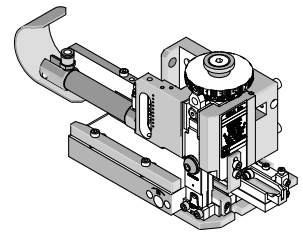**Mini-Mac Applicator
Air Feed- Mylar Tape**

molex®

Application Tooling Specification Sheet

Order No. 63885-7000

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™ Style, Male and Female, Fully Insulated Quick Disconnect, 18-22 AWG, Mylar Tap

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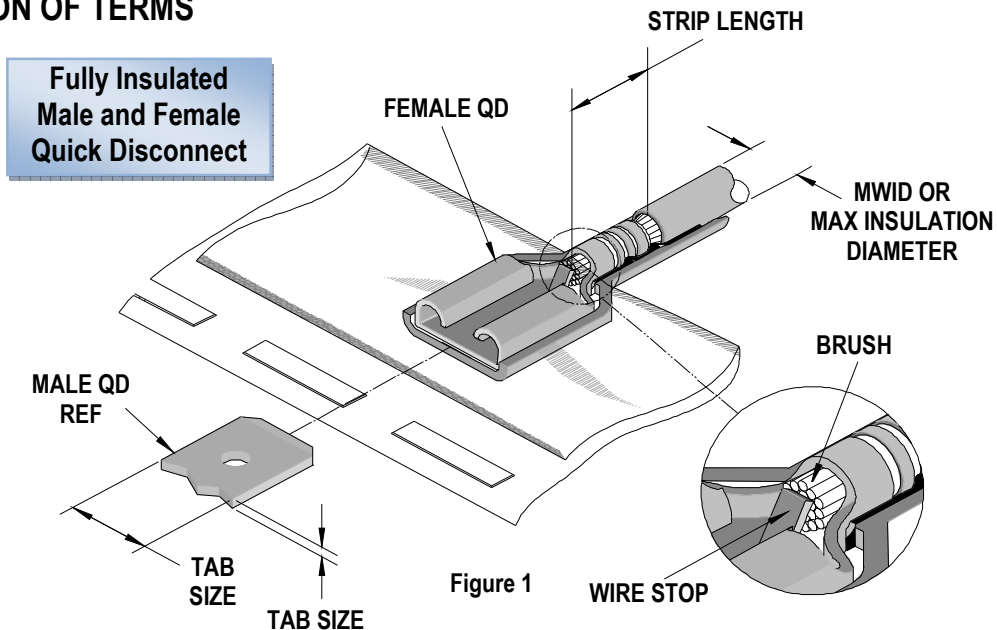
Note: To process the following terminals, use both conductor and insulation tooling.

Terminal No.	Terminal Eng. No.	Wire Size		Insulation Diameter Maximum		Strip Length	
		AWG	mm²	mm	In.	mm	In.
19003-0003	AA-2201T	22-18	0.35-0.80	3.43	.135	6.35	.250
19003-0007	AA-2201VNT	22-18	0.35-0.80	3.43	.135	6.35	.250
19003-0013	AA-2202T	22-18	0.35-0.80	3.43	.135	6.35	.250
19003-0020	AA-2203T	22-18	0.35-0.80	3.43	.135	6.35	.250
19003-0026	AA-2204T	22-18	0.35-0.80	3.43	.135	6.35	.250
19003-0032	AA-2205T	22-18	0.35-0.80	3.43	.135	6.35	.250
19003-0074	AA-2213T	22-18	0.35-0.80	3.43	.135	6.35	.250
19003-0075	AA-2214T	22-18	0.35-0.80	3.43	.135	6.35	.250
19003-0127	AA-2202VT	22-18	0.35-0.80	3.43	.135	6.35	.250
19003-0130	AA-2203VT	22-18	0.35-0.80	3.43	.135	6.35	.250
19023-0051	19023-0051	22-18	0.35-0.80	3.43	.135	6.35	.250
19023-0060	19023-0060	22-18	0.35-0.80	3.43	.135	6.35	.250
19276-0003	AA-2201T-LIF	22-18	0.35-0.80	3.43	.135	6.35	.250

- **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 #10) for crimping expanded flare products. (See parts list and assembly drawing).

