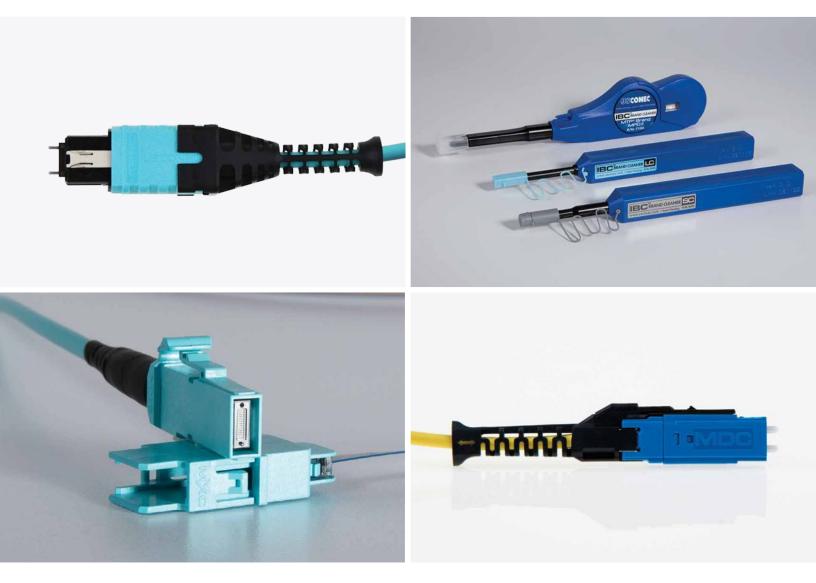


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#### Connectors

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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:**

errules

- 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® optimized for 10G, 40G, 100G and 400G applications
- SM MT Elite® meets IEC 61755-3-31 grade B requirements

#### **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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> low loss ferrules are produced to meet the ratified IEC 61755-3-31 grade B specification.

#### **Specifications**

Ferrule Type	Random Mated Attenuation <sup>1</sup> (≥ 97% dB)	Mean Random Mated Attenuation (dB)	Return Loss (dB)
Single-mode MT Elite®	≤0.25 <sup>2,3</sup>	≤0.12 <sup>23</sup>	≥60
Single-mode	≤0.50 <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>2</sup> IEC 61755-3-31 is defined for up to 12 fibers for SNI APC only. <sup>3</sup> Exceeds IEC 61755-1 Grade B performance.
- <sup>4</sup> Meets IEC 61755-1 Grade C performance.



12 Fiber, Single-mode Pre-Angled MT Ferrule

#### 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> 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
17618	4+4 Fiber, Single-mode MT Elite <sup>®</sup> , Pre-angled Ferrule

#### 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
MTF-4MM7-02	4-Fiber, Multimode Ferrule
MTF-8MM7-02	8-Fiber, Multimode Ferrule
MTF-12MM7-02	12-Fiber, Multimode Ferrule
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
18007	24-Fiber, Multimode MT Elite®, Ferrule
17617	4+4 Fiber, Multimode MT Elite <sup>®</sup> , Ferrule

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

Part Number	Description
MTA-008	Epoxy, 353ND, 6g 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.

•

— 5.3mm-

2 x 16 Fiber Ferrule

.....

4.6mm

2 x 12 Fiber Ferrule

MT-16 Ferrule

#### **Features:**

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

Part Number	Description
18210	16-Fiber, Multimode (1x16 Footprint)
17948	32-Fiber, Multimode (2x16 Footprint)

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

Part Number	Description	
16504	16-Fiber, Multimode MT Elite® (1x16 Footprint)	
16505	32-Fiber, Multimode MT Elite® (2x16 Footprint)	

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

Part Number	Description
MTA-008	Epoxy, 353ND, 6g 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

16738       Single-mode MT Elite® Grooved Guide Pin         12766       Multimode Flat Head Guide Pin         16736       Multimode Grooved Guide Pin	Description	
	Single-mode MT Elite® Grooved Guide Pin	
16736 Multimode Grooved Guide Pin	ultimode Flat Head Guide Pin	
	Iultimode Grooved Guide Pin	
16737 Single-mode/Multimode MT Elite® Grooved Guide Pin	Single-mode/Multimode MT Elite® Grooved Guide Pin	
16744 Multimode Flat Pin Clamp		
16745Single-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 <sup>®</sup> MT, 1x16 Multimode
18320	Ferrule, PRIZM <sup>®</sup> MT, 2x16 Multimode
16523	Ferrule, PRIZM® MT, 4x12 Multimode

#### PRIZM® MT Ferrules, 850 AR

Part Number	Description	
19883	Ferrule, PRIZM® MT Elite®, 1x16 Multimode, 850 AR	
19884	errule, PRIZM® MT, 2x16 Multimode, 850 AR	
16283	Ferrule, PRIZM® MT, 4x12 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® LightTurn® 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® LightTurn® ferrule is typically used in conjunction with US Conec's PRIZM® LightTurn® connector hardware and Mechanical Optical Interface (MOI) to create a miniature, detachable connector solution for high speed 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

#### **Specifications**

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® LightTurn® 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



HULEN MARKEN

## **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 enchanced 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 5 / TIA-604-5

-4.6mm-

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



#### Ø 2.0mm, 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	21744	21743
Heather Violet	21746	21745
Lime	21748 21747	
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	21750	21749

#### Ø 2.5mm, Controlled, 9.8N 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	21752	21751	
Heather Violet	21754	21753	
Lime	21756 21755		
Upuning Color	Single-Mode MTP Elite®		
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female	
Green	21758	21757	

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

## 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



## $\emptyset$ 2.0mm Short Boot, 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	23192	23191
Heather Violet	23194	23193
Lime	23196	23195
Housing Color	Single-Mode	e MTP Elite®
	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	23198	23197

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

Usuaing 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
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	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 MTP Elite®	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

Housing Color	Multimode MTP Elite®	
	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
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	18615	18614

## $\emptyset$ 4.5mm, Controlled, 9.8N Spring Force, MTP<sup> $\circ$ </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	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Green	18639	18638

## $\emptyset$ 5.0mm, Controlled, 9.8N Spring Force, MTP<sup> $\circ$ </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	18659	18658
Heather Violet	18661	18660
Lime	20953	20952
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	18663	18662

## Ø 5.5mm, 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	18683	18682
Heather Violet	18685	18684
Lime	20955	20954
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	19687	18686

