Ferrule Installation Tools

**Product Bulletin**

The CP-991 and CP-992 represent the next level of automated, high-volume ferrule cramping systems. Utilizing pneumatic power, quick-change tooling, and easy-to-use automation, these vibratory bowl-feed systems strip a single insulated conductor and apply a loose piece ferrule, all within 1.3 seconds. The automated stripping and crimping action is up to 6X faster than manual crimping; increasing productivity while reducing repetitive motion injuries.

The two systems allow for a large variety of loose piece ferrule size and pin length options. The CP-991 system crimps 24 – 12 AWG (0.5mm² – 2.5mm²) DIN compliant ferrules with 6 -12mm length pins. The CP-992 system crimps larger 12 – 8 AWG (4.0mm² – 10mm²) DIN compliant ferrules with 10-12mm length pins. The CP-991 and CP-992 tool’s performance is maximized in high volume wire harness and control panel applications. The ferrules and crimps produced with the tools meet industry standards including: UL486F, IEC 60999-1, and IPC/WHMA-A-620.

### Key Features

**Benefits**

- **Automated micro-processor**
  - Delivers quick three-step process (wire stripping, ferrule placement, and ferrule crimping) to reduce the average manual processing cycle time to 1.3 – 1.5 seconds.
  - Contributes to compliance of manufacturing standards and HACCP regulations to demonstrate due diligence for consumer safety and quality inspections.

- **Refrigible bowl-feeding container**
  - Designed for use with Loose Piece Ferrules to deliver reduced changeover and downtime from real changes. Also provides the capability to adjust the feeding speed for different production requirements.

- **Integral wire stripping**
  - Eliminates the need to use pre-stripped wire; this prevents the installation of ferrules onto any turned-back strands which can result when using pre-stripped wire.

- **Color coded components**
  - Allows proper part selection and quick identification of components (sleeve receivers, reversing base sleeves, cord-centering funnels, and separation plates for bowl-entry)

- **Cycle counter**
  - Digital LCD display system with reset button for batch quantity counting that improves accuracy and efficiency.

- **Sturdy metal frame and housing**
  - Durable design allows for job site flexibility and productivity.

### Quick Reference For Recommended Tooling

<table>
<thead>
<tr>
<th>Ferrule Installation Tools</th>
<th>CP-991</th>
<th>CP-992</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Terminals</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part Number</td>
<td>Description</td>
<td>Std. Pkg. Qty.</td>
</tr>
<tr>
<td>CT-1160</td>
<td>Controlled cycle ferrule hand tool</td>
<td>1</td>
</tr>
<tr>
<td>CT-1000</td>
<td>Multi-purpose ferrule hand tool</td>
<td>1</td>
</tr>
<tr>
<td>CT-2500/ST</td>
<td>Battery operated hand tool</td>
<td>1</td>
</tr>
<tr>
<td>CTFP-40</td>
<td>Bench-top pneumatic loose piece ferrule tool</td>
<td>1</td>
</tr>
<tr>
<td>CP-881</td>
<td>Real-fail Semi-automated strip and crimp tool</td>
<td>1</td>
</tr>
<tr>
<td>CP-991</td>
<td>Bowl-fail Semi-automated strip and crimp tool</td>
<td>1</td>
</tr>
<tr>
<td>UNI-M (APM-MR-SP15156JMD)</td>
<td>Real-fail Ferrule applicator for commercially available bench presses and automatic wire processing machines</td>
<td>1</td>
</tr>
</tbody>
</table>

*Representative List Only. See www.panduit.com for full offering.

