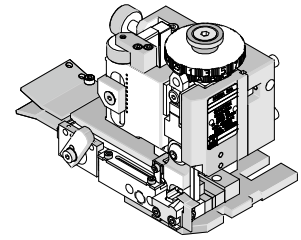


## Mini-Mac Applicator

# molex

## Application Tooling Specification Sheet



**Order No. 63891-1100**

### FEATURES

- Directly adapts to most automatic wire processing machines. This applicator ships from the factory set-up in the up-stroke condition for bench-top operation; however it will directly adapt to most automatic wire processing machines. Please review the applicator manual that shipped with your tool and is linked on the Molex website.
- 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.
- Optimum terminal feed/indexing can be obtained with the optional terminal guide assembly, Order No. 63830-0120. See page 5.
- Easy change-over for terminal feeding (up-stroke or down-stroke). Applicator shipped as up-stroke.

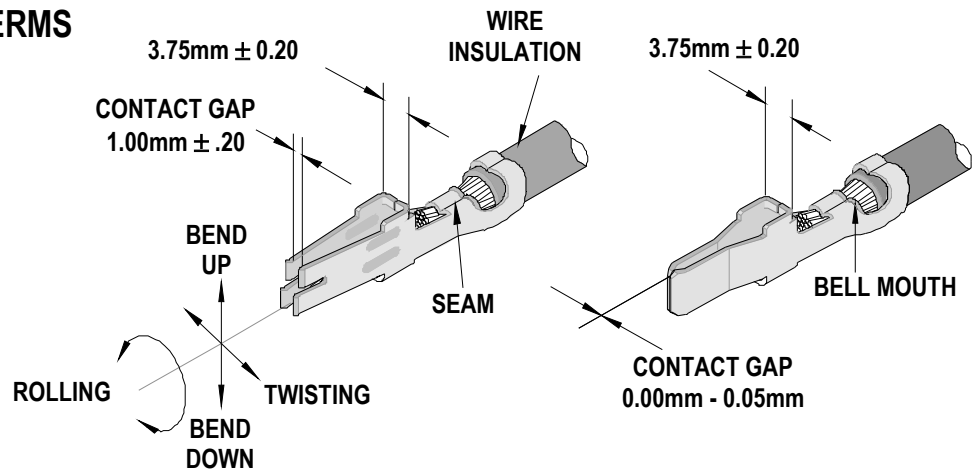
### SCOPE

Products: Mini-Fit Sr.™ Male and Female Crimp Terminals, 10 to 12 AWG.

Terminal Series No.	Terminal Order No.		Wire Size		Insulation Diameter				Strip Length	
					IPC/WHMA-A620 (1)		Terminal (2)			
					AWG	mm <sup>2</sup>	mm	In.	mm	In.
42815	42815-0010	42815-0011	10-12	N/A	4.40-5.30	.173-.209	3.50-5.30	.138-.209	7.50-8.50.	295-.335
	42815-0012	42815-0019								
	42815-0114									
42817	42817-0010	42817-0011	10-12	N/A	4.40-5.30	.173-.209	3.50-5.30	.138-.209	7.50-8.50.	295-.335
	42817-0012	42817-0019								
	42817-0110	42817-0111								
	42817-0112	42817-1014								
	42817-1114									

- (1) The Insulation Diameter range for optimum insulation crimps (meets IPC-A620 standard).  
 (2) Insulation Diameter range for the terminal.  
 (3) Other applicators may be available for insulation diameters outside the optimum range (1) described above. Enter the terminal order number at the Molex website for the latest applicator information.  
 (4) Crimp terminals to stranded copper wire only.  
 (5) Lubricate terminals plated in precious metals using Molex Oiler 63801-7240.

### DEFINITION OF TERMS



### CRIMP SPECIFICATIONS

Terminal Series No.	Bell mouth		Cut-off Tab Maximum		Conductor Brush	
	mm	In.	mm	In.	mm	In.
42815	.20-.50	.008-.020	.30-.50	.012-.020	3.50-4.50	.138-.177
42817	.20-.50	.008-.020	.30-.50	.012-.020	3.50-4.50	.138-.177

Terminal Series No.	Bend up	Bend down	Twist	Roll	Punch Width			
					Conductor		Insulation	
	Degree	Degree	mm	In	mm	In		
42815	3	3	4	8	3.60	.142	5.00	.197
42817	3	3	4	8	3.60	.142	5.00	.197

Seam shall not be open and no wire allowed out of the crimping area.