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



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

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

Heusing 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
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	21774	21773

#### Ø 2.5mm, 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	21776	21775
Heather Violet	21778	21777
Lime	21780	21779
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	21782	21781

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

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

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

Usuaina Calan	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



#### $\emptyset$ 3.0mm Short Boot, 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	18533	18532
Heather Violet	18535	18534
Lime	20983	20982
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	18537	18539

## Ø 3.6mm Short Boot, Controlled, 20N Spring Force, MTP $^{\circ}$ PRO

Usuaing Color	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
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	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

Ususia s Calar	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
Hausing 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	18645	18644

## Ø 5.0mm, 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	18665	18664
Heather Violet	18667	18666
Lime	20961	20960
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	18669	18668

## $\emptyset$ 5.5mm, 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	18689	18688
Heather Violet	18691	18690
Lime	20963	20962
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	18693	18692



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

	Multimode MTP Elite®	
Housing Color	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
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	18555	18554

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

Usuaing Calar	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-Mod	e 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

	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

Hausian Calan	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

Upusing 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

Heuring 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

Housing Color	Multimode MTP Elite®	
	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
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	18561	18560

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

Heusing Color	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-Mod	e 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

Housing 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

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

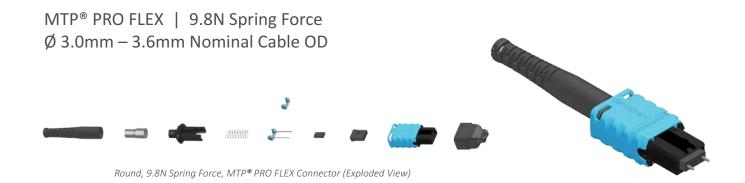
Heuring Color	Multimode MTP Elite®	
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N, Female
Aqua	18653	18652
Heather Violet	18655	18654
Lime	20975	20974
Upusing Color	Single-Mode	e MTP Elite®
Housing Color	MTP <sup>®</sup> PRO Kit P/N, Male	MTP <sup>®</sup> PRO Kit P/N,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

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

	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<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	18701	18700
Heather Violet	18703	18702
Lime	20979	20978
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	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®	
	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

Heuring 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
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	18591	18590



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

Hausing 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

Upuring 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
Upuring 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®	
	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
Upusing 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	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		



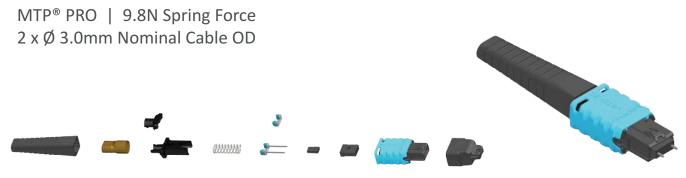
Bare Ribbon, 20N Spring Force, MTP® PRO Connector (Exploded View)

#### 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		
	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

Heusing 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		
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	21039 21038			



2 x 3.0mm Round, MTP® PRO Connector (Exploded View)

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

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	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

Housing 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® PRO, Male, Aqua = 10 pieces/tube
	18256	Pin Exchanger, MTP <sup>®</sup> PRO, Female, Aqua = 10 pieces/tube
~	18843	Pin Exchanger, MTP® 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 (10pieces/tube)</li> <li>Pin Exchanger, MTP® PRO, Male - SME, Yellow (10 pieces/tube)</li> </ul>





## $\emptyset$ 2.0mm, 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	20119	20117	20118	20117
Magenta	20122	20120	20121	20120
Heather Violet	20125	20123	20124	20123
Munsell Violet	20128	20126	20127	20126
Lime	20131	20129	20130	20129
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	-	-	20133	20132
Yellow	20135	20134	-	-

#### $\emptyset$ 2.0mm 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
23163	23161	23162	23161
23166	23164	23165	23164
23169	23167	23168	23167
23172	23170	23171	23170
23175	23173	23174	23173
Single-Mod	-Mode MTP Elite® Si		-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
-	-	23177	23176
23179	23178	-	-
	MTP® Kit P/N, Male 23163 23166 23169 23172 23175 Single-Mod MTP® Kit P/N, Male -	MTP® Kit P/N, Male         MTP® Kit P/N, Female           23163         23161           23166         23164           23169         23167           23172         23170           23175         23173           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           23163         23161         23162           23166         23164         23165           23169         23167         23168           23172         23170         23171           23175         23173         23174           Single-Mode MTP Elite®         MTP® Kit P/N, Male           MTP® Kit P/N, Male         MTP® Kit P/N, Female

## $\emptyset$ 2.5mm, Controlled, 9.8N Spring Force

	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	20142	20140	20141	20140
Magenta	20145	20143	20144	20143
Heather Violet	20148	20146	20147	20146
Munsell Violet	20151	20149	20150	20149
Lime	20154	20152	20153	20152
University 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	-	-	20156	20155
Yellow	20158	20157	-	-

## Ø 3.0mm, 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	20165	20163	20164	20163
Magenta	20168	20166	20167	20166
Heather Violet	20171	20169	20170	20169
Munsell Violet	20174	20172	20173	20172
Lime	20177	20175	20176	20175
Hausina 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	-	-	20179	20178
Yellow	20181	20180	-	-

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

TP <sup>®</sup> Kit P/N, Male 20211	MTP <sup>®</sup> Kit P/N, Female	MTP <sup>®</sup> Kit P/N, Male	
20211			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
TP <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	-	-
	20217 20220 20223 Single-Mode TP® Kit P/N, Male	20217     20215       20220     20218       20223     20221       Single-Mode MTP Elite®       TP® Kit P/N, Male       MTP® Kit P/N, Female       -     -	20217         20215         20216           20220         20218         20219           20223         20221         20222           Single-Mode         MTP Elite®         Single           TP® Kit P/N, Male         MTP® Kit P/N, Female         MTP® Kit P/N, Male           -         -         20225

## Ø 3.6mm, 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	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
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	-	-	20370	20369
Yellow	20372	20371	-	-