Terminal No.	Terminal Eng. No.	Wire Size		Insulation Diameter Maximum.		Strip Length	
		AWG	mm²	mm	In.	mm	In.
• 19003-0010	AA-2201XT	22-18	0.35-0.80	5.84	.230	6.35	.250
• 19003-0016	AA-2202XT	22-18	0.35-0.80	5.84	.230	6.35	.250
• 19003-0023	AA-2203XT	22-18	0.35-0.80	5.84	.230	6.35	.250
• 19003-0029	AA-2204XT	22-18	0.35-0.80	5.84	.230	6.35	.250
• 19003-0035	AA-2205XT	22-18	0.35-0.80	5.84	.230	6.35	.250

DEFINITION OF TERMS

Figure 1

Fully Insulated Male and Female Quick Disconnect

STRIP LENGTH

FEMALE QD

MWID OR MAX INSULATION DIAMETER

BRUSH

MALE QD REF

TAB SIZE

TAB SIZE

WIRE STOP

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

CRIMP SPECIFICATIONS

| Wire Size		"X" Dimension Conductor Crimp						Pull Force Minimum	
		Mean		Go		No Go			
AWG	mm²	In.	mm	In.	mm	In.	mm	Lbs	N
22	0.35	.090	2.29	.088	2.24	.092	2.34	8	35.6
20	0.50	.094	2.38	.092	2.34	.096	2.44	13	57.8
18	0.80	.098	2.45	.095	2.41	.103	2.62	20	90.0

Tool Qualification Notes:
1. Pull Force should be measured with no influence from the insulation crimp.
2. The above specifications are guidelines to an optimum crimp.

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 "K" gives the tightest position. A total adjustment of 0.50mm (.020") can be achieved by adjusting the conductor cam.

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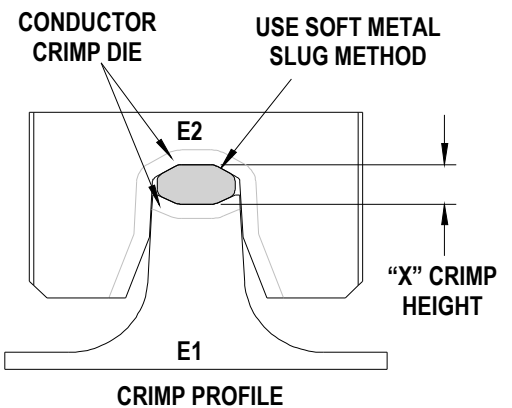
Use soft metal slug (solder) method to measure the "X" dimension. Verify tooling crimp height calibration by referring to the Go/No Go dimensions shown in the chart below.

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.

PARTS LIST

| Mini-Mac Applicator 63885-7000				
Item	Order No	Engineering No.	Description	Quantity
Perishable Tooling				
	63885-7070	63885-7070	Tool Kit (All "Y" Items)	REF
1	63465-0002	63465-0002	Conductor Punch	1 Y
2	63464-0002	63464-0002	Conductor Anvil	1 Y
3	63463-0005	63463-0005	• Insulation Punch	1 Y
4	63462-0006	63462-0006	• Insulation Anvil	1 Y
Other Components				
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
Frame				
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
Hardware				
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 #10) for crimping expanded flare products. (See product list)

Note: Crimp profiles used in 63885-7000 are equivalent to 19288-0049 / ATP-AA-575-CC and 19288-0233 / ATP-M-675-CC (UL file number E79133).

