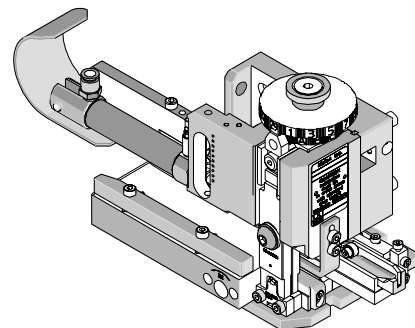




## Mini-Mac Applicator Application Tooling Specification Air Feed-Mylar Tape Order No. 63885-2300



### FEATURES

- Directly adapts to most crimp presses and automatic wire processors
- Applicator designed to industry standard mounting and shut height of 135.80mm (5.346")
- Conductor and insulation rings allow quick adjustment for conductor and insulation crimp height change
- Quick set-up time; plus the crimp height, track and feed adjustments can be set without removing the applicator from the crimp press

### SCOPE

Products: Insulkrimp™ Piggyback FIQD Terminals 18-22 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 and 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
Red	22	8	8	8	15
Red	20	13	10	13	19
Red	18	20	10	20	38

\*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).

**Note:** To process the following terminals, use both conductor and insulation tooling.

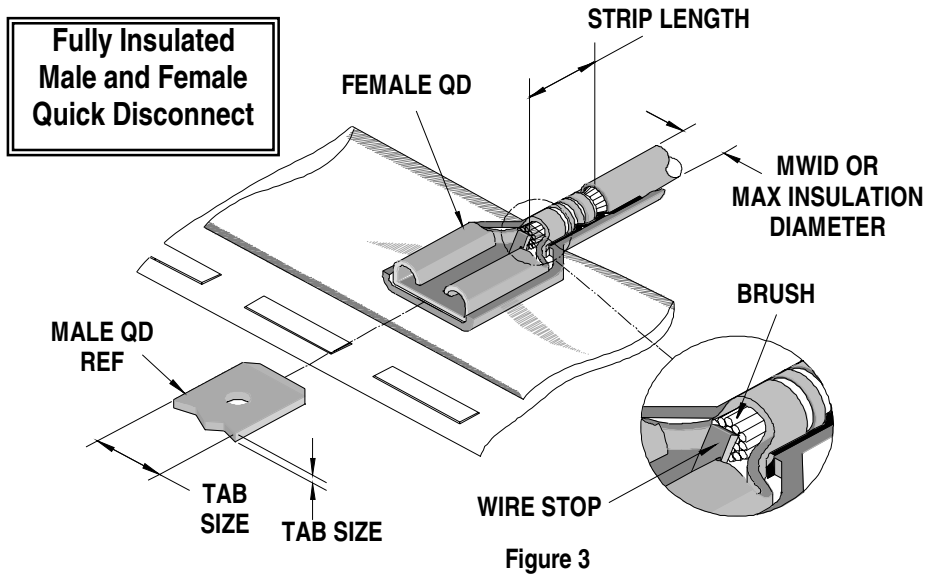
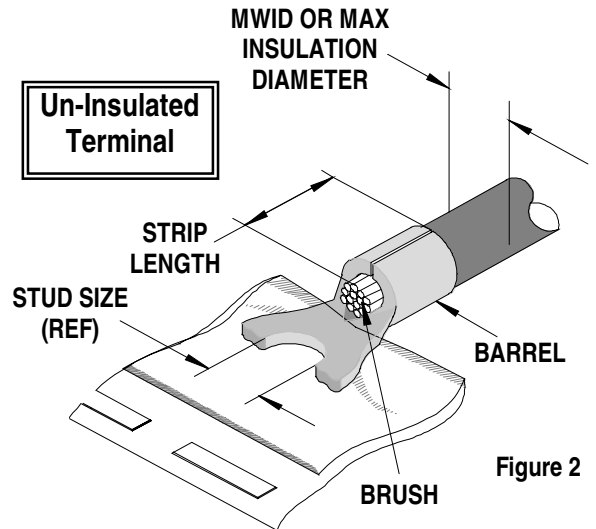
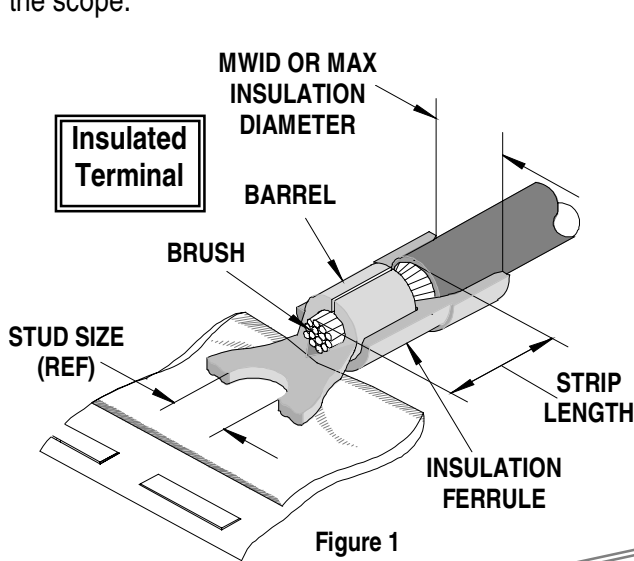
Terminal No.	Terminal Eng. No.	Wire Size		Insulation Diameter Maximum		Strip Length	
		AWG	mm <sup>2</sup>	mm	In.	mm	In.
19013-0002	AA-2317T	18-22	0.80-0.35	3.56	.140	7.92	.312
19013-0026	19013-0026	18-22	0.80-0.35	3.56	.140	7.92	.312