## Ø 3.6mm 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
20402	20400	20401	20400
20405	20403	20404	20403
20408	20406	20407	20406
20411	20409	20410	20409
20414	20412	20413	20412
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
-	-	20416	20415
20418	20417	-	-
	MTP <sup>®</sup> Kit P/N, Male 20402 20405 20408 20411 20414 Single-Mode MTP <sup>®</sup> Kit P/N, Male	MTP® Kit P/N, Male         MTP® Kit P/N, Female           20402         20400           20405         20403           20408         20406           20411         20409           20414         20412           Single-Mode MTP® Kit P/N, Female           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           20402         20400         20401           20405         20403         20404           20408         20406         20407           20411         20409         20410           20414         20412         20413           Single-Modet         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

## $\emptyset$ 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-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	-	-	20568	20567
Yellow	20570	20569	-	-

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

Hausina 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	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
Unusing 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	-	-	20663	20662
Yellow	20665	20664	-	-

## $\emptyset$ 5.0mm, 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	20742	20740	20741	20740
Magenta	20745	20743	20744	20743
Heather Violet	20748	20746	20747	20746
Munsell Violet	20751	20749	20750	20749
Lime	20754	20752	20753	20752
Usualiza 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	-	-	20756	20755
Yellow	20758	20757		-

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

Heuring 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	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
Haveing Calar	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	-	-	20848	20847
Yellow	20850	20849	-	-



#### Ø 2.0mm, Controlled, 20N Spring Force

Unusing 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	21937	21935	21936	21935
Magenta	21940	21938	21939	21938
Heather Violet	21943	21941	21942	21941
Munsell Violet	21946	21944	21945	21944
Lime	21949	21947	21948	21947
Usuain a 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	-	-	21951	21950
Yellow	21953	21952	-	-

## $\emptyset$ 2.5mm, Controlled, 20N Spring Force

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	21960	21958	21959	21958
Magenta	21963	21961	21962	21961
Heather Violet	21966	21964	21965	21964
Munsell Violet	21969	21967	21968	21967
Lime	21972	21970	21971	21970
Heusing 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	-	-	21974	21973
Yellow	21976	21975	-	-

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

	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	20188	20186	20187	20186	
Magenta	20191	20189	20190	20189	
Heather Violet	20194	20192	20193	20192	
Munsell Violet	20197	20195	20196	20195	
Lime	20200	20198	20199	20198	
Useria s Calar	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	-	-	20202	20201	
Yellow	20204	20203	-	-	

#### Ø 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
	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, Controlled, 20N 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
20379	20377	20378	20377
20382	20380	20381	20380
20385	20383	20384	20383
20388	20386	20387	20386
20391	20389	20390	20389
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
-	-	20393	20392
20395	20394	-	-
	MTP® Kit P/N, Male 20379 20382 20385 20388 20391 Single-Mod MTP® Kit P/N, Male -	MTP® Kit P/N, Male         MTP® Kit P/N, Female           20379         20377           20382         20380           20385         20383           20391         20389           Single-Mode         MTP® Kit P/N, Female           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           20379         20377         20378           20382         20380         20381           20385         20383         20384           20391         20389         20390           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

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

	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
	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	-	-	20439	20438
Yellow	20441	20440	-	-

#### $\emptyset$ 4.0mm, 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	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
	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	-	-	20591	20590
Yellow	20593	20592	-	-

#### $\emptyset$ 4.5mm, 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	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
	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	-	-	20686	20685
Yellow	20688	20687	-	-

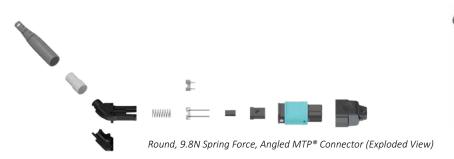
# Ø 5.0mm, Controlled, 20N Spring Force

Usuaing 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	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	
Usuain a 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	-	-	20779	20778	
Yellow	20781	20780	-	-	

# $\emptyset$ 5.5mm, 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	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
Usuain a 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	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





#### Ø 3.0mm, Controlled, 9.8N Spring Force, Angled

Housing 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	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	
	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	-	-	20318	20317	
Yellow	20320	20319	-	-	

#### $\emptyset$ 3.6mm, Controlled, 9.8N 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
20494	20492	20493	20492
20497	20495	20496	20495
20500	20498	20499	20498
20503	20501	20502	20501
20506	20504	20505	20504
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
-	-	20508	20507
20510	20509	-	-
	MTP® Kit P/N, Male 20494 20497 20500 20503 20506 Single-Mod MTP® Kit P/N, Male -	MTP® Kit P/N, Male         MTP® Kit P/N, Female           20494         20492           20497         20495           20500         20498           20503         20501           20506         20504           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           20494         20492         20493           20497         20495         20496           20500         20498         20499           20503         20501         20502           20506         20504         20505           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

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

Usuaing 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	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	
Hausing Calar	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	-	-	20614	20613	
Yellow	20616	20615	-	-	

#### Ø 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
	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	-	-

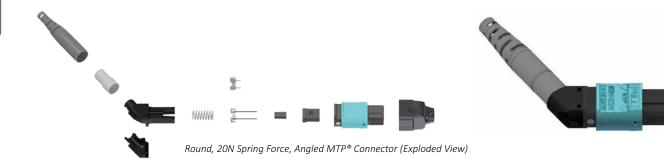
#### Ø 5.0mm, Controlled, 9.8N Spring Force, Angled

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
20788	20786	20787	20786
20791	20789	20790	20789
20794	20792	20793	20792
20797	20795	20796	20795
20800	20798	20799	20798
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
-	-	20802	20801
20804	20803	-	-
	MTP® Kit P/N, Male 20788 20791 20794 20797 20800 Single-Mode MTP® Kit P/N, Male -	MTP* Kit P/N, Male         MTP* Kit P/N, Female           20788         20786           20791         20789           20794         20792           20797         20795           20800         20798           Single-Mode TP 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           20788         20786         20787           20791         20789         20790           20794         20792         20793           20797         20795         20796           20800         20798         20799           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, Angled

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	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
Havein a 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	-	-	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

Heusing 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	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
Usuain a Calan	Single-Mod	le 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	-	-	20341	20340
Yellow	20343	20342	-	-

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

	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	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
Hausing Cales	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

Heuring Color	Multimod	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	20623	20621	20622	20621
Magenta	20626	20624	20625	20624
Heather Violet	20629	20627	20628	20627
Munsell Violet	20632	20630	20631	20630
Lime	20635	20633	20634	20633
Usuain a Calan	Single-Moc	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	-	-	20637	20636
Yellow	20639	20638	-	-