Air Feed Mylar Tape Applicator

Assembly Drawing
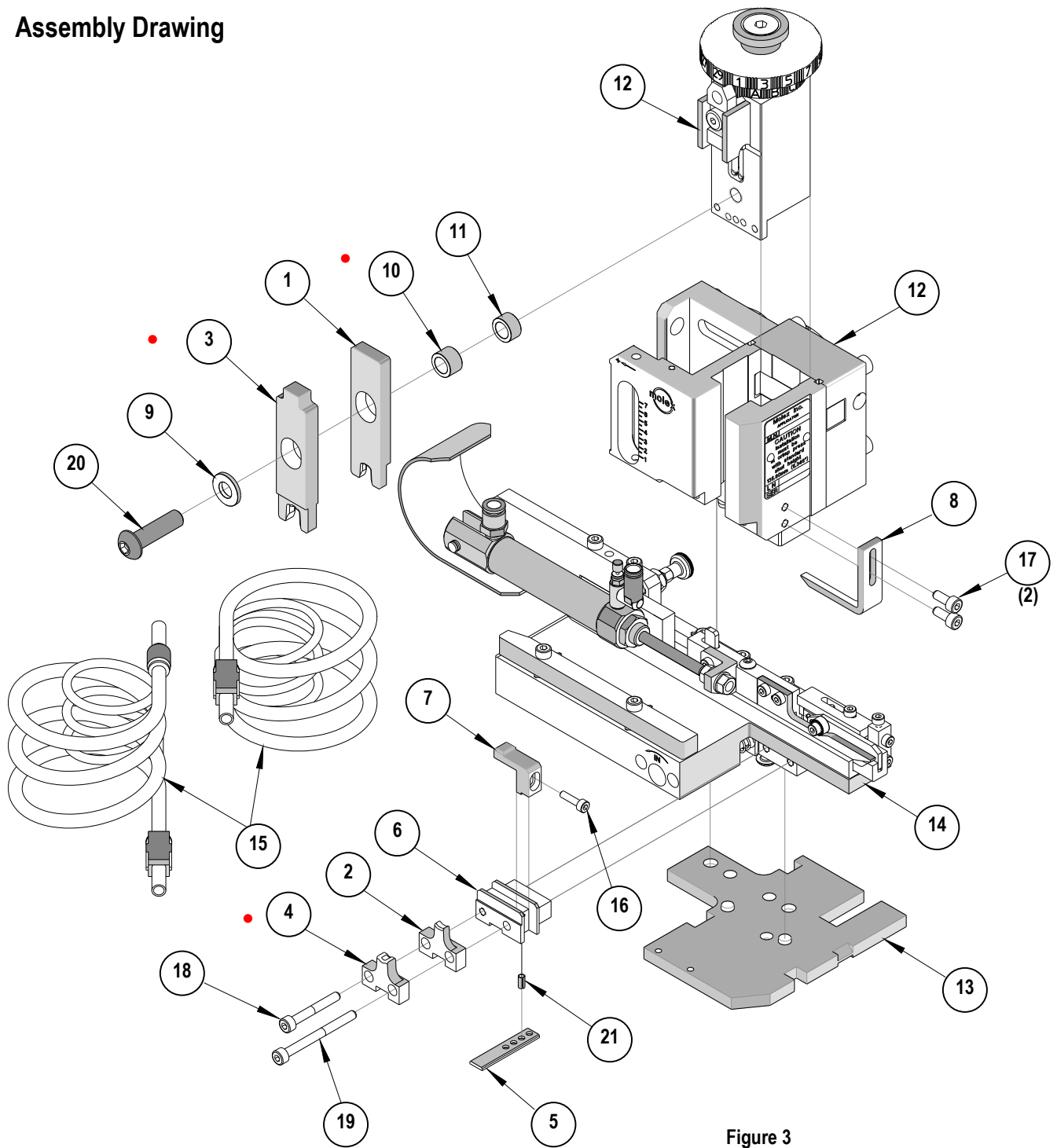
Figure 3

- **Note:** Insulation tooling is NOT intended for "expanded flare" terminals. Remove the insulation punch (Item #3), anvil (Item #4), and collar (Item #10) 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.

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