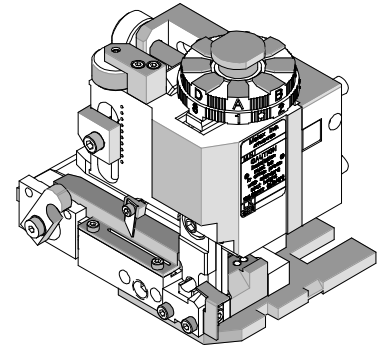




# Mini-Mac Applicator Application Tooling Specification Sheet Order No. 63830-6000



## FEATURES

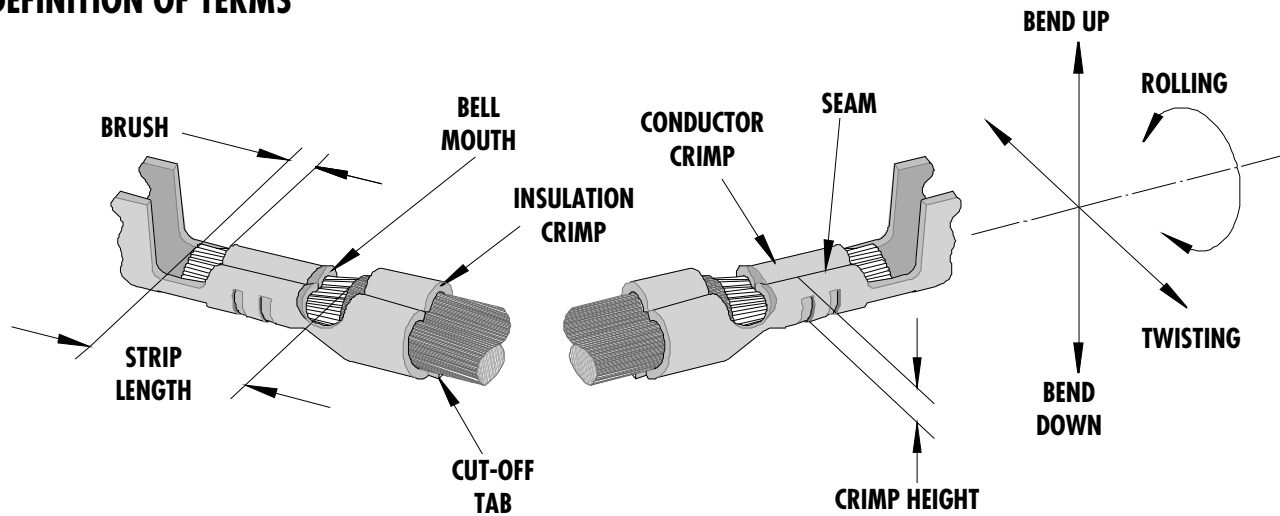
- % Directly adapts to most crimp presses and automatic wire processors
- % Applicator designed to industry-standard mounting and shut height of 135.80mm (5.346")
- % Conductor and insulation rings allow quick adjustment for conductor and insulation crimp height change
- % Quick set-up time; plus the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

## SCOPE

Products: Panel Grounding Clip Crimp Terminal 16-18 AWG.