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

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	20718	20716	20717	20716
Magenta	20721	20719	20720	20719
Heather Violet	20724	20722	20723	20722
Munsell Violet	20727	20725	20726	20725
Lime	20730	20728	20729	20728
	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	-	-	20732	20731
Yellow	20734	20733	-	-

	, , , , , , , , , , , , , , , , , , , ,			
Heusing Color	Multimode	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	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
Hausing Calar	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	-	-	20825	20824
Yellow	20827	20826	-	-

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

# $\emptyset$ 5.5mm, Controlled, 20N 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	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
	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	-	-



2 x 3.0mm Round, 9.8N Spring Force, MTP® Connector (Exploded View)

# 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	

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

#### 2 x Ø 3.0mm, Controlled, 20N 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	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
Hausing Calar	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

Unusing 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
Haveing Calar	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	-	-	20271	20270
Yellow	20273	20272	-	-

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

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
20448	20446	20447	20446
20451	20449	20450	20449
20454	20452	20453	20452
20457	20455	20456	20455
20460	20458	20459	20458
Single-Mode	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
-	-	20462	20461
20464	20463	-	-
	20451 20454 20457 20460 Single-Mode MTP® Kit P/N, Male	20451     20449       20454     20452       20457     20455       20460     20458       Single-Mode MTP Elite®       MTP® Kit P/N, Male       MTP® Kit P/N, Female	20451         20449         20450           20454         20452         20453           20457         20455         20456           20460         20458         20459           Single-Mode         MTP® Kit P/N, Female         MTP® Kit P/N, Male           MTP® Kit P/N, Male



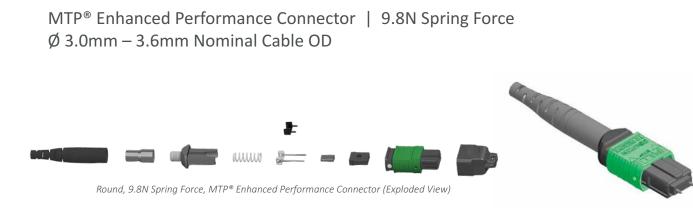
Round, 20N Spring Force,  $MTP^{\circledast}$  FLEX Connector (Exploded View)

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

Hausing 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	20281	20279	20280	20879
Magenta	20284	20282	20283	20282
Heather Violet	20287	20285	20286	20285
Munsell Violet	20290	20288	20289	20288
Lime	20293	20291	20292	20291
University Color	Single-Mod	Aode MTP Elite® Single-Mod		-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	-	-	20295	20294
Yellow	20297	20296	-	-

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

U susia e Calan	Multimod	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	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
Usuring Caler	Single-Moc	le 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	-	-



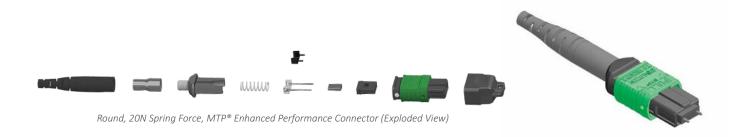
#### Ø 3.0mm, MTP<sup>®</sup> Enhanced Performance, 9.8N Spring Force

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

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

Housing Color	Multimode MTP Elite®		
	MTP <sup>®</sup> Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female	
Aqua	22102	22101	
Heusing Color	Single-Mode MTP Elite®	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		
Usualiza Calan	Single-Mode MTP Elite®	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

Heusing Color	Multimode MTP Elite®			
Housing Color	MTP® Kit P/N, Male	MTP <sup>®</sup> Kit P/N, Female		
Aqua	15705	15704		
Heusing 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, 9.8N Spring Force, MTP® Connector (Exploded View)

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

Usuaing Calan	Multimode	MTP Elite <sup>®</sup>	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	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
Hausing Calan	Single-Mode	ode MTP Elite® Single-Mode		-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

	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	20027	20025	20026	20025
Magenta	-	-	20029	20028
Heather Violet	20030	20028	20032	20031
Munsell Violet	20036	20034	20035	20034
Lime	20039	20037	20038	20037
Haveina 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	-	-	20041	20040
Yellow	20043	20042	-	-

# MTP® Connector | 20N Spring Force Bare Ribbon

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

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

Heusing 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	20004	20002	20003	20002
Magenta	20007	20005	20006	20005
Heather Violet	20010	20008	20009	20008
Munsell Violet	20013	20011	20012	20011
Lime	20016	20014	20015	20014
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	-	-	20018	20017
Yellow	20020	20019	-	-



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

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

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

Usuaing Color	Multimode	MTP Elite <sup>®</sup>	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	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
	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	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	-	-

# 

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

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	15322	15321	15320	15321
Magenta	17061	17060	-	-
Lime	19220	19218	19219	19218
Hausing 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	-	-	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	





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

#### Ø 2.0mm, 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	21408	21406	21407	21406
Magenta	21411	21409	21410	21409
Lime	21414	21412	21413	21412
Usuaine Calan				
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female	
Green	21416		21415	

#### $\emptyset$ 2.0mm Short Boot, Controlled, 20N Spring Force, MTP<sup>®</sup>-16

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	23182	23180	23181	23180
Magenta	23185	23183	23184	23183
Lime	23188	23186	23187	23186
Hausing Cales		Single	-Mode	
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female	
Green	23	23190		189

#### Ø 2.5mm, 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	21420	21418	21419	21418	
Magenta	21424	21421	21423	21421	
Lime	21427	21425	21426	21425	
Hausing Calan		Single-Mode			
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female		
Green	214	429	21428		

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

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	16525	16524	18028	16524
Magenta	16527	16526	18029	16526
Lime	19235	19233	19234	19233
Heusing Color	Single-Mode			
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female	
Green	19402		19401	

#### Ø 3.6mm, Controlled, 20N Spring Force, MTP<sup>®</sup>-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	
Llausing Caler		Single-Mode			
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female		
Green	194	19404		403	

#### Ø 4.0mm, Controlled, 20N Spring Force, MTP<sup>®</sup>-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	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	19	406	194	105

#### Ø 4.5mm, 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	18009	18008	18034	18008
Magenta	18011	18010	18035	18010
Lime	19244	19242	19243	19242
Housing Color	Single-Mode			
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female	
Green	194	408	19407	

