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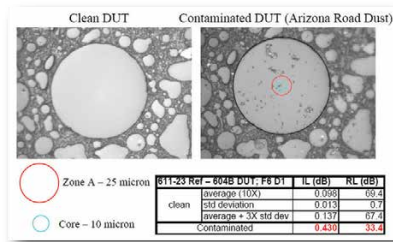
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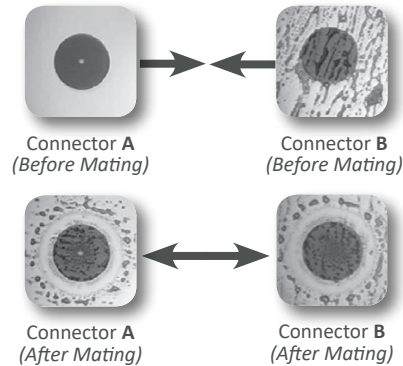
## The Importance of Cleaning

A clean connector is extremely important in the reliability of any optical network infrastructure. Connector end faces containing even small amounts of debris (skin oils, dust, lotions, water residue, etc.) not only suffer from power degradation but also an increased likelihood of permanent damage when mated. Good cleaning practices, proper training, and use of reliable cleaning tools will aid in the following:

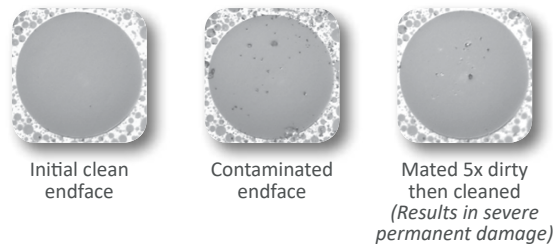
### 1. Prevent signal degradation



### 2. Prevent residue cross contamination

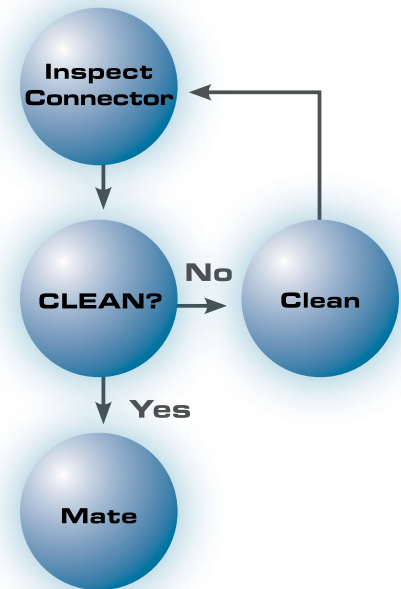


### 3. Reduce lasting effects of contamination



## Good Cleaning Practices: Inspect-Clean-Inspect

- Always inspect both connectors before mating.
- Mating dirty connectors may:
  - Cross contaminate both connectors
  - Scratch and pit the ferrule end face
- Inspecting and cleaning before mating will:
  - Prevent permanent damage to connectors
  - Reduce trouble shooting time
  - Reduce material costs
  - Improve signal quality
- Make keeping fiber optic connectors clean a priority
  - Develop inspection and cleaning procedures
  - Train your team regularly on how to inspect and clean your connectors



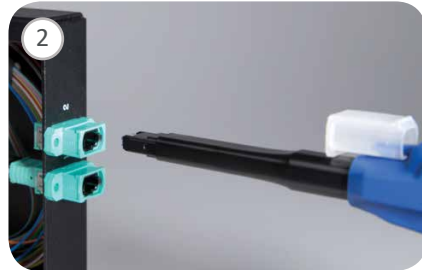
# Fiber Optic Cleaning Guide

## Multi-fiber Cleaner Instructions

Cleaning cable assemblies in bulkhead adapters:



Remove guide cap and place it on the cap holder



Insert tip of cleaner into adapter



Push the cleaner forward inside the adapter until you hear a click, indicating the cleaning process is complete

Cleaning unmated cable assemblies:



Open the cover of the guide cap



Insert connector into the guide cap



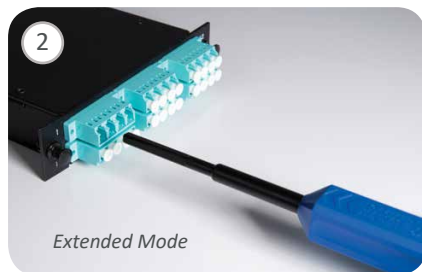
Push the cleaner forward towards the connector end face until you hear a click, indicating the cleaning process is complete

## Single Fiber Cleaner Instructions

Cleaning cable assemblies in bulkhead adapters:



Remove guide cap from cleaner

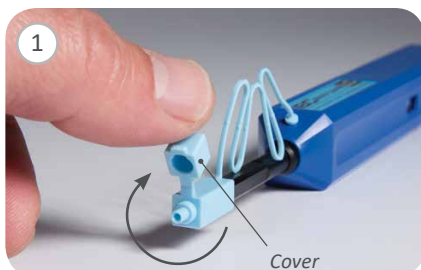


Insert tip of cleaner into adapter

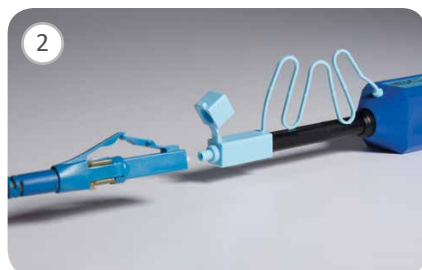


Push the cleaner forward inside the adapter until you hear a click, indicating the cleaning process is complete

Cleaning unmated cable assemblies:



Open the cover of the guide cap



Insert connector into the guide cap



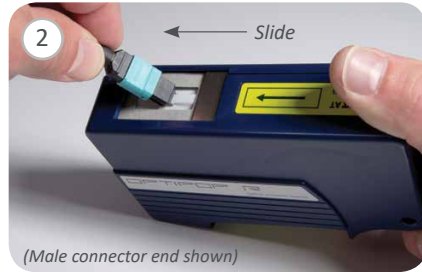
Push the cleaner forward towards the connector end face until you hear a click, indicating the cleaning process is complete

## Cassette Cleaner Instructions

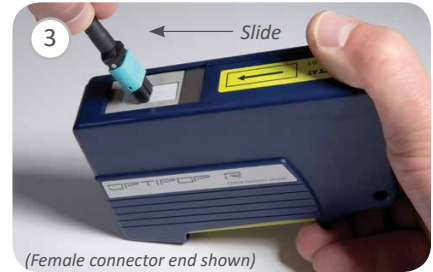
Cleaning unmated cable assemblies:



1 Depress lever to expose cleaning slot and cloth



2 With cleaning cloth exposed, slide connector end face in the direction of the arrow  
(Male connector end shown)



3 Keep connector perpendicular to cleaning surface  
(Female connector end shown)

## Wet-to-Dry Clean

Dry cleaning procedures are very effective at removing common sources of contamination. A wet-to-dry cleaning process may assist in removing stubborn debris and/or may reduce contamination caused by static found in dry environments. For detailed Wet-to-Dry cleaning instructions, please refer to US Conec AE Note 1824.

### IBC™ Cleaner Wet-to-Dry Instructions



1 Spray a small amount of cleaning solvent on an optical grade wipe



2 Lightly touch the cleaning ribbon/thread to the wet area of the wipe. Do not soak the ribbon/thread. Excessive cleaning solvent will require additional dry cleans



3 Follow standard cleaning procedure for connector type and cleaner used. A second push will provide a dry clean

### Cassette Cleaner Wet-to-Dry Instructions



1 Press the lever of the cleaning cassette to advance to a new cleaning cloth



2 Spray a very small amount of cleaning solvent on one end of the cleaning cloth. Do not soak the cloth. Excessive cleaning solvent will require additional dry cleans



3 Place the connector on the wet area of the cloth and wipe from the wet area to the dry area



## IBC™ Brand Single Fiber Cleaning Tools

The US Conec IBC™ Brand of single fiber cleaners can be used to effectively clean various single fiber connectors such as FC, LC, SC, LC Duplex and M250 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 contaminants:

- |                                   |                     |                      |
|-----------------------------------|---------------------|----------------------|
| • 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™ Brand Cleaning Tools for 1.25mm Based Connectors