| Terminal Series No. | Terminal Order No. | Wire Size         |                 | Insulation Diameter Max. |           | Strip Length |           |
|---------------------|--------------------|-------------------|-----------------|--------------------------|-----------|--------------|-----------|
|                     |                    | AWG               | mm <sup>2</sup> | mm                       | In.       | mm           | In.       |
| 42172A-A1           | 40-06-2003         | 16                | 1.30            | 2.80-3.00                | .110-.118 | 4.75-5.54    | .187-.218 |
| 42172A-B1           | 40-06-2005         |                   |                 |                          |           |              |           |
| 42172A-C1           | 40-06-2013         |                   |                 |                          |           |              |           |
| 42172A-F1           | 40-06-2017         |                   |                 |                          |           |              |           |
| 42172A-G1           | 40-06-2024         |                   |                 |                          |           |              |           |
| 42172A-H1           | 50-29-1597         |                   |                 |                          |           |              |           |
| 42172A-A1           | 40-06-2003         | 18                | 0.80            | 2.80-3.00                | .110-.118 | 4.75-5.54    | .187-.218 |
| 42172A-B1           | 40-06-2005         |                   |                 |                          |           |              |           |
| 42172A-C1           | 40-06-2013         |                   |                 |                          |           |              |           |
| 42172A-F1           | 40-06-2017         |                   |                 |                          |           |              |           |
| 42172A-G1           | 40-06-2024         |                   |                 |                          |           |              |           |
| 42172A-H1           | 50-29-1597         |                   |                 |                          |           |              |           |
| 42172A-A1           | 40-06-2003         | 18 (2)            | 0.80 (2)        | 2.80-3.00                | .110-.118 | 4.75-5.54    | .187-.218 |
| 42172A-B1           | 40-06-2005         |                   |                 |                          |           |              |           |
| 42172A-C1           | 40-06-2013         |                   |                 |                          |           |              |           |
| 42172A-F1           | 40-06-2017         |                   |                 |                          |           |              |           |
| 42172A-G1           | 40-06-2024         |                   |                 |                          |           |              |           |
| 42172A-H1           | 50-29-1597         |                   |                 |                          |           |              |           |
| 42172A-A1           | 40-06-2003         | 16 (1)-and (1) 18 | 1.30 and 0.80   | 2.80-3.00                | .110-.118 | 4.75-5.54    | .187-.218 |
| 42172A-B1           | 40-06-2005         |                   |                 |                          |           |              |           |
| 42172A-C1           | 40-06-2013         |                   |                 |                          |           |              |           |
| 42172A-F1           | 40-06-2017         |                   |                 |                          |           |              |           |
| 42172A-G1           | 40-06-2024         |                   |                 |                          |           |              |           |
| 42172A-H1           | 50-29-1597         |                   |                 |                          |           |              |           |
| 42172A-A1           | 40-06-2003         | 18 (1)-and (1) 20 | 0.80 and 0.60   | 2.80-3.00                | .110-.118 | 4.75-5.54    | .187-.218 |
| 42172A-B1           | 40-06-2005         |                   |                 |                          |           |              |           |
| 42172A-C1           | 40-06-2013         |                   |                 |                          |           |              |           |
| 42172A-F1           | 40-06-2017         |                   |                 |                          |           |              |           |
| 42172A-G1           | 40-06-2024         |                   |                 |                          |           |              |           |
| 42172A-H1           | 50-29-1597         |                   |                 |                          |           |              |           |

## DEFINITION OF TERMS



The above terminal drawing is a generic terminal representation. It is not an image of any terminal listed in the scope.

## CRIMP SPECIFICATION

| Terminal Series No. | Bell mouth |           | Cut-off Tab Max. |      |      |      | Conductor Brush |           |
|---------------------|------------|-----------|------------------|------|------|------|-----------------|-----------|
|                     |            |           | Front            |      | Rear |      |                 |           |
|                     | mm         | In.       | mm               | In.  | mm   | In.  | mm              | In.       |
| 42172A-A1           | 0.51-1.02  | .020-.024 | 0.38             | .015 | 0.25 | .010 | 0.75-2.25       | .030-.089 |
| 42172A-B1           | 0.51-1.02  | .020-.024 | 0.38             | .015 | 0.25 | .010 | 0.75-2.25       | .030-.089 |
| 42172A-C1           | 0.51-1.02  | .020-.024 | 0.38             | .015 | 0.25 | .010 | 0.75-2.25       | .030-.089 |
| 42172A-F1           | 0.51-1.02  | .020-.024 | 0.38             | .015 | 0.25 | .010 | 0.75-2.25       | .030-.089 |
| 42172A-G1           | 0.51-1.02  | .020-.024 | 0.38             | .015 | 0.25 | .010 | 0.75-2.25       | .030-.089 |
| 42172A-H1           | 0.51-1.02  | .020-.024 | 0.38             | .015 | 0.25 | .010 | 0.75-2.25       | .030-.089 |

