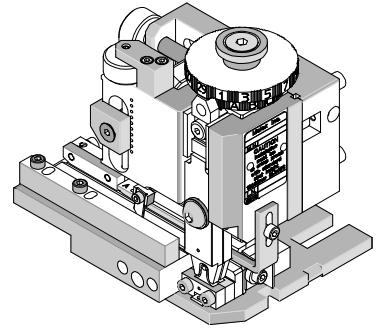




Mini-Mac Applicator Application Tooling Specification Mechanical Feed-Metal Strip Order No. 63881-5700



FEATURES

- Directly adapts to most automatic wire processing machines
- Applicator designed to industry standard mounting and shut height 135.80mm (5.346")
- Quick set-up time; plus the crimp height, track and feed adjustments can be set without removing the applicator from the press
- Fine adjustment allows users to achieve target with little effort by adjusting in increments of .015mm (.0006") for conductor crimp height and .063mm (.0025") for insulation height
- Independent adjustment rings allow users to quickly adjust the conductor or insulation crimp height without affecting each other

SCOPE

Products: Krimptite® Metal Strip Closed Barrel Female Quick Disconnect Terminals 12-14 AWG.

Testing

Mechanical

The tensile test, or pull test, is a means of evaluating the mechanical properties of the crimped connections. The following chart shows the UL and government specifications (MIL-T-7928) for various wire sizes. The tensile strength is shown in pounds. It indicates the minimum acceptable force to break or separate the terminal from the conductor.

| Color Code | Wire Size (AWG) | *UL - 486 A | *UL - 486 C | *UL - 310 | *Military Class 2 |
|------------|-----------------|-------------|-------------|-----------|-------------------|
| Yellow | 26 | 3 | N/A | N/A | 7 |
| Yellow | 24 | 5 | N/A | N/A | 10 |
| Red | 22 | 8 | 8 | 8 | 15 |
| Red | 20 | 13 | 10 | 13 | 19 |
| Red | 18 | 20 | 10 | 20 | 38 |
| Blue | 16 | 30 | 15 | 30 | 50 |
| Blue | 14 | 50 | 25 | 50 | 70 |
| Yellow | 12 | 70 | 35 | 70 | 110 |
| Yellow | 10 | 80 | 40 | 80 | 150 |
| Red | 8 | 90 | 45 | N/A | 225 |
| Blue | 6 | 100 | 50 | N/A | 300 |

*UL - 486 A - Terminals (Copper conductors only)

*UL - 486 C - Butt Splices, Parallel Splices, Closed End Connectors, and Wire Nuts

*UL - 310 - Quick Disconnects, Flag and Couplers

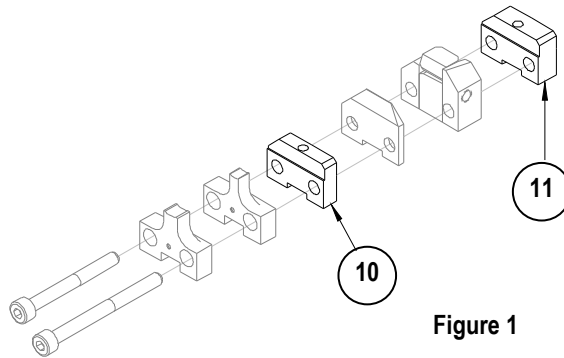
*Military Class 2- Military Approved Terminals only as listed

Product List

The following is a partial list of the product order numbers and their specifications that this tool is designed to run. Updates to this list are available on www.molex.com.

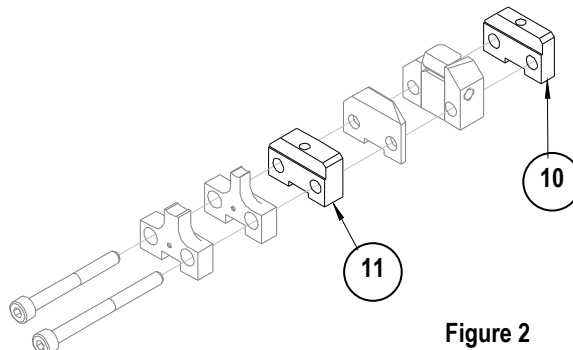
| Terminal No. | Terminal Eng. No. | Wire Size | | Insulation Diameter Maximum | | Strip Length | |
|--------------|-------------------|-----------|-----------------|-----------------------------|-----|--------------|------|
| | | AWG | mm ² | mm | In. | mm | In. |
| 19016-0246 | 19016-0246 | 12-14 | 3.30-2.00 | N/A | N/A | 6.35 | .250 |
| 19016-0250 | 19016-0250 | 12-14 | 3.30-2.00 | N/A | N/A | 6.35 | .250 |

Note: To process these terminals, assemble spacers with cutoff tooling as shown in Figure 1.
See also parts list and assembly drawing.



| Terminal No. | Terminal Eng. No. | Wire Size | | Insulation Diameter Maximum | | Strip Length | |
|--------------|-------------------|-----------|-----------------|-----------------------------|-----|--------------|-----|
| | | AWG | mm ² | mm | In. | mm | In. |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Note: To process this terminal, assemble spacers with cutoff tooling as shown in Figure 2.
See also parts list and assembly drawing.