#### Ø 5.0mm, Controlled, 20N Spring Force, MTP®-16

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	17689	17688	18036	17688	
Magenta	17691	17690	18037	17690	
Lime	19247	19245	19246	19245	
Usuaina Calan		Single-Mode			
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female		
Green	194	410	19	409	

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

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	18013	18012	18038	18012
Magenta	18015	18014	18039	18014
Lime	19249	19248	19249	19248
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female	
Green	194	19412		411



2 x 3.0mm Round, 20N Spring Force, MTP®-16 Connector (Exploded View)

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

-		-			
Hausing Calan	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	17101	17100	18040	17100	
Magenta	17103	17102	18041	17101	
Lime	19253	19251	19252	19251	
Hausing Calar		Single-Mode			
Housing Color	MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female		
Green	194	416	19	415	

#### 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

Unusing 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	17865	17864	18043	17864	
Magenta	17867	17866	18044	17866	
Lime	19256 19254		19255	19254	
Usualiza Calan	Single-Mode				
Housing Color	MTP <sup>®</sup> Kit	P/N, Male	MTP <sup>®</sup> Kit P/N, Female		
Green	19414		19413		

#### Bare Ribbon without Boot, Controlled, 20N Spring Force, MTP®-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	21042	21040	21041	21040	
Magenta	21045	21043	21044	21043	
Lime	21048 21046		21047	21046	
Hausing Color	Single-Mode				
Housing Color	Housing Color MTP® Ki		MTP <sup>®</sup> Kit P	t P/N, Female	
Green	210	21050		049	

# MTP®-16 Connector | 20N Spring Force Oval

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

Useria s Calar	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	21053	21051	21052	21051	
Magenta	21056	21054	21055	21054	
Lime	21059	21057	21058	21057	
Hausing Calan	Single-Mode				
Housing Color	Housing Color MTP <sup>®</sup> Kit P/N, Male		MTP <sup>®</sup> Kit P/N, Female		
Green	21061		21060		

#### 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<sup>®</sup> 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

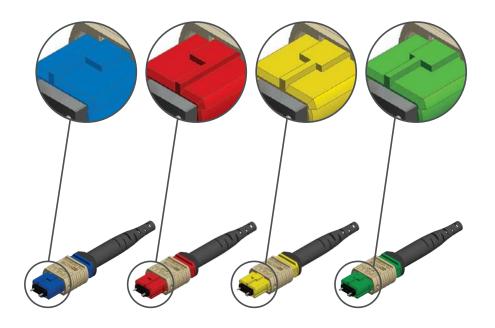
#### **Applications**

- 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<sup>®</sup> Standard Footprint | Standard Footprint | Full Flange

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
	Opposed	Black	MTP-ADPT	MTP-ADPT-2
Full Flange	Opposed	Beige	6496	9220
-	Opposed	Green	7868	8852
	Opposed	Aqua	7869	9218
	Opposed	Blue	6531	9135
	Opposed	Red	17872	17873
40	Opposed	Magenta	13770	13771
	Opposed	Yellow	17852	17853
-	Opposed	Heather Violet	16697	16698
-	Opposed	Munsell Violet	16772	16773
-	Opposed	Lime	19451	19452
-	Opposed	White	19925	19926
-	Aligned	Gray	5306	12196

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

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
	Opposed	Black	MTP-RF-ADPT	12075
Reduced Flange	Opposed	Beige	12197	12202
	Opposed	Green	12198	12203
	Opposed	Aqua	9574	12204
	Opposed	Blue	12200	12205
	Opposed	Red	17874	17875
	Opposed	Magenta	13850	13851
	Opposed	Yellow	17854	17855
	Opposed	Heather Violet	16701	16703
	Opposed	Munsell Violet	16775	16776
	Opposed	Lime	19453	19454
	Opposed	White	19927	19928
	Aligned	Gray	12035	12206

\*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)
	Opposed	Black	12036	12216
Full Flange	Opposed	Beige	12212	12217
	Opposed	Green	12213	12218
	Opposed	Aqua	12214	12219
TOP	Opposed	Blue	12215	12220
	Opposed	Red	17876	17877
60	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

# MTP<sup>®</sup> Adapters | SC Footprint | Full Flange

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

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
	Opposed	Black	12041	12226
Reduced Flange	Opposed	Beige	12222	12227
	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 Duplex Footprint | Full Flange

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
	Opposed	Black	14974	14992
Full Flange	Opposed	Beige	14975	14993
-	Opposed	Green	14977	14994
-	Opposed	Aqua	14978	14995
	Opposed	Blue	14979	14996
	Opposed	Red	14981	14998
Contraction of the second	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

# MTP® Adapters | SC Duplex Footprint | Reduced Flange

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
	Opposed	Black	14983	15001
Reduced Flange	Opposed	Beige	14984	15002
	Opposed	Green	14985	15003
E.S.	Opposed	Aqua	14986	15004
	Opposed	Blue	14987	15005
	Opposed	Red	14989	15007
	Opposed	Magenta	14990	15008
•	Opposed	Yellow	16497	16498
	Opposed	Heather Violet	16715	16716
	Opposed	Munsell Violet	16788	16789
	Opposed	Lime	19648	19649
	Opposed	White	19935	19936
	Aligned	Gray	14988	15006

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

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

### MTP® Specialty Adapters | Shuttered

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

Flange Type	Key Orientation	Color	Part Number (with 1 dust plug)	Part Number (with 2 dust plugs)
	Opposed	Black	17011	17012
Full Flange	Opposed	Beige	17013	17014
	Opposed	Green	17015	17016
	Opposed	Aqua	17017	17018
No. Ar	Opposed	Blue	17019	17020
5	Opposed	Red	17023	17024
Contract of the second s	Opposed	Magenta	17025	17026
	Opposed	Yellow	17027	17028
	Opposed	Heather Violet	17029	17030
	Opposed	Munsell Violet	17031	17032
	Aligned	Gray	17021	17022

# MTP® Specialty Adapters | Angled

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

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

# MTP® Specialty Adapters | Ganged

Туре	Flange Type	Key Orientation Color	Color	Part Number
Ganged	Ganged 1 x 4 Straight	Ganged 1 x 4 Straight Opposed		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 1x6 Straight Adapter