After crimping, the conductor profile should measure the following.

Terminal Series No.	Wire Size		Conductor				Pull Force Minimum	
			Crimp Height		Crimp Width (Ref)			
	AWG	mm <sup>2</sup>	mm	In.	mm	In.	N	Lb.
42815	10	N/A	2.69-2.79	.106-.110	3.95	.156	355.0	80.0
	12	N/A	2.39-2.49	.094-.098	3.85	.152	311.0	70.0
42817	10	N/A	2.69-2.79	.106-.110	3.95	.156	355.0	80.0
	12	N/A	2.39-2.49	.094-.098	3.85	.152	311.0	70.0

#### 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.

#### Special Note:

Cut-off Tab length below 0.30mm may cause the box dimension to be under recommendation. See Figure 1

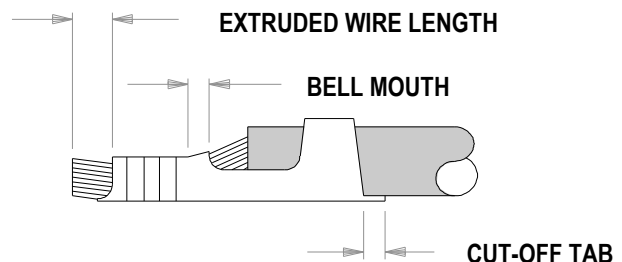


Figure 1

**PARTS LIST**

Mini-Mac Applicator 63891-1100				
Item	Order No	Engineering No.	Description	Quantity
<b>Perishable Tooling</b>				
	63891-1170	63891-1170	Tool Kit (All "Y" Items)	REF
1	11-18-5244	60827A106	Conductor Punch	1 Y
2	63821-0002	63821-0002	Conductor Anvil	1 Y
3	11-18-5246	60827A108	Insulation Punch	1 Y
4	63821-0004	63821-0004	Insulation Anvil	1 Y
5	63443-0045	63443-0045	Front Cut-off Plunger	1 Y
6	63443-0046	63443-0046	Front Cut-off Plunger Retainer	1 Y
6	63443-4202	63443-4202	Plunger Retainer (Non Carrier Cut-Off) To be used on all wire processors only.	0
<b>Other Components</b>				
7	11-18-5248	60827A115	Tooling Washer	1
8	63443-0009	63443-0009	Scrap Chute Front	1
9	63443-0024	63443-0024	Lower Tooling Key	1
10	63443-1715	63443-1715	Height Spacer	1
11	63443-2209	63443-2209	Course Spacer (9.00mm)	1
12	63443-2306	63443-2306	Fine Spacer (3.30mm)	1
13	63700-0539	63700-0539	Cut-Off Plunger Spring	1
14	63803-5105	63803-5105	Conductor Bushing	1
15	63821-0012	63821-0012	Front Cover	1
16	63821-0015	63821-0015	Wire Stop	1
17	63830-0008	63830-0008	Front Plunger Striker	1
18	63830-0117	63830-0117	Terminal Lead In	2
19	63830-0118	63830-0118	Rear Cover	1
<b>Frame</b>				
20	63801-3201	63801-3201	Top	1
21	63801-3281	63801-3281	Base	1
22	63801-4650	63801-4650	Track	1
<b>Hardware</b>				
23	N/A	N/A	M3 by 6 Long FHCS	1**
24	N/A	N/A	M3 by 6 Long SHCS	2**
25	N/A	N/A	M4 by 6 Long SHCS	5**
26	N/A	N/A	M4 by 12 Long BHCS	2**
27	N/A	N/A	M4 by 50 Long SHCS	2**
28	N/A	N/A	M5 by 12 Long SHCS	1**
29	N/A	N/A	M8 by 20 Long BHCS	1**
30	N/A	N/A	2mm by 8 Long Roll Pin	1**
** Fastener parts can be obtained through most industrial supply houses by using the generic descriptions listed above in the parts list table.				
<b>Abbreviation descriptions:</b> SHCS = Socked Head Cap Screw, FHCS = Flat Head Cap Screw, SSS = Socket Set Screw, BHCP = Button Head Cap Screw, Roll Pin = Spiral Pin.				

