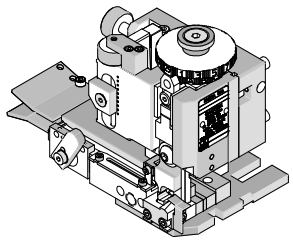
**Mini-Mac Applicator**

molex

# Application Tooling Specification Sheet



**Order No. 63891-1100**

## 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.
- Optimum terminal feed/indexing can be obtained with the optional terminal guide assembly, Order No. 63830-0120. See page 5.

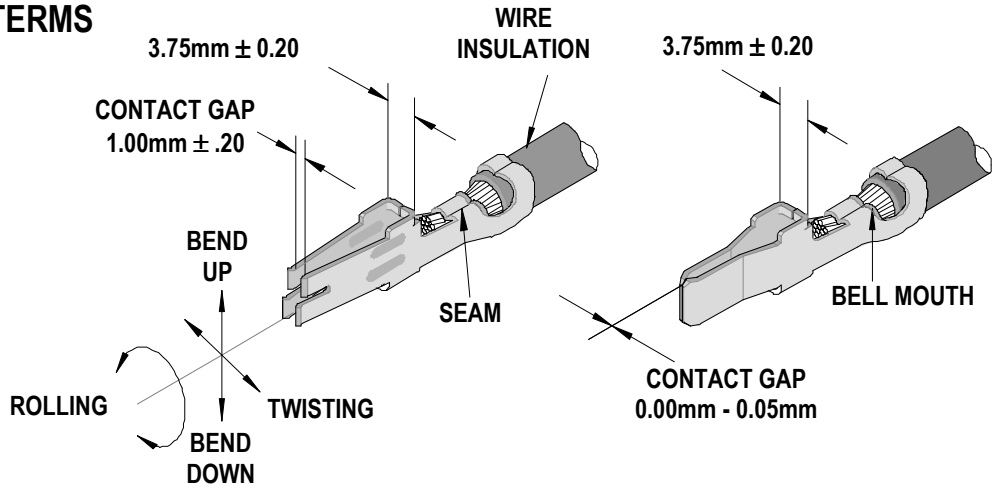
## SCOPE

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 | mm² | mm | In. | mm | In. | mm | In. |
| 42815 | 42815-0010 | 42815-0011 | 10-12 | 3.30 - 5.00 | 4.40-5.30 | .173-.209 | 3.50-5.30 | .138-.209 | 7.50-8.50. | 295-.335 |
| | 42815-0012 | 42815-0019 | | | | | | | | |
| 42817 | 42817-0010 | 42817-0011 | 10-12 | 3.30 - 5.00 | 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 | | | | | | | | | |

(1) To achieve optimum IPC-A620 insulation crimps, use this insulation OD range
(2) Overall insulation OD specification for terminal.
Applicator 63891-1200 should be used for insulation OD range 3.50-4.40mm

## 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 (Ref) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | 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**<br>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 | | | |
| | AWG | mm² | mm | In. | mm | In. | N | Lb. |
| 42815 | 10 | 5.00 | 2.69-2.79 | .106-.110 | 3.60 | .142 | 355.0 | 80.0 |
| | 12 | 3.30 | 2.39-2.49 | .094-.098 | 3.60 | .142 | 311.0 | 70.0 |
| 42817 | 10 | 5.00 | 2.69-2.79 | .106-.110 | 3.60 | .142 | 355.0 | 80.0 |
| | 12 | 3.30 | 2.39-2.49 | .094-.098 | 3.60 | .142 | 311.0 | 70.0 |

Pull Force should be measured with no influence from the insulation crimp.
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

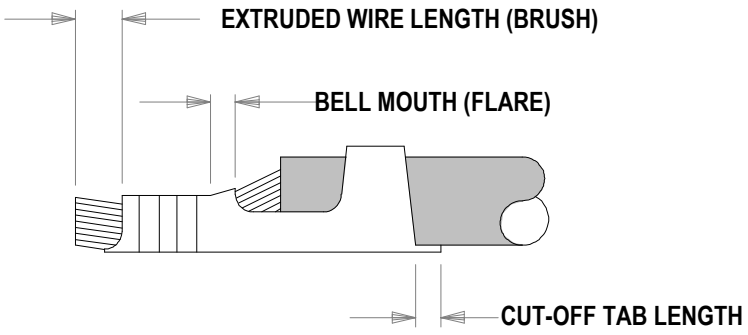



**Figure 1**

## PARTS LIST

| Mini-Mac Applicator 63891-1100 | | | | |
|---|---|---|---|---|
| **Item** | **Order No** | **Engineering No.** | **Description** | **Quantity** |
| **Perishable Tooling** | | | | |
| | 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 |
| **Other Components** | | | | |
| 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 |
| **Frame** | | | | |
| 20 | 63801-3201 | 63801-3201 | Top | 1 |
| 21 | 63801-3281 | 63801-3281 | Base | 1 |
| 22 | 63801-4650 | 63801-4650 | Track | 1 |
| **Hardware** | | | | |
| 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** |
| ** Available from an industrial supply company such as MSC (1-800-645-7270). | | | | |