Ganged 2x8 Straight Adapter



Ganged 1x2 Angled

Adapter



Ganged 1x4 Angled Adapter

#### 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
<i>a</i> .	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)
	Opposed	Black	21681	21682
Full Flange	Opposed	Aqua	21683	21684
hin	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)
Deduced Flores	Opposed	Black	21663	21664
Reduced Flange	Opposed	Aqua	21665	21666
	Opposed	Magenta	21671	21672
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Opposed	Green	21667	21668
	Opposed	Heather Violet	21673	21674
1-25	Opposed	Lime	21677	21678
	Opposed	Yellow	21669	21670
	Opposed	Munsell Violet	21675	21676
	Opposed	White	21679	21680
	Aligned	Gray	22214	22215

#### **MTP® Push-Pull Tabs**

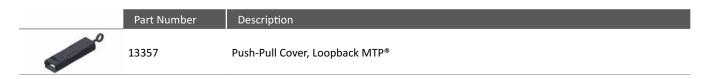
The Push-Pull Tabs greatly simplify the use of MPO connectivity when manual access to the release slider and rear portion of the connector is restricted. This novel accessory for the expanding MTP<sup>®</sup> brand product family enables easy insertion and extraction of MTP<sup>®</sup> brand plugs in 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® 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
15510	Dust Cap, Flanged with lanyard hole, MTP <sup>®</sup> /MT Ferrule
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

#### **Wash Plugs**

US Conec's MTP<sup>®</sup> wash plugs have a novel, elastomeric component designed from a dissipative, non-outgassing, engineering thermoset material. The wash plug inserts into a standard MPO adapter port while creating a true seal around the end face of the MT ferrule or Tx/Rx optical interface component. It is suitable to withstand the extreme temperatures of solder reflow processing.

 Part Number	Description
Y0320	Wash Plug, MTP® Adapter

#### **MTP® FLEX Boots**

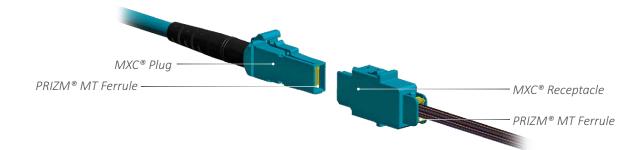
A bendable strain-relief boot, featuring a tight bend radius to support cable routing in highly dense areas. The advanced design offers flexible positioning from 0° to 90°, enduring multiple bends with minimal impact on performance. Where access to optical front panels may be a challenge, the MTP<sup>®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

#### **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.

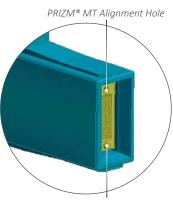


#### **Features:**

- 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

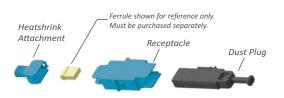


PRIZM<sup>®</sup> MT Alignment Post

#### MXC<sup>®</sup> Plugs Spacer Spring Push Ferrule shown for reference only. (2-Piece Set) Must be purchased separately. Cable Boot Housing Dust Cap Crimp Ring Spring Cable Diameter Color Kit Part Number Description Kit, Connector, 3.0mm MXC® 3.0mm Aqua 19878 19879 Kit, Connector, 3.6mm MXC® 3.6mm Aqua 4.0mm 19880 Kit, Connector, 4.0mm MXC® Aqua 4.5mm Aqua 19881 Kit, Connector, 4.5mm MXC® 19882 5.0mm Kit, Connector, 5.0mm MXC® Aqua 5.5mm 19885 Kit, Connector, 5.5mm MXC® Aqua

The MXC<sup>®</sup> plug is compatible with the PRIZM<sup>®</sup> MT Ferrule (sold separately).





Color	Kit Part Number	Description
Aqua	15752	Receptacle, MXC <sup>®</sup>
	15899	Kit, Receptacle w/Heatshrink Attachment, MXC®
	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> Single Port Blind Mate Hardware

Color	Kit Part Number	Description
Black	22076	Kit, Plug Internal, MXC <sup>®</sup> Single Port Blind Mate, Black
Aqua	21644	Adapter, MXC <sup>®</sup> Single Port Blind Mate
Black	21280	Mounting Bracket, MXC <sup>®</sup> Single Port Blind Mate

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

	Kit Part Number	Description
MXC® Plug, External w/ Push-Pull Tab / 6 Port MXC® Plug Carrier	19888	Kit, Plug External, 3.0mm/Ribbon MXC <sup>®</sup> , Bend Relief, Aqua
6 Port MXC® Internal Blind Mate Assembly	19887	Kit, Plug Internal, MXC <sup>®</sup> 6 Port Blind Mate, Black
	17096	Blind Mate Assembly, MXC <sup>®</sup> 6 Port Blind Mate
Back Plane	15168	Plug Carrier, MXC <sup>®</sup> 6 Port Blind Mate
6 Port MXC <sup>®</sup> Hybrid	15170	Adapter, MXC <sup>®</sup> 6 Port Blind Mate
Blind Mate Adapter Mounting Bracket	16607	Mounting Bracket, MXC <sup>®</sup> 6 Port Blind Mate

#### **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® LightTurn® Bare Ribbon Housing
<ul> <li>A</li> </ul>	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 <sup>®</sup> Ferrules

### PRIZM® LightTurn® Mechanical Optical Interface (MOI)

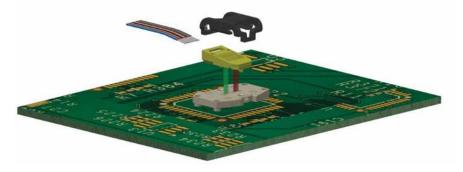
The MOI provides the coupling interface between the PRIZM<sup>®</sup> LightTurn<sup>®</sup> connector and the optical transmitter or photodiode array. The MOI is first aligned to the transmitter or photodiode array and permanently attached to the substrate allowing for passive alignment of the PRIZM<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
States	15214	PRIZM® Mechanical Optical Interface (MOI) 10+ Gbps
and the second second	17813	PRIZM® 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 most dense 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

#### ELiMENT<sup>®</sup> MDC Connector with DirectConec<sup>™</sup> Boot

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

#### ELIMENT® MDC Jr. Connector

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



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 Ali	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	Aligned	Heather Violet	MDC/MDC Jr.	21882	21875
and the second second	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
Contraction of the second	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**

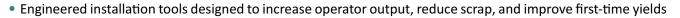
US Conec's ELIMENT<sup>\*</sup> Duplex LC Uniboot is a high performance two-in-one LC connector that provides quick and easy toolless polarity reversal. The Duplex LC Uniboot reduces internal fiber damage by limiting fiber rotation to 180 degrees while eliminating exposed fibers during polarity reversal.

