Slots	LC, MU	Two	ATC-RE-02
6339	MPO Male	Male MPO with guide pins and male MMC/TMT with guide pins	One	ATC-RE-03
6340	MTRJ	Male MTRJ with guide pins	One	ATC-RE-04
8057	OptiTap®	OptiTap®	One	ATC-RE-03W
6232	Refill	(Used for all OPTIPOP R cassettes; 6 pack)	-	ATC-RS-01

# **CLETOP Refillable Cassette Cleaners**

The CLETOP and CLETOP-S are refillable cassette style fiber optic connector end face cleaners. They offer a low cost per clean, making them a good fit for factory settings. The CLETOP cleaners come in multiple versions and can be used to clean single fiber and multi-fiber connector end faces, depending on the version chosen. CLETOP cleaners feature an anti-static cloth material that minimizes contaminant attraction while creating a debris-free connector end face. The refills come in either cassettes or reels and the refill type used is dependent upon the version of cleaner being used. Refills offer more than 400 cleanings each and are easy to install.

	US Conec Part Number	Model	Tape Color	Cleans Connector Types	Tape or Cartridge	NTT-AT Part Number	Additional Information
	14703	CLETOP Type A	Blue	SC, SC2, FC, ST, DIN, D4, E2000	Таре	14100501	Uses refill part number 14709 or 14710
	15052	CLETOP Type A	White	SC, SC2, FC, ST, DIN, D4, E2000	Таре	14100511	Uses refill part number 14709 or 14710
	14704	CLETOP Type B	Blue	MU, LC, MT, MPO, BIC, MMC	Таре	14100601	Uses refill part number 14709 or 14710
	15053	CLETOP Type B	White	MU, LC, MT, MPO, BIC, MMC	Таре	14100611	Uses refill part number 14709 or 14710
	14706	CLETOP Type MPO	White	MTP <sup>®</sup> /MPO (Male and Female), MMC	Таре	14100201	Uses refill part number 14709 or 14710
	14707	CLETOP-S Type A	Blue	SC, SC2, FC, ST, DIN, D4, E2000	Cartridge	14110501	Uses refill part number 14711 or 14712
	14708	CLETOP-S Type B	Blue	MU, LC, MT, MPO, BIC, MMC	Cartridge	14110601	Uses refill part number 14711 or 14712
and	15051	CLETOP-S Type B	White	MU, LC, MT, MPO, BIC, MMC	Cartridge	14110611	Uses refill part number 14711 or 14712

#### **CLETOP Refillable Cassette Cleaners**

# **CLETOP Replacement Tape & Cartridges**

	US Conec Part Number	Model	Tape or Cartridge	Tape Color	NTT-AT Part Number
0	14709	CLETOP Refill	Таре	Blue	14100700
٢	14710	CLETOP Refill	Таре	White	14100710
1	14711	CLETOP-S Refill	Cartridge	Blue	14110700
* •	14712	CLETOP-S Refill	Cartridge	White	14110710

# **Stick Cleaners**

US Conec's line of stick and pipe cleaners offers a solution for those hard to reach areas where an IBC<sup>™</sup> Brand Cleaner nor a cassette style cleaner cannot be used. The sticks and pipes come in multiple sizes and can accommodate small form factor duplex and/or single-fiber connectors, transceiver receptacles and lenses. They are suitable for both field and factory use.

### **NEOCLEAN S Stick Cleaners**

US Conec Part Number	Size	Sticks per Case	Sticks per Sleeve	NTT-AT Part Number	Additional Information
24981	1.25 mm	200	10	ATC-NS-125	Notched for length customization
24982	2.5 mm	200	10	ATC-NS-250	Notched for length customization

# **CLETOP Stick Cleaners**

US Conec Part Number	Size	Units per Case	NTT-AT Part Number	Additional Information
14713	2.5 mm	200	14100400	-
14715	2.0 mm	200	14100402	_
14716	2.0 mm 2.5 mm	100	14100403	Double-ended



### US Conec Customer Service Contact:

Americas (AMS): Email: ams-cs@usconec.com

Europe, Middle East, Africa (EMEA): Email: emea-cs@usconec.com

Asia-Pacific (APAC): Email: apac-cs@usconec.com

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