## Assembly Drawing

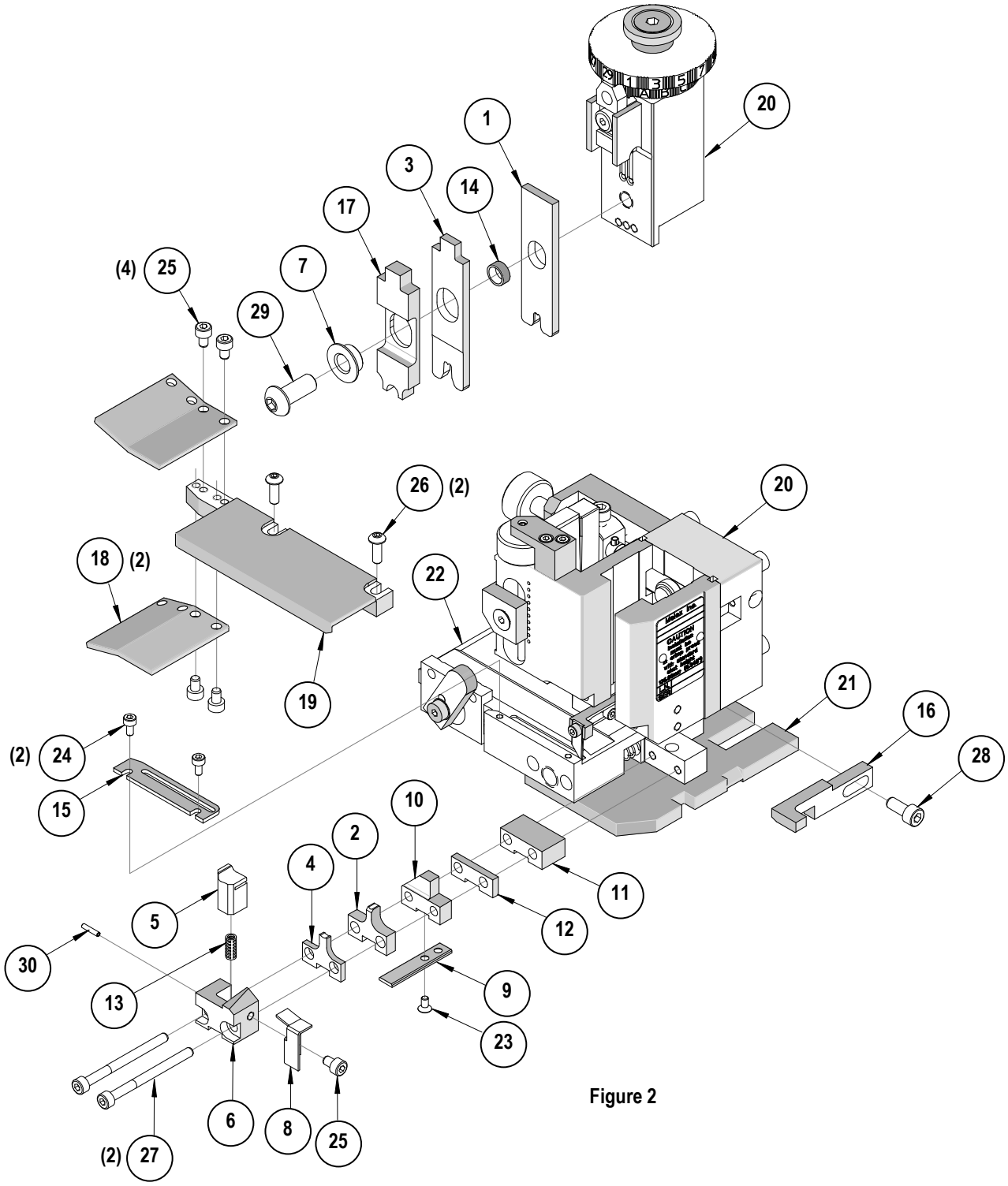


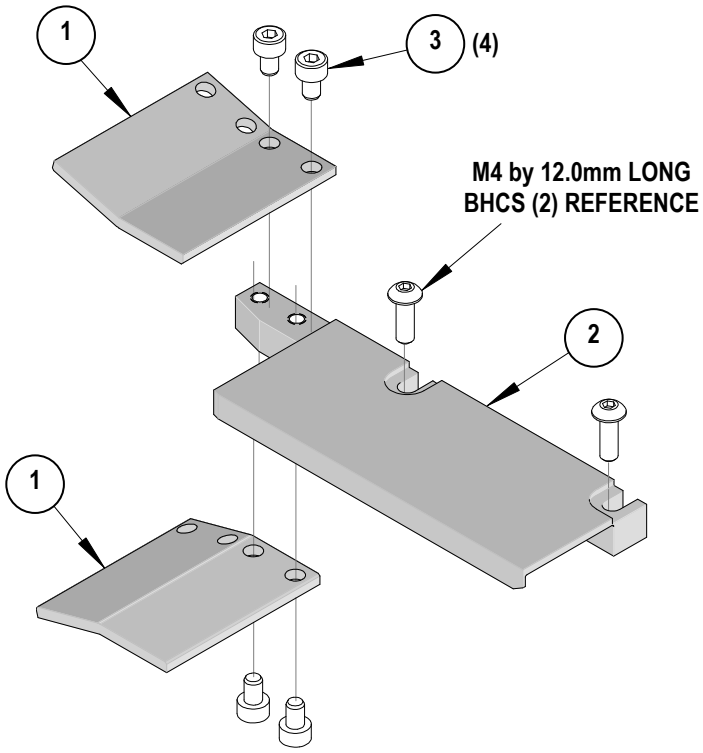

Figure 2

## 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** |
| ** Available from an industrial supply company such as MSC (1-800-645-7270). | | | | |

## 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.

**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

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