| Terminal Series No. | Bend up    Bend down |   | Twist        Roll |   | Punch Width (Ref) |      |            |      | Seam<br><br>Seam shall not be open<br>and no wire allowed out of the<br>crimping area |
|---------------------|----------------------|---|-------------------|---|-------------------|------|------------|------|---------------------------------------------------------------------------------------|
|                     | Degree               |   | Degree            |   | Conductor         |      | Insulation |      |                                                                                       |
|                     |                      |   |                   |   | mm                | In   | mm         | In   |                                                                                       |
| 42172A-A1           | 3                    | 3 | 4                 | 8 | 3.20              | .126 | 4.30       | .169 |                                                                                       |
| 42172A-B1           | 3                    | 3 | 4                 | 8 | 3.20              | .126 | 4.30       | .169 |                                                                                       |
| 42172A-C1           | 3                    | 3 | 4                 | 8 | 3.20              | .126 | 4.30       | .169 |                                                                                       |
| 42172A-F1           | 3                    | 3 | 4                 | 8 | 3.20              | .126 | 4.30       | .169 |                                                                                       |
| 42172A-G1           | 3                    | 3 | 4                 | 8 | 3.20              | .126 | 4.30       | .169 |                                                                                       |
| 42172A-H1           | 3                    | 3 | 4                 | 8 | 3.20              | .126 | 4.30       | .169 |                                                                                       |

After crimping, the crimp profiles should measure the following:

| Terminal Series No. | Wire Size    |                 | Conductor Crimp Height |           | Pull Force Min. |      |
|---------------------|--------------|-----------------|------------------------|-----------|-----------------|------|
|                     | AWG          | mm <sup>2</sup> | mm                     | In.       | N               | Lb.  |
| 42172A-A1           | 16           | 1.30            | 1.78-1.83              | .070-.072 | 266.7           | 60.0 |
| 42172A-A1           | 18           | 0.80            | 1.60-1.65              | .063-.065 | 155.6           | 35.0 |
| 42172A-A1           | 18 (2)       | 0.80 (2)        | 1.85-1.91              | .073-.075 | 155.6           | 35.0 |
| 42172A-A1           | (1)16+(1)18  | 1.30 and 0.80   | 1.91-1.96              | .075-.077 | 155.6           | 35.0 |
| 42172A-A1           | (1)18 +(1)20 | 0.80 and 0.60   | 1.78-1.83              | .070-.072 | 89.0            | 20.0 |
| 42172A-B1           | 16           | 1.30            | 1.78-1.83              | .070-.072 | 266.7           | 60.0 |
| 42172A-B1           | 18           | 0.80            | 1.60-1.65              | .063-.065 | 155.6           | 35.0 |
| 42172A-B1           | 18 (2)       | 0.80 (2)        | 1.85-1.91              | .073-.075 | 155.6           | 35.0 |
| 42172A-B1           | (1)16+(1)18  | 1.30 and 0.80   | 1.91-1.96              | .075-.077 | 155.6           | 35.0 |
| 42172A-B1           | (1)18 +(1)20 | 0.80 and 0.60   | 1.78-1.83              | .070-.072 | 89.0            | 20.0 |
| 42172A-C1           | 16           | 1.30            | 1.78-1.83              | .070-.072 | 266.7           | 60.0 |
| 42172A-C1           | 18           | 0.80            | 1.60-1.65              | .063-.065 | 155.6           | 35.0 |
| 42172A-C1           | 18 (2)       | 0.80 (2)        | 1.85-1.91              | .073-.075 | 155.6           | 35.0 |
| 42172A-C1           | (1)16+(1)18  | 1.30 and 0.80   | 1.91-1.96              | .075-.077 | 155.6           | 35.0 |
| 42172A-C1           | (1)18 +(1)20 | 0.80 and 0.60   | 1.78-1.83              | .070-.072 | 89.0            | 20.0 |
| 42172A-F1           | 16           | 1.30            | 1.78-1.83              | .070-.072 | 266.7           | 60.0 |
| 42172A-F1           | 18           | 0.80            | 1.60-1.65              | .063-.065 | 155.6           | 35.0 |
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| 42172A-F1           | (1)18 +(1)20 | 0.80 and 0.60   | 1.78-1.83              | .070-.072 | 89.0            | 20.0 |
| 42172A-G1           | 16           | 1.30            | 1.78-1.83              | .070-.072 | 266.7           | 60.0 |
| 42172A-G1           | 18           | 0.80            | 1.60-1.65              | .063-.065 | 155.6           | 35.0 |
| 42172A-G1           | 18 (2)       | 0.80 (2)        | 1.85-1.91              | .073-.075 | 155.6           | 35.0 |
| 42172A-G1           | (1)16+(1)18  | 1.30 and 0.80   | 1.91-1.96              | .075-.077 | 155.6           | 35.0 |
| 42172A-G1           | (1)18 +(1)20 | 0.80 and 0.60   | 1.78-1.83              | .070-.072 | 89.0            | 20.0 |
| 42172A-H1           | 16           | 1.30            | 1.78-1.83              | .070-.072 | 266.7           | 60.0 |
| 42172A-H1           | 18           | 0.80            | 1.60-1.65              | .063-.065 | 155.6           | 35.0 |
| 42172A-H1           | 18 (2)       | 0.80 (2)        | 1.85-1.91              | .073-.075 | 155.6           | 35.0 |
| 42172A-H1           | (1)16+(1)18  | 1.30 and 0.80   | 1.91-1.96              | .075-.077 | 155.6           | 35.0 |
| 42172A-H1           | (1)18 +(1)20 | 0.80 and 0.60   | 1.78-1.83              | .070-.072 | 89.0            | 20.0 |