DEFINITION OF TERMS

The following illustrations are a generic terminal representation and not an exact image of any terminal listed in the scope.

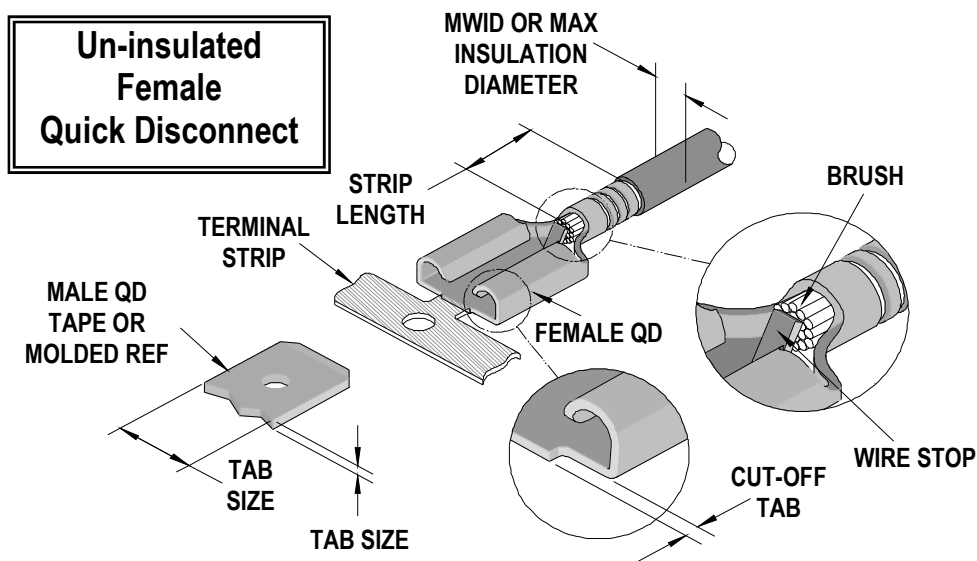
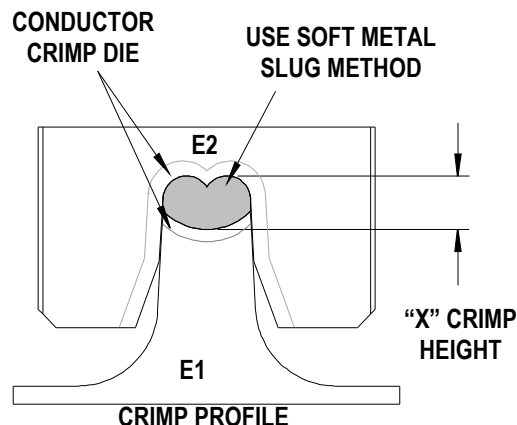


Figure 3

Tool Calibration

To recalibrate this applicator, make sure the power is completely shut off on the press.

1. The Mini-Mac applicator must be properly installed in the press.
2. Crimping dies must be properly installed in the Mini-Mac applicator.
3. The recommended method of measuring the crimp height of the conductor dies is the soft metal slug method, (See Figure 2).
4. The slug must have a diameter 0.51mm (.020") larger than the "X" No Go dimension before crimping.
5. Place the soft metal slug (solder) into the nest of the bottom die and crimp (by hand cycling the press) similar to a terminal. The crimp height can be measured with a blade type micrometer or dial caliper, (Dimension "X").
6. Adjustment of the crimp height can be accomplished by indexing the conductor cam. The letter "A" gives the loosest position and "N" gives the tightest position. A total adjustment of 0.50mm (.020") can be achieved by adjusting the conductor cam.



Use soft metal slug (solder) method to measure the "X" dimension. Verify tooling crimp height calibration by referring to the Go/No Go dimensions shown in the chart below.

Figure 2

Note: If the crimp height is too tight on the setting "A", check the shut height of the press. See the Industrial Mini-Mac Applicator Manual Section 2.1 for adjustments.

