

Fishman Corporation

#### **Product Name:**

Fishman Fiber Optic Benchtop Automation System - Option 2

#### **Manufacturer Part Number:**

DAB0041



AIRFREE® TECHNOLOGY

# **Automating Fiber Optic Connector Assembly**

# **The Complete System** for True Automation



By combining AlgorithmicControl™ with the LC/MT/SC Genius™ Precision ConnectorMount,™ the High Precision Benchtop Robot, the SmartReload™ Station and the Fiber Optic Connector SmartApp,™ Fishman® has created a superior solution that makes certain each fiber optic connector is filled precisely, cycle after cycle.



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# **Automating Fiber Optic Connector Assembly**

# **How the System Works**





#### Acts as the Command Center for the Fiber Optic Benchtop Automation System

The SmartDispenser® with AlgorithmicControl $^{\mathtt{m}}$  is the industry's only intelligent fluid dispensing system.

- · As Such, It Supplies the Exact Amount of Epoxy to Each Fiber Optic Connector
  - $_{\circ}\;$  It does this by knowing the syringe size
  - old It does this by knowing the exact fluid deposit volume
  - It does this by knowing the fluid delivery speed
  - $_{\circ}\,$  It does this by knowing how much post dispense reverse motion
  - All this ensures exact replication
- Plus, It Will Notify Operator When Syringe Reservoir is Empty and Stop Robot

AirFree® Technology processes this information by applying algorithmic directives to the linear drive system. This enables the mechanical linear drive system with a cylinder (syringe) containing epoxy to dispense its fluid deposits accurately with the highest degree of repeatability.



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# **How the System Works**





Acts as the Connector Location Tool for the Fiber Optic Benchtop Automation System

The Precision ConnectorMount™ Holds LC, SC or MT Fiber Optic Connectors in a Fixed Position.

 Its design allows for the fluid dispense tip to be guided into the connector center tube in preparation for the application of assembly fluid, which assures unparalleled precision



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# **How the System Works**



### The LC, MT and SC Connector SmartApp™ Monitors Amount of Fluid in the Syringe Reservoir.

- This SmartApp™ monitors how many fiber optic connectors are in a complete ConnectorMount™
  - This SmartApp™ monitors how much epoxy is dispensed into each fiber optic connector
    - This SmartApp™ assures that each fiber optic connector in a ConnectorMount™ is 100% filled. It also will not allow a ConnectorMount™ to be partially filled

#### The LC, MT and SC Connector SmartApp™ Monitors Epoxy Cure Time.

- This SmartApp™ will automatically stop the robot and notify the operator when the epoxy cure time
  has expired
  - This SmartApp™ will hold the robot stop communication signal until each fiber optic connector in a ConnectorMount™ is 100% filled. It also will not allow a ConnectorMount™ to be partially filled



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# **Automating Fiber Optic Connector Assembly**

# **How the System Works**



# Acts as the Rapid Syringe Changeover Station for the Fiber Optic Benchtop Automation System

The SmartReload™ Station Reduces Syringe Changeover Downtime From Approximately 9 Minutes to 40 Seconds.

- Allows the AirFree® LinearDrive™ System (LDS) Dispense Guns, with syringe fluid reservoir, to be loaded while the automation cell is assembling fiber optic connectors
- Increases production throughput while dramatically lowering the cost of typical hand-held benchtop assembly lines
- Moreover, as part of a Fishman® Fiber Optic Benchtop Automation System, a single SmartReload™ Station can service multiple cells



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# **Automating Fiber Optic Connector Assembly**



#### **System Ordering Options**

#### DAA0041 - Fiber Optic Benchtop Automation System Includes:

- · SmartDispenser® AirFree® Fluid Dispensing System
- High Precision Benchtop Robot
- LC, MT, SC Fiber Optic Connector SmartApp
- SmartReload™ Station includes:
   SmartDispenser® AirFree® Controller
  - SmartDispenser® AirFree® Controller Table Mount
     SmartDispenser® Gun Tray
- · Dispense Tip Locator
- USB Memory Stick
- Genius™ Syringe Holding Rack
   SmartDispenser® LDS Dispense Gun

#### TBD Genius™ Precision ConnectorMount™

- · Custom Design to a Specific Fiber Optic Connector
- · Part Number Assigned at Time of Design

#### DAB0041 - Fiber Optic Benchtop Automation System Includes:

- · SmartDispenser® AirFree® Fluid Dispensing System
- · High Precision Benchtop Robot
- · LC, MT, SC Fiber Optic Connector SmartApp
- Floor Standing Safety Glass Enclosure for FO Benchtop Automation System
   SmartReload\* Station includes:

- SmartDispenser® AirFree® Controller
   SmartDispenser® AirFree® Controller Table Mount
   SmartDispenser® Gun Tray
- · Dispense Tip Locator
- USB Memory Stick
   Genius™ Syringe Holding Rack
- SmartDispenser® LDS Dispense Gun

#### TBD Genius™ Precision ConnectorMount™

- · Custom Design to a Specific Fiber Optic Connector
- · Part Number Assigned at Time of Design

#### **OPTION 3**

#### DAC0041 - Fiber Optic Benchtop Automation System Includes:

- · SmartDispenser® AirFree® Fluid Dispensing System
- High Precision Benchtop Robot
- · LC, MT, SC Fiber Optic Connector SmartApp" Floor Standing Safety Glass Enclosure for FO Benchtop Automation System
- Laser Light Curtain
- SmartBeload™ Station includes: SmartDispenser® AirFree® Controller
- SmartDispenser® AirFree® Controller Table Mount
   SmartDispenser® Gun Tray
- Dispense Tip Locator USB Memory Stick
- ∘ Genius™ Syringe Holding Rack
- SmartDispenser® LDS Dispense Gun

#### TBD Genius™ Precision ConnectorMount™

- Custom Design to a Specific Fiber Optic Connector
- · Part Number Assigned at Time of Design

Note: Genius® Precision ConnectorMounts™ are custom quoted. A ballpark price range is included for budgetary purposes and is not fixed. Complexity of the fiber optic connector will determine final price