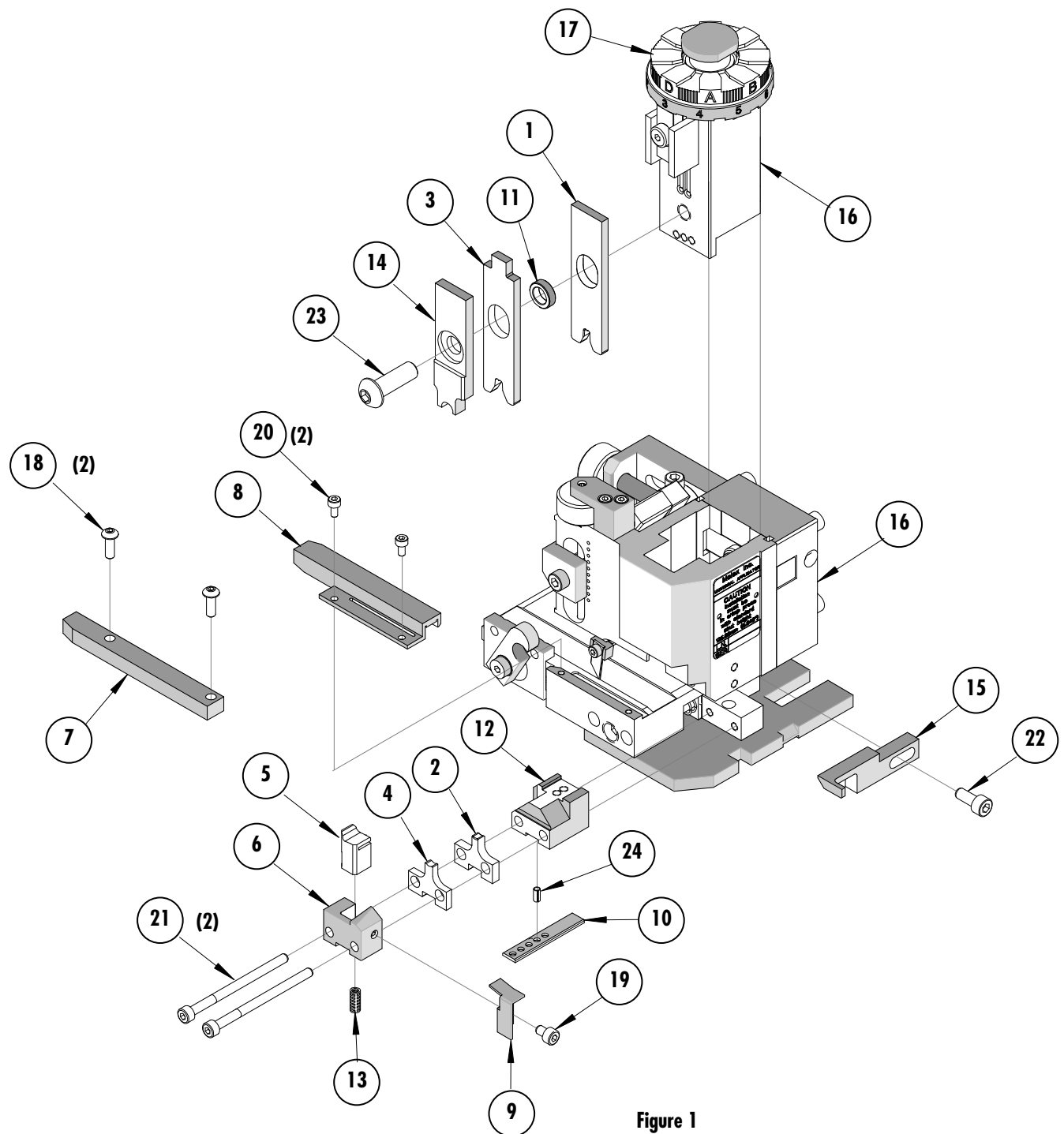
Pull Force should be measured with no influence from the insulation crimp.

