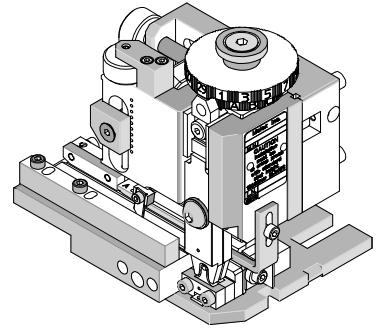




## Mini-Mac Applicator Application Tooling Specification Mechanical Feed-Metal Strip Order No. 63881-5700



### 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

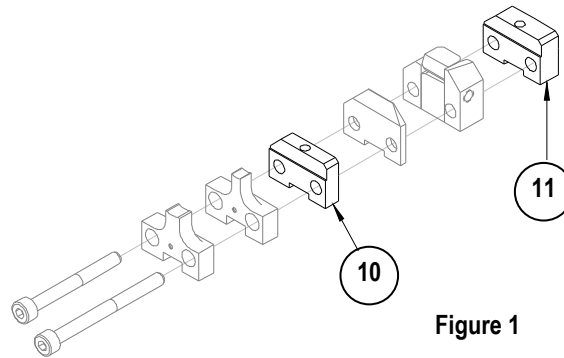
\*Military Class 2 - Military Approved Terminals only as listed

### 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](http://www.molex.com).

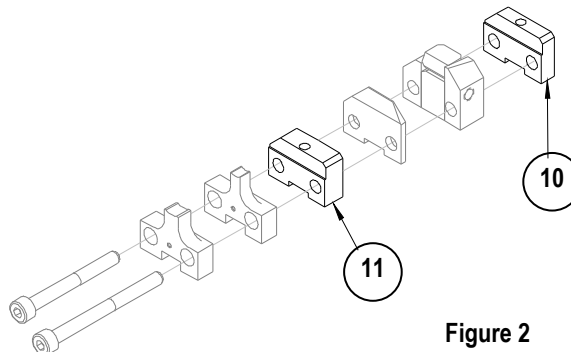
Terminal No.	Terminal Eng. No.	Wire Size		Insulation Diameter Maximum		Strip Length	
		AWG	mm <sup>2</sup>	mm	In.	mm	In.
19016-0246	19016-0246	12-14	3.30-2.00	N/A	N/A	6.35	.250
19016-0250	19016-0250	12-14	3.30-2.00	N/A	N/A	6.35	.250

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 <sup>2</sup>	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.

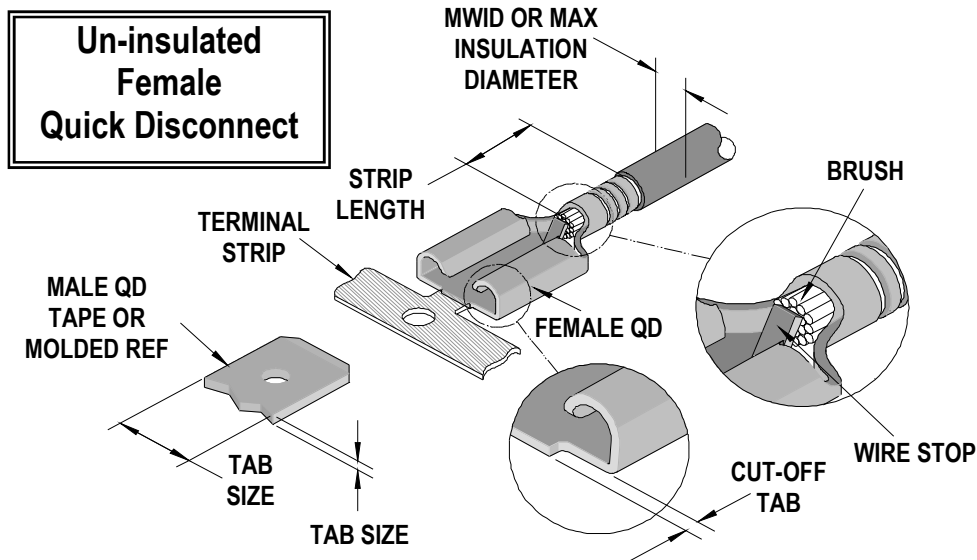
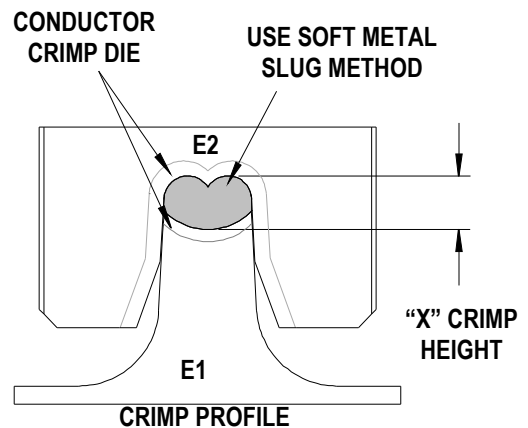