**For a copy of Panduit product warranties, log on to www.panduit.com/warranty**

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**Ordering Information**

<table>
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<tbody>
<tr>
<td>CTFP-40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CP-991</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT-1550</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UP14ZLV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Quick Reference For Recommended Tooling**

- **How many ferrules do you use in 1 year?**
  - **< 50k**
    - **Hand-held Manual Tools**
  - **50 ~ 250k**
    - **Semi-automated Tools**
  - **> 100k**
    - **Fully Automated Tools**
Automated processing delivers:
- Wire stripping
- Ferrule placement
- Ferrule crimping
- Over six times faster than manual production
- Process cycle time 1.5 seconds

Battery Operated Crimp Tool
Part Number: CT-2300/ST
Key Features and Benefits:
- Fast Intelligent Notification Software (FINS)
- Consistent control-cycle crimping with fast cycle time
- Ergonomic trigger and grip

Manual Crimp Tool
Part Number: CT-1160 and CT-1170
Key Features and Benefits:
- Consistent control-cycle crimping
- Ergonomic handles
- Low investment cost

Manual Crimp Tool
Part Number: CT-1000
Key Features and Benefits:
- 3-in-1 design for cutting, stripping and crimping
- Ferrules stored in handle for installation convenience
- Light-weight body

Semi-Automated Ferrule Strip and Crimp Tool
Part Number: CP-881
Key Features and Benefits:
- Automated processing delivers:
  - Wire stripping
  - Ferrule placement
  - Ferrule crimping
  - Over six times faster than manual production
  - Process cycle time 1.5 seconds
- Continuously Moulded Ferrules
  - Size 20 – 14 AWG (0.5 – 2.5 mm²)
  - Mini-reels of 500 to 1000 pieces
  - Bulk reels of 1500 to 3000 pieces
- Reduces production changeover and downtime
- Quick setup and changeover
  - Ferrule applicator and wire stripping die sets are designed to easily be removed and installed
  - Provides product changeover in less than ten seconds to improve productivity and reduce setup time
- Digital LCD cycle counter with reset button
- Lightweight with built-in carrying handle for ease of movement

Fully Automated Wire Processing and Ferrule Crimping on Reel
Part Number: UNI-M & Schleuniger Crimp Center
Key Features and Benefits:
- Single internal die set
- Funnel entry wire inserter kits
- Optional spacer blocks
- Split cycle function
- Cycle counter
- #24-10 AWG ferrules*

Complete Your Installation Solution With:
Ferrule Installation Tools
Manual Crimp Tool
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- #24-10 AWG ferrules*

*24 gauge not UL listed

Reel Smart Automated Termination System
Wire termination methods are labor intensive requiring the use of hand tools which provide: slower production, a less reliable electrical connection, and an increased risk of repetitive motion injuries. With competitive automation systems, each terminal requires a separate tooling applicator adding cost and complexity to the operation.

The Panduit Reel Smart™ Automated Termination System provides a safe, reliable, and efficient electrical termination with the flexibility of a single tooling applicator. Your production will receive all the benefits of maximized productivity, operator safety, reliability, and tooling options that provide flexibility and versatility.

Reel Smart™ Universal Applicators (continued)

CA9 EZAIR™ Universal Applicator Technical Data

<table>
<thead>
<tr>
<th>Product Feed</th>
<th>Compressed air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interchangeable Die Sets</td>
<td>18 die sets terminate entire product line</td>
</tr>
<tr>
<td>Crimp Height Adjust</td>
<td>Micro dial adjust</td>
</tr>
<tr>
<td>Operational Options</td>
<td>Bench press or CST</td>
</tr>
</tbody>
</table>

Electrical Crimp Press
Panduit® Reel Smart™ products partner with Schleuniger electric presses to provide one of the best termination systems in the market. The Schleuniger UniCrimp 200 and UniCrimp 100 bench presses are designed to crimp wire sizes up to 10 AWG (6mm²). These presses are fast, quiet, and safe while providing the necessary force to deliver a quality crimp connection. The UniCrimp 200 press comes loaded with high end features like split cycle and adjustable crimp speed. The UniCrimp 100 is a simple, low cost crimping press providing high quality on an affordable price.