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.

22220

#### Features:

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



- 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
	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 Marda	Blue	Blue	900	Black	22750
Single-Mode	Blue	Blue	600	Black	22931
Single Made 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® 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:**

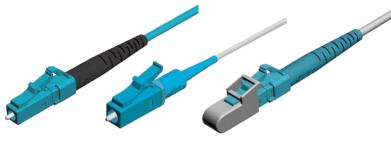
- MM, SM, and APC
- 900µm and 1.6/2.0mm cable boots
- One-piece tunable connector body
- Yellow and White heat shrink available
- Meets IEC Attenuation Grade B random mating requirements (0.12 dB mean, 0.25 dB maximum for ≥ 97% of the connectors)

#### $900 \mu m \mbox{ ELiMENT}^{\mbox{\tiny (B)}} \mbox{ LC Connector}$

Performance	Housing Color	Boot Color	Part Number
	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<sup>®</sup> LC Connector

Performance	Housing Color	Heatshrink Color	Boot Color	Part Number
	Aqua	White	Black	17224
	Aqua	White	Aqua	17307
Multimeral a	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
Single-Mode	Blue	White	White	17305
	Blue	Yellow	Black	17402
	Blue	Yellow	Blue	17403
	Blue	Yellow	White	17404
	Green	White	Black	17228
Single-Mode APC	Green	White	Green	17309
	Green	Yellow	Black	17407
	Green	Yellow	Green	17408



# ELIMENT® LC Adapters | Duplex | Full Flange

Flange Type	Color	Part Number
Full Flange	Aqua	18241
i un riange	Blue	17336
C.	Green	17253
	Heather Violet	17926
	Beige	18462

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

Flange Type	Color	Part Number
Reduced Flange	Aqua	18242
	Blue	18260
A COLORING	Green	18261
	Heather Violet	17924
	Beige	18463

# ELiMENT® LC Adapters | Quad | Full Flange

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

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

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

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

Part Number	Description
18354	Crimp Die
18356	Crimp Tool & Die
18900	LC Duplex Clip
19747	2mm LC-FLEX Boot

#### **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
Multimode	Aqua	Black	17257
	Aqua	Aqua	17361
	Heather Violet	Black	17975
	Beige	Black	17260
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
Multimode	Aqua	Black	17258
	Aqua	Aqua	17362
	Heather Violet	Black	17976
	Beige	Black	17261
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
Multimode	Aqua	Black	17259
	Aqua	Aqua	17363
	Heather Violet	Black	17977
	Beige	Black	17262
	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

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

#### 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

Flange Type	Color	Part Number
Full Flange	Aqua	18263
i un riange	Blue	17338
2	Green	17339
	Heather Violet	17938
	Beige	18470

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

Flange Type	Color	Part Number
Reduced Flange	Aqua	18264
	Blue	17437
	Green	17438
	Heather Violet	17940
	Beige	18471

#### ELIMENT® SC Connector Tools

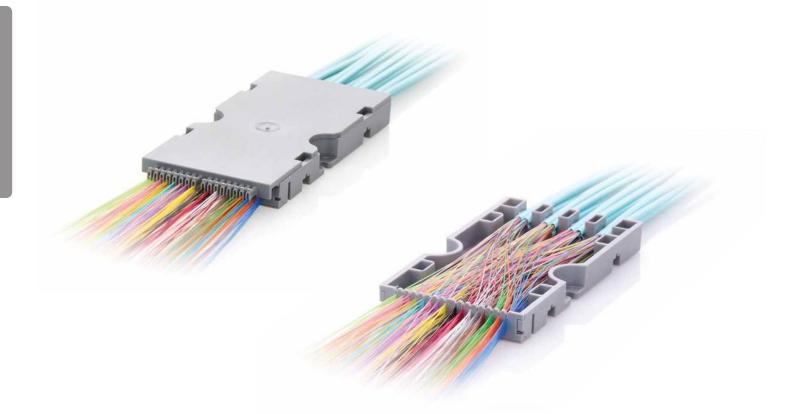
Part Number	Description
18355	Crimp Die
18357	Crimp Tool & Die

#### **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**

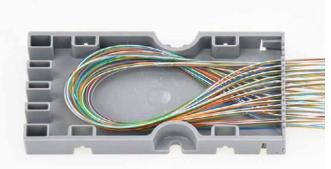
Operating Temperature	Flammability	Mechanical
-40°C to 75°C	UL 94V-0	GR-2866

## 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.



#### **Ribbonizing Tools**

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.



Tools & Consumables





Disposable 4 Fiber Ribbonizing Tool (Top)

Disposable 8 Fiber Ribbonizing Tool (Top)

Disposable 12 Fiber Ribbonizing Tool (Top)

Disposable 16 Fiber Ribbonizing Tool (Top)

# **Disposable Ribbonizing Tools**

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

#### **Ribbon Cutter**

US Conec offers a ribbon fiber cutting solution for assembly of MTP<sup>®</sup> connectors. The standard fiber cutter offers a quick, effective way to provide a controlled ribbon shear at the proper length for insertion into the MT ferrule.

#### **Ribbon Cutter**

Part Number	Description	Purpose	100
MFA-004	Ribbon Cutter	Provides a clean ribbon edge for insertion into MT ferrules	
6383	Replacement Blade for Ribbon Cutter	Replaces carbide blade in p/n MFA-004	

Ribbon Cutter

#### **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 <sup>®</sup> 3.0mm hardware; includes the hand tool (400053-01) and crimp die (8173)
17619	Crimp Tool, MTP®, 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 <sup>®</sup> 4.5-5.5mm hardware; includes the hand tool (400053-01) and crimp die (13119)
12245	Crimp Tool, MTP <sup>®</sup> , Oval	Crimps MTP $^{\circ}$ 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®, Zipcord, 3.0mm	Crimps MTP <sup>®</sup> 3.0mm zipcord hardware; crimp die only - no hand tool
12208	Crimp Die, MTP®, Round, 3.6mm	Crimps MTP <sup>®</sup> 3.6mm hardware; crimp die only - no hand tool
13119	Crimp Die, MTP®, 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	Crimps 900µm; crimp die only - no hand tool