**\*Note:** To process the following terminals, use conductor tooling only. Insulation tooling is NOT intended for "expanded flare" terminals. Remove the insulation punch (Item #3), anvil (Item #4), and collar (Item #53) for crimping expanded flare products. (See 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.
* 19013-0004	AA-2317XT	18-22	0.80-0.35	5.84	.230	7.92	.312
* 19013-0028	19013-0028	18-22	0.80-0.35	5.84	.230	7.92	.312

**DEFINITION OF TERMS**

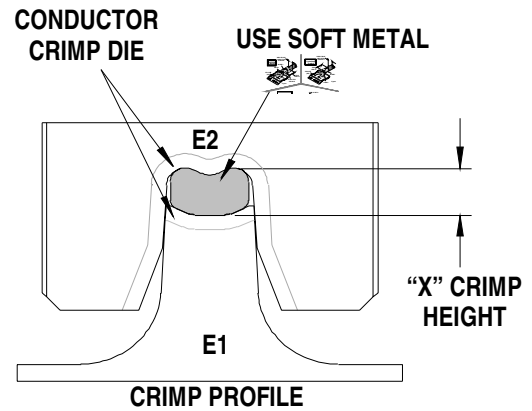
The following illustrations are a generic terminal representation and not an exact image of any terminal listed in the scope.



### 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 4.
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 "K" 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 4

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

Wire Size		"X" Dimension Conductor Crimp						Pull Force Minimum	
AWG	mm <sup>2</sup>	Mean		Go		No Go		Lbs	N
		In	mm	In	mm	In	mm		
22	.35	.080	2.03	.077	1.96	.087	2.21	8.0	35.6
20	.50	.080	2.03	.077	1.96	.087	2.21	13.0	57.8
18	.80	.080	2.03	.077	1.96	.087	2.21	20.0	90.0