UniCrimp 200 Overview:
- Economic and user-friendly
- Quick-release applicator base for easy change-over
- Adjustable crimp speed
- Standard tool-less, incremental crimp height adjustment (micro-adjust)
- Split cycle capability for closed barrel contacts
- Used with both Panduit CA9 and CA-800EZ
- Terminates all Panduit Reel Smart terminals and ferrules

Technical Data

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>110 VAC/60Hz, 220 VAC/50Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crimp Stroke</td>
<td>40mm</td>
</tr>
<tr>
<td>Controller</td>
<td>LED touch pad user interface</td>
</tr>
<tr>
<td>Crimp Micro-adjust</td>
<td>Micrometer shut height adjust</td>
</tr>
<tr>
<td>Crimp Force</td>
<td>3.7 tons</td>
</tr>
<tr>
<td>Versatility</td>
<td>Split cycle, pneumatic feed option, cycle counter, quick release applicator mounting base</td>
</tr>
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Technical Data Required for use with Panduit CA9 applicator
Automated processing delivers:
- Wire stripping
- Ferrule placement
- Ferrule crimping
- Over six times faster than manual production
- Process cycle time 1.5 seconds

Battery Operated Crimp Tool
Part Number: CT-2300/ST

Key Features and Benefits:
- Fast Intelligent Notification Software (FINIS)
- Consistent control-cycle crimping with fast cycle time
- Ergonomic trigger and grip

Manual Crimp Tool
Part Number: CT-1160 and CT-1170

Key Features and Benefits:
- Consistent control-cycle crimping
- Ergonomic handles
- Low investment cost

Semi-Automated Ferrule Strip and Crimp Tool
Part Number: CP-881

Key Features and Benefits:
- Automated processing delivers:
  - Wire stripping
  - Ferrule placement
  - Ferrule crimping
  - Over six times faster than manual production
  - Process cycle time 1.5 seconds
- Continuously Molded Ferrules
  - Size 20 – 14 AWG (0.5 – 2.5 mm²)
  - Mini-reels of 500 to 1000 pieces
  - Bulk reels of 1500 to 3000 pieces
  - Reduces production changeover and downtime

Fully Automated Wire Processing and Ferrule Crimping on Reel
Part Number: UNI-M & Schleuniger Crimp Center

Key Features and Benefits:
- Single internal die set
- Funnel entry wire inserter kits
- Optional spacer blocks
- Split cycle function
- Cycle counter
- #24-10 AWG ferrules*

*24 gauge not UL listed

Complete Your Installation Solution With:
Reel Smart Automated Termination System

Wire termination methods are labor intensive requiring the use of hand tools which provide: slower production, a less reliable electrical connection, and an increased risk of repetitive motion injuries. With competitive automation systems, each terminal requires a separate tooling applicator adding cost and complexity to the operation.

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Schleuniger Electrical Crimp Press

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UniCrimp 200 Overview:
- Economic and user-friendly
- Quick-release applicator base for easy change-over
- Adjustable crimp speed
- Standard tool-less, incremental crimp height adjustment (micro-adjust)
- Split cycle capability for closed barrel contacts
- Used with both Panduit CA9 and CA-800EZ
- Terminates all Panduit Reel Smart terminals and ferrules

Technical Data

| Power Supply | 110 VAC/60Hz, 220 VAC/50Hz |
| Crimp Stroke | 40mm |
| Controller | LED touch pad user interface |
| Crimp Micro-adjust | Micrometer shut height adjust |
| Crimp Force | 3.7 tons |
| Versatility | Split cycle, pneumatic feed option, cycle counter, quick release applicator mounting base |

*Required for use with Panduit CA9 applicator
### Ferrule Installation Tools

The CP-991 and CP-992 represent the next level of automated, high-volume ferrule crimping systems. Utilizing pneumatic power, quick-change tooling, and easy-to-use automation, these vibratory bowl-feed systems strip a single insulated conductor and apply a loose piece ferrule, all within 1.3 seconds. The automated stripping and crimping action is up to 6X faster than manual crimping; increasing productivity while reducing repetitive motion injuries.