	Part Number	Model	Cleans Connector Types	Additional Information
	9393	LC	LC, MU	-
	22046	MDC	MDC	Cleans VSFF MDC connectors
	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

IBC™ Brand Cleaning Tools for 2.5mm Based Connectors

	Part Number	Model	Cleans Connector Types	Additional Information
	9392	SC	SC, ST, FC, E2000	-
	9394	HC	OptiTap®	Used in FTTx applications
	13310	M250	SC, ST, FC E2000, TFOCA	1.8 mm cleaning region
	13964	Zi25	SC, ST, FC, E2000	Compact size; includes retractable zipcord

IBC™ Brand Cleaning Tools for Specialty Connectors

	Part Number	Model	Cleans Connector Types	Additional Information
	12926	M20	SMPTE 304M, SMPTE 358M, MIL PRF 28876	Cleans harsh environment 2.0 mm based connector systems
	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 wrist lanyard
	15523	G1000	Glenair Mighty Mouse 20 series	Compact size; can be used to clean MIL/AERO 1.0 mm connectors; includes retractable zipcord

## IBC™ 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™ 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 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 contaminants:

• 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™ Brand Cleaning Tools for MT Based Connectors

	Part Number	Model	Cleans Connector Types	Additional Information
	7104	MPO II	MPO	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™ Brand Eliminator™ Cleaning Fluid

US Conec’s IBC™ Brand Eliminator™ 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™ 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™ Cleaning Fluid can also be used for cleaning fibers in preparation for fusion splicing or other connectorization applications.



Eliminator™ Cleaning Fluid

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



## Cleaning Tools for PRIZM® MT Based Connectors

The PRIZM® MT cleaning tool is designed specifically for use with US Conec's PRIZM® 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® MT in an MTP® format.

### PRIZM® MT Cleaning Tools

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

### PRIZM® MT Cleaning Tool Adapters

	Part Number	Model	Cleans Connector Types	US Conec Cleaner Used	Additional Information
	16824	MXC®	MXC® back plane	15990	Cleans blind mate MXC® plugs from outside the chassis and on the card prior to assembly in the chassis
	18904	MXC®	MXC® back plane	15990	Cleans plug and socket Molex HBMT card edge connections

### NEOCLEAN PZ Refillable Cassette Cleaner

The NEOCLEAN PZ is a cassette style fiber optic cleaner system designed specifically for the PRIZM® LightTurn® connector. This refillable cassette cleaner uses a microfiber fabric to remove harmful contaminants 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® LightTurn® cable assemblies.




Placing PRIZM® LightTurn® 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® LightTurn®	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® 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.

#### CLETOP Refillable Cassette Cleaners

	US Conec Part Number	Model	Tape Color	Cleans Connector Types	Tape or Cartridge	NTT-AT Part Number	Additional Information
	14703	CLETOP Type A	Blue	SC, SC2, FC, ST, DIN, D4, E2000	Tape	14100501	Uses refill part number 14709 or 14710
	15052	CLETOP Type A	White	SC, SC2, FC, ST, DIN, D4, E2000	Tape	14100511	Uses refill part number 14709 or 14710
	14704	CLETOP Type B	Blue	MU, LC, MT, MPO, MTRJ (Female), BIC	Tape	14100601	Uses refill part number 14709 or 14710
	15053	CLETOP Type B	White	MU, LC, MT, MPO, MTRJ (Female), BIC	Tape	14100611	Uses refill part number 14709 or 14710
	14705	CLETOP Type MTRJ	White	MTRJ (Male and Female)	Tape	14100101	Uses refill part number 14709 or 14710
	14706	CLETOP Type MPO	White	MTP®/MPO (Male and Female)	Tape	14100201	Uses refill part number 14709 or 14710
	14707	CLETOP-S Type A	Blue	SC, SC2, FC, ST, DIN, D4, E2000	Cartridge	14110501	Uses refill part number 14711 or 14712
	14708	CLETOP-S Type B	Blue	MU, LC, MT, MPO, 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 Replacement Tape & Cartridges



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

# Stick Cleaners

## Stick Cleaners

US Conec's line of stick and pipe cleaners offers a solution for those hard to reach areas where an IBC™ 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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