Figure 3

## 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 <sup>2</sup>	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**

<b>Mini-Mac Applicator 63881-5700</b>				
<b>Item</b>	<b>Order No</b>	<b>Engineering No.</b>	<b>Description</b>	<b>Quantity</b>
<b>Perishable Tooling</b>				
	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
<b>Other Components (REF 810250)</b>				
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
<b>Frame</b>				
18	63801-3201	63801-3201	Top	1
19	63801-3281	63801-3281	Base	1
20	63801-4550	63801-4550	Track	1
<b>Hardware</b>				
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

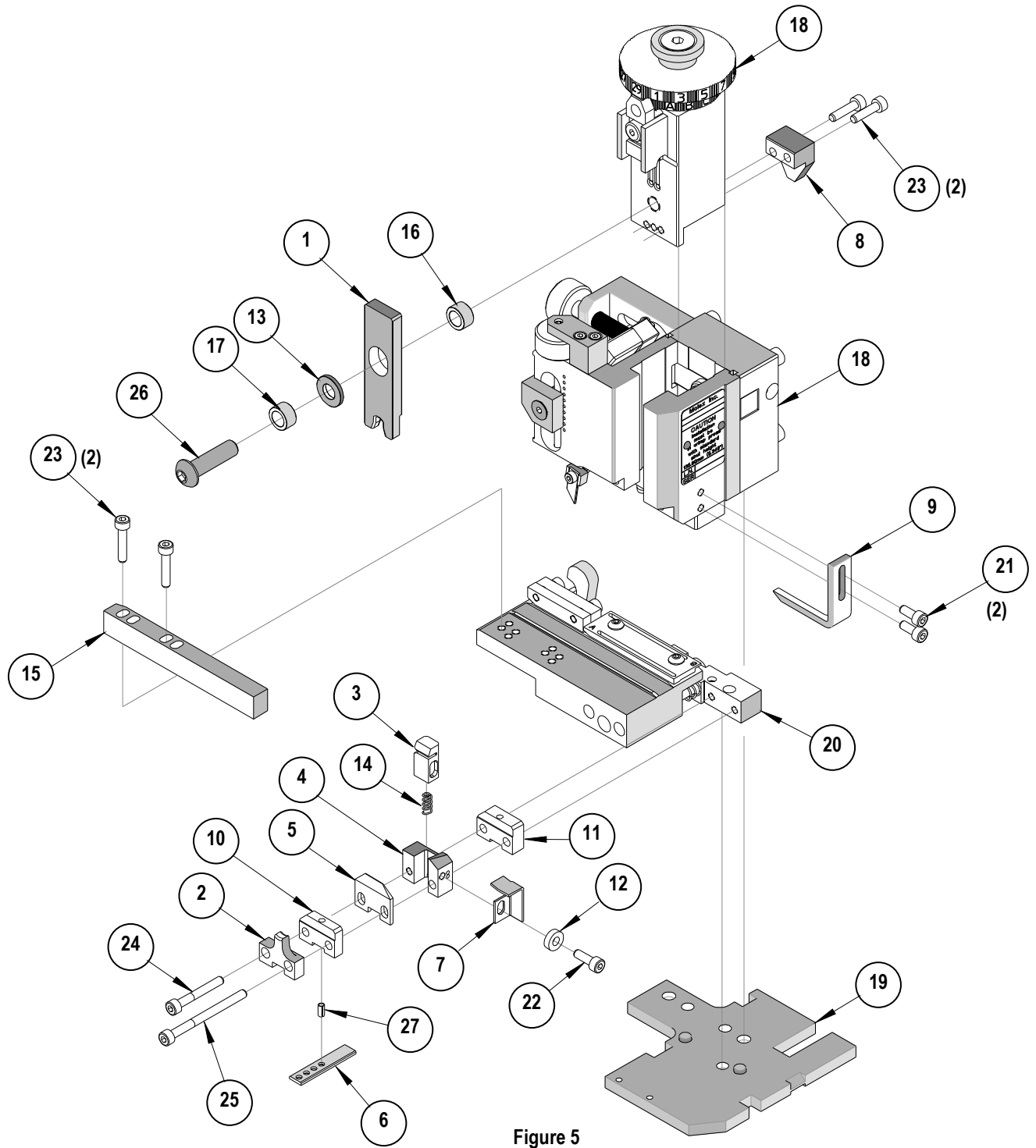


Figure 5

## 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.

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