### Assembly Drawing

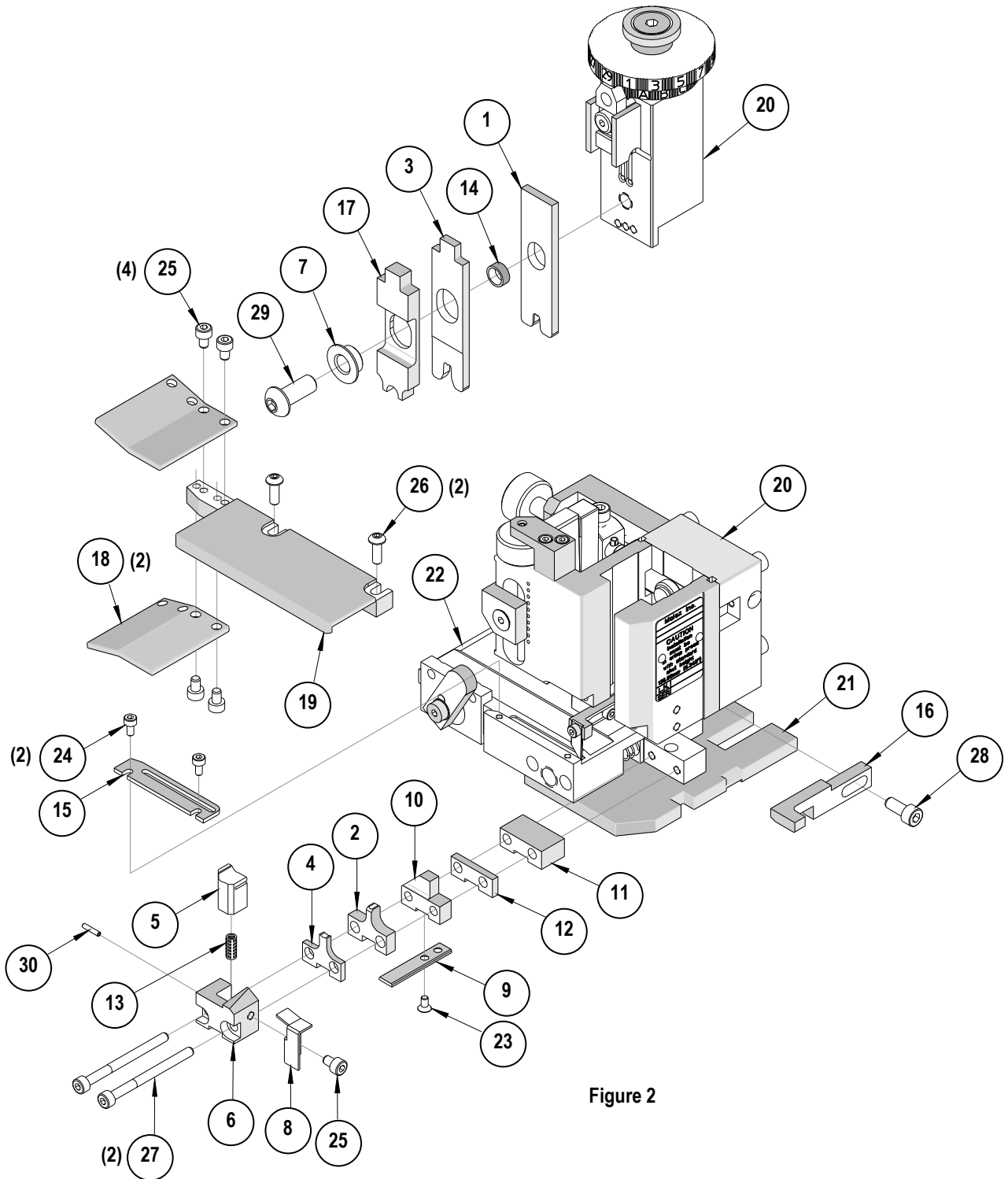


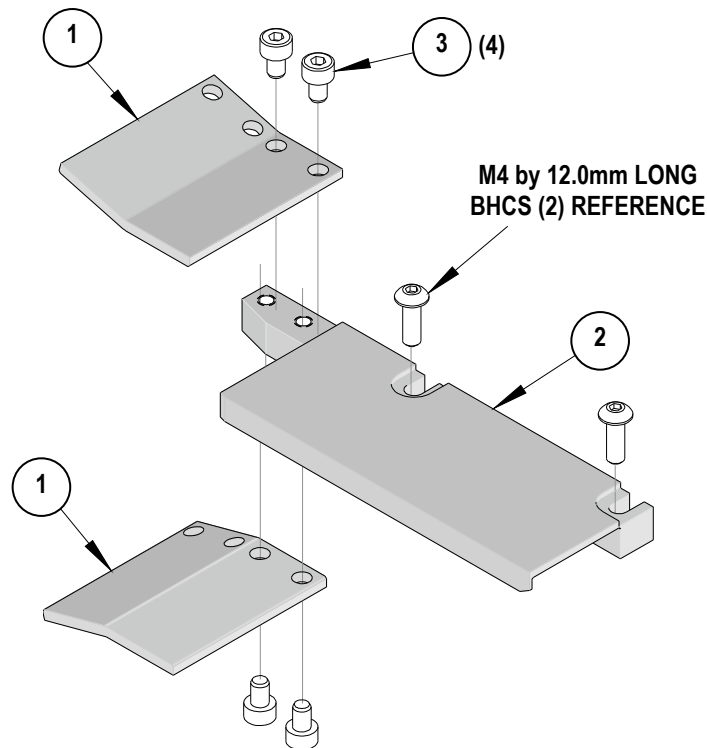
Figure 2

## Older Version Applicators

Older versions of this applicator can be updated with the Terminal Guide Assembly please order the parts below.

The Terminal Guide Assembly helps to align slightly bent up or down terminals, entering the track. Recommended for use with wire processing equipment, or roughly handled terminal reels. To install the Terminal Guide assembly follow the steps below.




1. Remove the (2) M4 by 12 BHCS from the existing rear cover.
2. Remove the rear cover
3. Replace it with the 63830-0120 Terminal Guide Assembly.
4. Replace the (2) M4 by 12 BHCS.



Terminal Guide Assembly 63830-0120				
Item	Order No	Engineering No.	Description	Quantity
1	63830-0117	63830-0117	Terminal Lead-In	2
2	63830-0118	63830-0118	Rear Cover	1
Hardware				
3	N/A	N/A	M4 by 6 Long SHCS	4**
** Fastener parts can be obtained through most industrial supply houses by using the generic descriptions listed above in the parts list table.				
<b>Abbreviation descriptions:</b> SHCS = Socked Head Cap Screw, FHCS = Flat Head Cap Screw, SSS = Socket Set Screw, BHCP = Button Head Cap Screw, Roll Pin = Spiral Pin.				

## NOTES

1. Molex recommends an extra perishable tooling kit be maintained at your facility.
2. Verify tooling alignment by manually cycling the press and 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 Manual.

 <b>CAUTION</b>	<p>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</p> <p>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.</p>
 <b>CAUTION</b>	<p>Molex tooling crimp specifications are valid only when used with Molex terminals and tooling manufactured by Molex or authorized distributors ("Molex Tooling"). When using tooling other than Molex Tooling with specific Molex specific connector systems listed in our ATS documents, the Molex tooling qualification does not apply and the responsibility for full qualification of the connector system is that of the customer.</p> <p>Molex accepts no liability for connector performance or tooling support where tooling other than Molex Tooling is used, or where Molex Tooling is modified.</p>
 <b>CAUTION</b>	<p>A-620 and other industry standards do not supersede the manufacturer's specifications. Some terminals designed over 20 years ago may not meet the desired physical attributes for some of today's standards. However, these terminals will still perform electrically at an acceptable quality level based on the qualification testing and years of successful performance in the field.</p>

## Contact Information

Application Tooling Support  
 2200 Wellington Court  
 Lisle, IL 60532 USA  
 Direct +1-402-458-TOOL (8665)

Visit our website at [www.molex.com/applicationtooling](http://www.molex.com/applicationtooling)