CRIMP SPECIFICATIONS

| Terminal Series No | Wire Size | | "X" Dimension Conductor Crimp | | | | | | Pull Force Minimum | |
|--------------------|-----------|-----------------|-------------------------------|------|------|------|-------|------|--------------------|-------|
| | | | Mean | | Go | | No Go | | Lbs | N |
| | AWG | mm ² | In | mm | In | mm | In | mm | | |
| 19016 | 12 | 3.30 | .080 | 2.03 | .077 | 1.96 | .087 | 2.21 | 70.0 | 311.4 |
| | 14 | 2.00 | .080 | 2.03 | .077 | 1.96 | .087 | 2.21 | 50.0 | 222.4 |

| Terminal Series No. | Cut-off Tab Maximum | |
|---------------------|---------------------|------|
| | mm | In. |
| 19016 | 0.51 | .020 |

Pull Force should be measured with no influence from the insulation crimp. The above specifications are guidelines to an optimum crimp.

PARTS LIST

| Mini-Mac Applicator 63881-5700 | | | | |
|--|-----------------|------------------------|--------------------------------|-----------------|
| Item | Order No | Engineering No. | Description | Quantity |
| Perishable Tooling | | | | |
| | 63881-5770 | 63881-5770 | Tool Kit (All "Y" Items) | REF |
| 1 | 63468-0050 | 63468-0050 | Conductor Punch | 1 Y |
| 2 | 63464-0050 | 63464-0050 | Conductor Anvil | 1 Y |
| 3 | 63466-0201 | 63466-0201 | Cut-off Plunger Rear | 1 Y |
| 4 | 63466-0301 | 63466-0301 | Rear Plunger Retainer | 1 Y |
| 5 | 63466-0002 | 63466-0002 | Cut-Off Blade | 1 Y |
| Other Components (REF 810250) | | | | |
| 6 | 63443-0021 | 63443-0021 | Lower Tooling Key | 1 |
| 7 | 63466-0101 | 63466-0101 | Scrap Chute | 1 |
| 8 | 63466-0403 | 63466-0403 | Cut-off Plunger Striker (Rear) | 1 |
| 9 | 63466-0921 | 63466-0921 | Terminal Stripping Blade | 1 |
| 10 | 63466-1054 | 63466-1054 | 5.40mm Spacer | 1 |
| 11 | 63466-1075 | 63466-1075 | 7.50mm Spacer | 1 |
| 12 | 63600-0110 | 63600-0110 | M4 Washer, 3mm Thick | 1 |
| 13 | 63600-1290 | 63600-1290 | Washer | 1 |
| 14 | 63700-0539 | 63700-0539 | Cut-Off Plunger Spring | 1 |
| 15 | 63801-4510 | 63801-4510 | Terminal Guide Front | 1 |
| 16 | 63890-0866 | 63890-0866 | Conductor Bushing-6.40mm Long | 1 |
| 17 | 63890-0867 | 63890-0867 | Insulation Bushing-7.70mm Long | 1 |
| Frame | | | | |
| 18 | 63801-3201 | 63801-3201 | Top | 1 |
| 19 | 63801-3281 | 63801-3281 | Base | 1 |
| 20 | 63801-4550 | 63801-4550 | Track | 1 |
| Hardware | | | | |
| 21 | N/A | N/A | M4 by 10 Long SHCS | 2** |
| 22 | N/A | N/A | M4 by 12 Long SHCS | 1** |
| 23 | N/A | N/A | M4 by 20 Long SHCS | 4** |
| 24 | N/A | N/A | M4 by 40 Long SHCS | 1** |
| 25 | N/A | N/A | M4 by 45 Long SHCS | 1** |
| 26 | N/A | N/A | M8 by 30 Long BHCS | 1** |
| 27 | N/A | N/A | 3mm by 6 Long Roll Pin | 1** |
| ** Available from an industrial supply company such as MSC (1-800-645-7270). | | | | |

Note: Crimp profiles used in 63881-5700 are equivalent to ATP-P-175/MMZ-P-175 (UL File E79133)