The above specifications are guidelines to an optimum crimp.

**PARTS LIST**

| <b>Mini-Mac Applicator 63830-6000</b>                                        |            |                 |                                |          |
|------------------------------------------------------------------------------|------------|-----------------|--------------------------------|----------|
| Item                                                                         | Order No   | Engineering No. | Description                    | Quantity |
| <b>Perishable Tooling</b>                                                    |            |                 |                                |          |
|                                                                              | 63830-6070 | 63830-6070      | Tool Kit (All "Y" Items)       | REF      |
| 1                                                                            | 63830-6001 | 63830-6001      | Conductor Punch                | 1 Y      |
| 2                                                                            | 63445-3180 | 63445-3180      | Conductor Anvil                | 1 Y      |
| 3                                                                            | 63830-6002 | 63830-6002      | Insulation Punch               | 1 Y      |
| 4                                                                            | 63445-4322 | 63445-4322      | Insulation Anvil               | 1 Y      |
| 5                                                                            | 63443-0048 | 63443-0048      | Cut-Off Plunger                | 1 Y      |
| 6                                                                            | 63443-0049 | 63443-0049      | Front Cut-off Plunger Retainer | 1 Y      |
| <b>Other Components</b>                                                      |            |                 |                                |          |
| 7                                                                            | 11-18-4612 | 60743A110       | Rear Cover Riser               | 1        |
| 8                                                                            | 11-18-4940 | 60743C122       | Front Cover                    | 1        |
| 9                                                                            | 63443-0009 | 63443-0009      | Scrap Chute                    | 1        |
| 10                                                                           | 63443-0021 | 63443-0021      | Lower Tooling Key              | 1        |
| 11                                                                           | 63443-0050 | 63443-0050      | Tooling Washer                 | 1        |
| 12                                                                           | 63443-2501 | 63443-2501      | Anvil Mount                    | 1        |
| 13                                                                           | 63700-0539 | 63700-0539      | Cut-Off Plunger Spring         | 1        |
| 14                                                                           | 63830-3006 | 63830-3006      | Front Plunger Striker          | 1        |
| 15                                                                           | 63830-6003 | 63830-6003      | Wire Stop                      | 1        |
| <b>Frame</b>                                                                 |            |                 |                                |          |
| 16                                                                           | 63800-4300 | 63800-4300      | Mini-Mac Applicator Frame      | 1        |
| 17                                                                           | 69028-0806 | 69028-0806      | Conductor Adjusting Cam        | 1        |
| <b>Hardware</b>                                                              |            |                 |                                |          |
| 18                                                                           | N/A        | N/A             | M3 by 6 Long SHCS              | 2**      |
| 19                                                                           | N/A        | N/A             | M4 by 6 Long SHCS              | 1**      |
| 20                                                                           | N/A        | N/A             | M4 by 12 Long BHCS             | 2**      |
| 21                                                                           | N/A        | N/A             | M4 by 50 Long SHCS             | 2**      |
| 22                                                                           | N/A        | N/A             | M5 by 12 Long SHCS             | 1**      |
| 23                                                                           | N/A        | N/A             | M8 by 25 Long BHCS             | 1**      |
| 24                                                                           | N/A        | N/A             | 3mm by 6 Long Roll Pin         | 1**      |
| ** Available from an industrial supply company such as MSC (1-800-645-7270). |            |                 |                                |          |

## Assembly Drawing



### Figure 1

## 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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