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

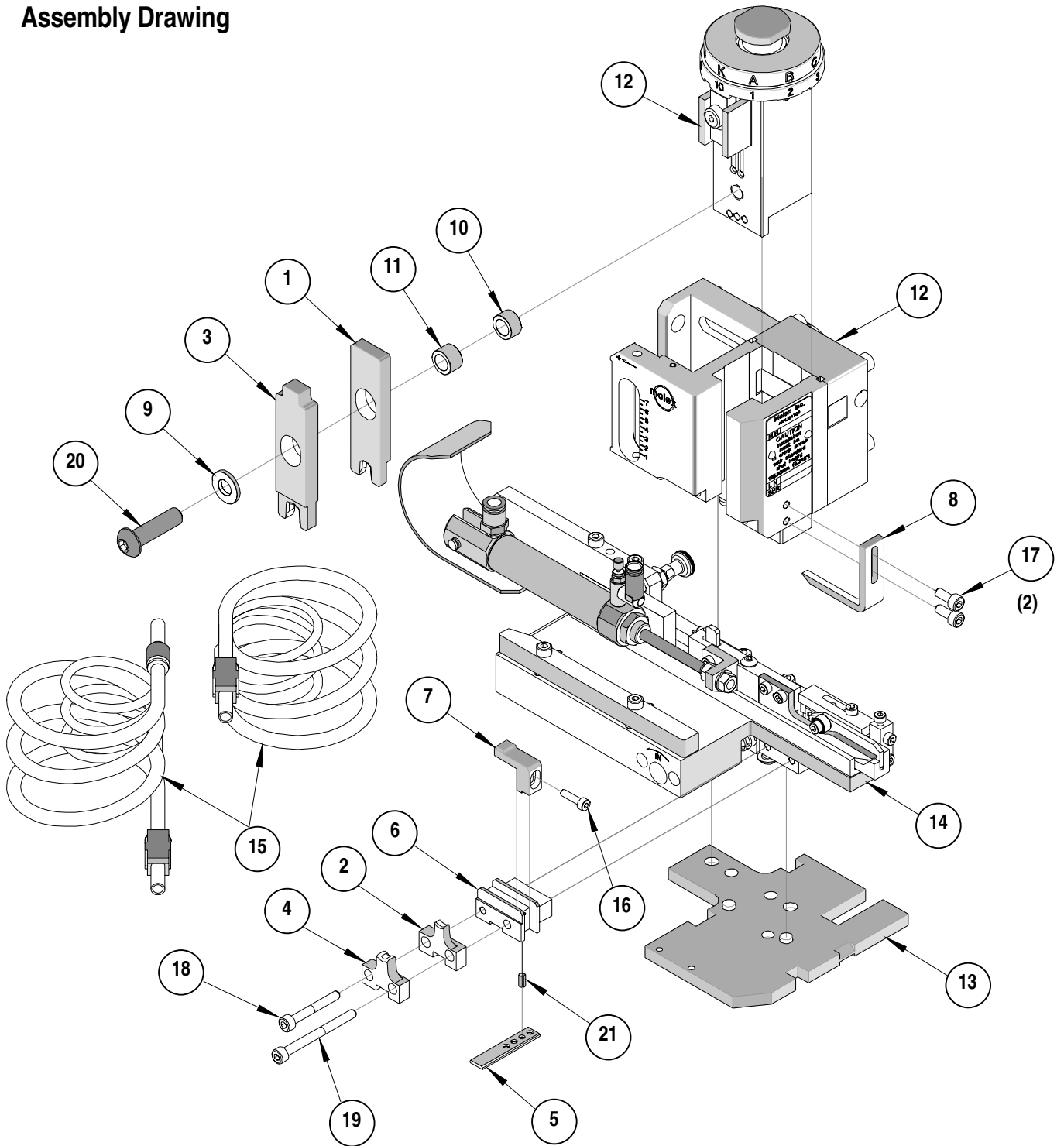
**PARTS LIST**

<b>Mini-Mac Applicator 63885-2300</b>				
<b>Item</b>	<b>Order No</b>	<b>Engineering No.</b>	<b>Description</b>	<b>Quantity</b>
<b>Perishable Tooling</b>				
	63885-2370	63885-2370	Tool Kit (All "Y" Items)	REF
1	63465-0009	63465-0009	Conductor Punch	1 Y
2	63464-0009	63464-0009	Conductor Anvil	1 Y
3	63463-0005	63463-0005	Insulation Punch	1 Y
4	63462-0006	63462-0006	Insulation Anvil	1 Y
<b>Other Components (REF 850050)</b>				
5	63443-0021	63443-0021	Lower Tooling Key	1
6	63466-0912	63466-0912	Anvil Mount	1
7	63466-0913	63466-0913	Terminal Support	1
8	63466-0921	63466-0921	Terminal Stripping Blade	1
9	63600-1290	63600-1290	Washer	1
10	63890-0866	63890-0866	Collar-6.4mm Long	1
11	63890-0867	63890-0867	Collar-7.7mm Long	1
<b>Frame</b>				
12	63801-3301	63801-3301	Air Feed Applicator Frame Head	1
13	63801-3281	63801-3281	Base	1
14	63801-5850	63801-5850	Track Assembly	1
15	63801-3390	63801-3390	Air Kit	1
<b>Hardware</b>				
16	N/A	N/A	M3 by 12 Long SHCS	1**
17	N/A	N/A	M4 by 10 Long SHCS	2**
18	N/A	N/A	M4 by 16 Long SHCS	1**
19	N/A	N/A	M4 by 45 Long SHCS	1**
20	N/A	N/A	M8 by 30 Long BHCS	1**
21	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:** Insulation tooling is NOT intended for "expanded flare" terminals. Remove the insulation punch (Item #3), anvil (Item #4), and collar (Item #11) for crimping expanded flare products. (See product list)

**Note:** Crimp profiles used in 63885-2300 are equivalent to 19032-0258 and 19032-0263 (UL file number E79133).

**Assembly Drawing**



**Figure 5**

**\*Note:** Insulation tooling is NOT intended for “expanded flare” terminals. Remove the insulation punch (Item #3), anvil (Item #4), and collar (Item #11) for crimping expanded flare products. (See product list)

## 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>