Assembly Drawing

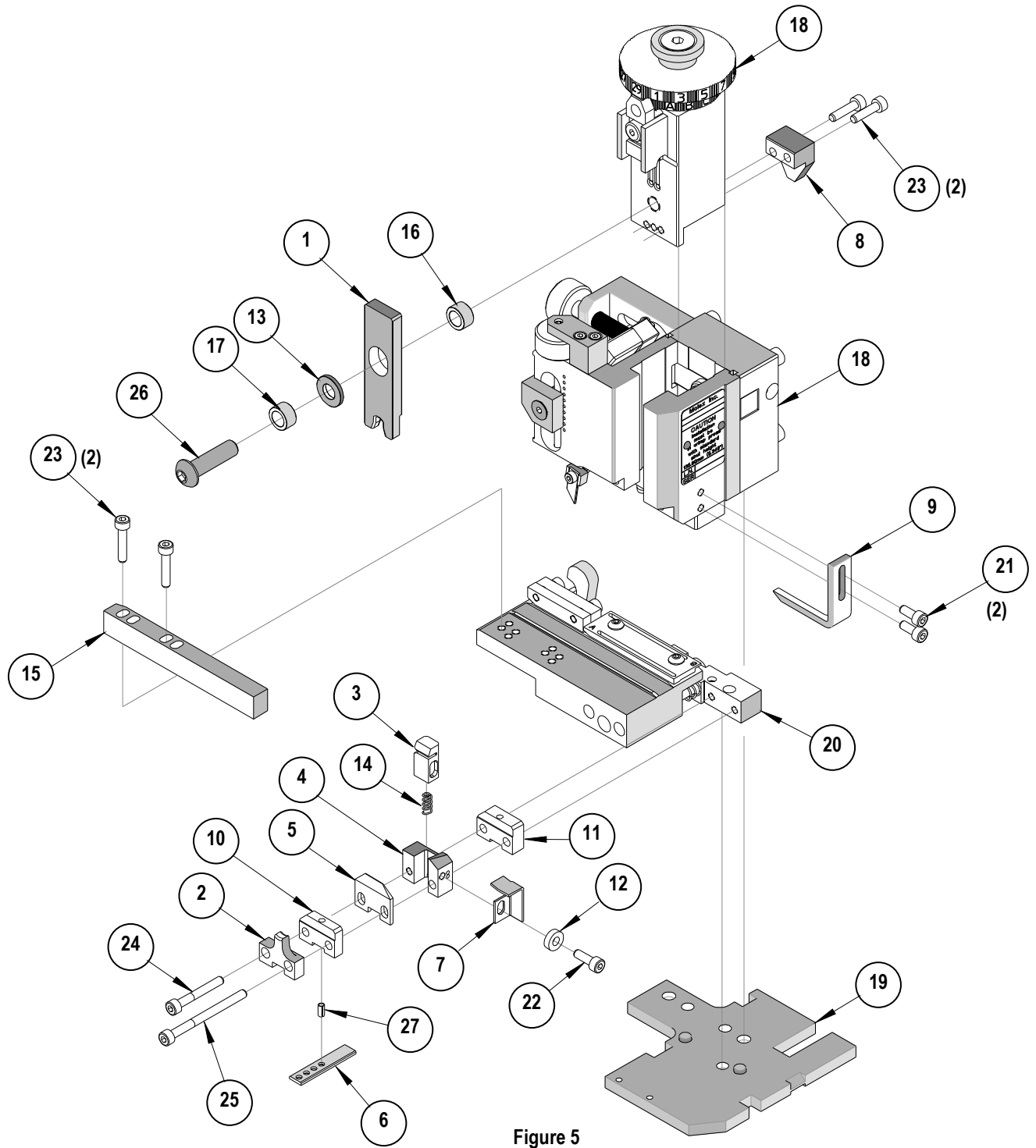


Figure 5

NOTES

1. Molex recommends an extra perishable tooling kit be maintained at your facility.
2. Verify tooling alignment by manually cycling the press with applicator before crimping under power. Check that all screws are tight.
3. Slugs, terminals, dirt, and oil should be kept clear of work area.
4. Wear safety glasses at all times.
5. For recommended maintenance refer to the Mini-Mac Applicator Manual (Document no. 63880-0000).

CAUTION: This applicator should only be used in a press with a shut height of 135.80 mm (5.346"). Tooling damage could result at a lower setting.

CAUTION: To prevent injury, never operate this applicator without the guards supplied with the press or wire-processing machine in place. Reference the press or wire processing manufacturer's instruction manual.

CAUTION: Molex crimp specifications are valid only when used with Molex terminals, applicators and tooling.

Contact Information

For more information on Molex application tooling please contact Molex at 1-800-786-6539.

Americas Headquarters
Lisle, Illinois 60532 U.S.A.
1-800-78MOLEX
amerinfo@molex.com

Far East North Headquarters
Yamato, Kanagawa, Japan
81-462-65-2324
feninfo@molex.com

Far East South Headquarters
Jurong, Singapore
65-6-268-6868
fesinfo@molex.com

European Headquarters
Munich, Germany
49-89-413092-0
eurinfo@molex.com

Corporate Headquarters
2222 Wellington Ct.
Lisle, IL 60532 U.S.A.
630-969-4550
Fax: 630-969-1352

Visit our Web site at <http://www.molex.com>