The two systems allow for a large variety of loose piece ferrule size and pin length options. The CP-991 system crimps 24 – 12 AWG (0.5mm² - 2.5mm²) DIN compliant ferrules with 6 - 12mm length pins. The CP-992 system crimps 12 – 8 AWG (4.0mm² - 10mm²) DIN compliant ferrules with 10 -12mm length pins. The CP-991 and CP-992 tool’s performance is maximized in high volume wire harness and control panel applications. The ferrules and crimps produced with the tools meet industry standards including: UL486F, IEC 60999-1, and IPC/WHMA-A-620.

### Key Features

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<td>to reduce the average manual processing cycle time to 1.3 – 1.5 seconds.</td>
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**Design for use with Loose Piece Ferrules to deliver reduced changeover and downtime from reel changes.** Also provides the capability to adjust the feeding speed for different production requirements.

**Digital LCD display system with reset button for batch quantity counting that improves accuracy and efficiency.**

**Sturdy metal frame and housing**

**Contributes to compliance of manufacturing standards and HACCP regulations**

**Reduced changeover and downtime from reel changes. Also provides the capability to adjust the feeding speed for different production requirements.**

**Improves accuracy and efficiency.**

**Durable design allows for job site flexibility and productivity.**

### Ferrules

<table>
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<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>CT-1160</td>
<td>Controlled cycle ferrule hand tool, Hexagon crimp profile</td>
</tr>
<tr>
<td>CT-1000</td>
<td>Multi-purpose ferrule hand tool</td>
</tr>
<tr>
<td>CT-2500ST</td>
<td>Battery operated hand tool</td>
</tr>
<tr>
<td>CTFF-40</td>
<td>Bench-top pneumatic loose piece ferrule tool</td>
</tr>
<tr>
<td>CP-881</td>
<td>Reel-fed Semi-automated strip and crimp tool</td>
</tr>
<tr>
<td>CP-991</td>
<td>Bowl-fed Semi-automated strip and crimp tool</td>
</tr>
<tr>
<td>CP-882</td>
<td>Reel-fed Ferrule applicator for commercially available bench presses and automatic wire processing machines</td>
</tr>
<tr>
<td>UC2900</td>
<td>Electric Bench Press</td>
</tr>
<tr>
<td>F78-8-M</td>
<td>Non-insulated Ferrule, 16 AWG (1.5mm²), 0.31(8.0mm) length</td>
</tr>
<tr>
<td>FSD77-8-D</td>
<td>Insulated Ferrule, 18 awg (1.00mm²), 8mm pin length, DIN Rad</td>
</tr>
<tr>
<td>FSD77-8-K</td>
<td>Insulated Ferrule on Reel, 18 awg (1.00mm²), 8mm pin length, DIN Rad</td>
</tr>
<tr>
<td>FSD77-8-3K2</td>
<td>Insulated Ferrule on Reel, 18 awg (1.00mm²), 8mm pin length, DIN Rad</td>
</tr>
</tbody>
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### Terminals

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<tr>
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<tbody>
<tr>
<td>CT-1550</td>
<td>Controlled cycle terminal hand tool</td>
</tr>
<tr>
<td>CT-160</td>
<td>Multi-purpose terminal hand tool</td>
</tr>
<tr>
<td>UP14ZLW</td>
<td>Bench-top pneumatic loose piece terminal tool</td>
</tr>
<tr>
<td>CA8</td>
<td>Non-insulated Ferrule, 16 AWG (1.5mm²), 0.31(8.0mm) length</td>
</tr>
<tr>
<td>BSN14-C</td>
<td>Non-insulated Ferrule, #16 – #14 AWG</td>
</tr>
<tr>
<td>P10-10F-D</td>
<td>Non-insulated Terminal, #12 – #10 AWG</td>
</tr>
<tr>
<td>Py10-10F8-2K</td>
<td>Vinyl Insulated Ring Terminal on Reel, #12 – #10 AWG</td>
</tr>
<tr>
<td>DNF14-250FB3K</td>
<td>Insulated Ferrule Disconnect on Reel, #16 – #14 AWG</td>
</tr>
</tbody>
</table>

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