# MTP<sup>®</sup> Assembly Tools

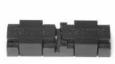
Part Number	Description	Purpose
5683	Pump, Vacuum, ULVAC	Vacuum pump used in kit MTA-021
5684	Vacuum Tubing, 1'	Plastic tubing used in kit MTA-021
6372	Stripper, Oval Cable Jacket	Jacket removal tool for traditional oval ribbon cable
6383	Replacement Blade for Ribbon Cutter	Replaces carbide blade in p/n MFA-004
8173	Crimp Die, MTP <sup>®</sup> , Round, 3.0	Crimps MTP® 3.0mm hardware; crimp die only-no hand tool
8202	Crimp Tool, MTP®, 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 $MTP^{\circledast}$ 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
12013	Spring Compression Tool, MTP®	Aids MTP® assembly process by compressing loose spring into spring push
12208	Crimp Die, MTP <sup>®</sup> , Round, 3.6 mm	Crimps MTP® 3.6mm hardware; crimp die only-no hand tool
12245	Crimp Tool, MTP®, Oval	Crimps MTP <sup>®</sup> oval hardware; includes the hand tool (400053-01) and crimp dies (9883)
12345	Crimp Tool, MTP®, 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 $^{\circledast}$ 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®, 4.5-5.5mm	Crimps MTP <sup>®</sup> 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 $MTP^{\$}$ assembly
19798	Fiber Holder, 3.0-3.6mm, Loose Fiber	Holds loose fibers during stripping and cleaving for 3.0-3.6mm MTP® assembly; eliminates the need for ribbonizing
13923	Ribbon Holder, 3.0-3.6mm	Holds ribbon fibers during stripping and cleaving for 3.0-3.6mm $MTP^{\texttt{0}}$ assembly
13926	Fiber Holder, 2.0mm, Loose Fiber	Holds loose fibers during stripping and cleaving for 2.0mm MTP® and PRIZM® LightTurn® assemblies; eliminates the need for ribbonizing
17147	Ribbon Holder, 3.0mm, 3.6mm, and 4.0mm, MTP®-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
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 $900\mu m$
15360	Disposable Ribbonizer, 16F (Green)	Creating 16F, adhesive based ribbons for insertion into MT ferrules, 10+ uses

# **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
MTA-008	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
MFA-004	Ribbon Cutter	Provides a clean ribbon edge for insertion into MT ferrules
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®-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 <sup>®</sup> and MTP <sup>®</sup> PRO	Aligns ferrule into the housing, MTP® and MTP® PRO



18476 Universal Housing Removal Tool, MTP®



13923 Ribbon Holder, 3.0-3.6mm



17150 Ferrule Insertion Cap, MTP®-16



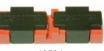
Extraction tool, MTP®



13926 Fiber Holder, 2.0mm, Loose Fiber



6372 Stripper, Oval Cable Jacket



13591 Ribbon Holder, 4.5-5.5mm



19798



**15173** Ribbon holder for 900μm



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





12013 Spring Compression Tool, MTP®



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

# PRIZM<sup>®</sup> MT Assembly Tools

Part Number	Description	Purpose
20642	Laser Fiber Cleaver for PRIZM <sup>®</sup>	Fiber preparation for PRIZM <sup>®</sup> MT
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, PRIZM® MT
17666	MXC <sup>®</sup> Housing Removal Tool	Disassembles MXC <sup>®</sup> plug housing and removes PRIZM <sup>®</sup> MT ferrule
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 <sup>®</sup> MT Ribbon Handler, 12F Assembly	Holds ribbon during stripping and cleaving for 12F ribbons
16514	PRIZM <sup>®</sup> 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
21547	US Conec PRIZM <sup>®</sup> Connector Custom Inspection Reticle	Provides inspection guidance for allowable defects
18754	Ferrule Insertion Cap	Aligns ferrule into the housing





13923 Ribbon Holder, 3.0-3.6mm



# 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® and PRIZM® LightTurn® 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 <sup>®</sup> MT ferrules
20642	Laser Fiber Cleaver for PRIZM®	Fiber preparation for PRIZM® LightTurn®



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	-
111020	22046	MDC	MDC	Cleans VSFF MDC connectors
	22277	QM125	Q-ODC-2 Mini	Cleans harsh environment 1.25mm based connector systems
STOC and	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
	13965	Zi125	LC, MU	Compact size; includes retractable zipcord
	14303	LC <sup>2</sup>	LC	Cleans 525+ pairs of LC duplex connectors
	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
100 mag	9392	SC	SC, ST, FC, E2000	-
Ball Internet	9394	НС	OptiTap®	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
Pro Francis	12926	M20	SMPTE 304M, SMPTE 358M, MIL PRF 28876	Cleans harsh environment 2.0 mm based connector systems
OTVO man	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 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 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 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
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® II	OptiTip®	Requires attached lanyard of adapters
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
And a	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	One	ATC-RE-01
6437	Two Slots	LC, MU	Two	ATC-RE-02
6339	MPO Male	Male MPO 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
3 11212	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, MTRJ (Female), BIC	Таре	14100601	Uses refill part number 14709 or 14710
	15053	CLETOP Type B	White	MU, LC, MT, MPO, MTRJ (Female), BIC	Таре	14100611	Uses refill part number 14709 or 14710
	14705	CLETOP Type MTRJ	White	MTRJ (Male and Female)	Таре	14100101	Uses refill part number 14709 or 14710
1 194	14706	CLETOP Type MPO	White	MTP <sup>®</sup> /MPO (Male and Female)	Таре	14100201	Uses refill part number 14709 or 14710
ama	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, MTRJ (Female), BIC	Cartridge	14110601	Uses refill part number 14711 or 14712
	15051	CLETOP-S Type B	White	MU, LC, MT, MPO, MTRJ (Female), BIC	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
6	14710	CLETOP Refill	Таре	White	14100710
1	14711	CLETOP-S Refill	Cartridge	Blue	14110700
-34. or	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
7892	1.25 mm	250	10	ATC-ST-01N	Notched for length customization
7893	2.5 mm	250	10	ATC-ST-02N	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	-
14714	1.25 mm	200	14100401	-
14715	2.0 mm	200	14100402	-
14716	2.0 mm 2.5 mm	100	14100403	Double-ended



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