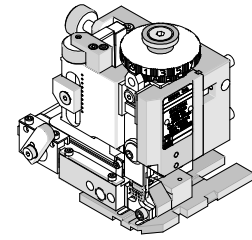


Mini-Mac  
Applicator**molex****Application Tooling  
Specification Sheet****Order No. 63888-5000****FEATURES**

- 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
- Pilot pin in cut-off punch produces symmetrical cut-off tabs and consistent cut-off tab length, see terminal strip adjustment on page 3

**SCOPE**

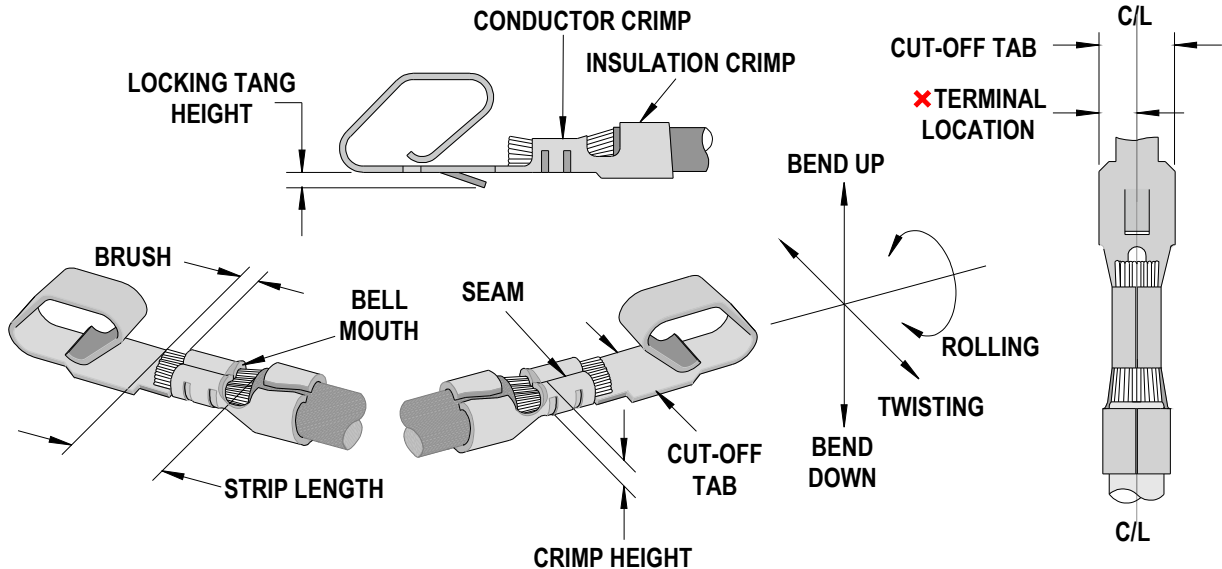
Products: KK® and Trifurcon™, 3.96mm (.156") Pitch Crimp Terminal, 18-24 AWG.

| Terminal Series No. | Terminal Order No. |            |            |            | Wire Size |                 | Insulation Diameter |       | Strip Length |           |
|---------------------|--------------------|------------|------------|------------|-----------|-----------------|---------------------|-------|--------------|-----------|
|                     |                    |            |            |            | AWG       | mm <sup>2</sup> | mm                  | In.   | mm           | In.       |
| 2477                | 08-50-0109         | 08-56-0113 | 40-01-1179 |            | 18 - 24   | 0.80-0.20       | *2.79               | *.110 | 2.54-3.18    | .100-.125 |
| 2478                | 08-50-0001         | 08-50-0014 | 08-50-0015 | 08-50-0047 | 18 - 24   | 0.80-0.20       | *2.79               | *.110 | 2.54-3.18    | .100-.125 |
|                     | 08-50-0063         | 08-50-0073 | 08-50-0091 | 08-50-0105 |           |                 |                     |       |              |           |
|                     | 08-50-0119         | 08-50-0146 | 08-50-0271 | 08-50-0281 |           |                 |                     |       |              |           |
|                     | 08-51-0001         | 08-52-0023 | 08-52-0027 | 08-52-0044 |           |                 |                     |       |              |           |
|                     | 08-52-0046         | 08-52-0071 | 08-52-0073 | 08-52-0114 |           |                 |                     |       |              |           |
|                     | 08-52-0811         | 08-53-0004 | 08-53-0811 | 08-55-0103 |           |                 |                     |       |              |           |
|                     | 08-55-0133         | 08-56-0105 | 08-56-0153 | 08-58-0103 |           |                 |                     |       |              |           |
|                     | 08-58-0114         | 08-58-0121 | 08-65-0114 | 39-00-0103 |           |                 |                     |       |              |           |
|                     | 39-00-0133         | 39-00-0286 | 39-00-0343 | 39-00-0345 |           |                 |                     |       |              |           |
|                     | 39-00-0347         | 39-00-0349 | 40-01-1118 | 50-29-1689 |           |                 |                     |       |              |           |
| 2878                | 08-50-0115         | 08-51-0109 | 08-52-0126 | 08-53-0814 | 18 - 20   | 0.80-0.50       | *2.79               | *.110 | 2.54-3.18    | .100-.125 |
|                     | 08-58-0127         | 08-55-0138 | 08-65-0118 |            |           |                 |                     |       |              |           |
| 4838                | 08-50-0131         | 08-55-0125 | 08-55-0139 | 08-55-0142 | 18 - 22   | 0.80-0.35       | 2.41                | .095  | 2.54-3.18    | .100-.125 |
|                     | 08-55-0144         | 08-55-0145 | 08-55-0147 | 08-55-0149 |           |                 |                     |       |              |           |
| 6438                | 08-50-0164         | 08-51-0801 | 08-52-0813 | 05-53-0813 | 18 - 24   | 0.80-0.20       | 2.41                | .095  | 2.54-3.18    | .100-.125 |
|                     | 08-56-0135         | 08-56-0137 |            |            |           |                 |                     |       |              |           |
| 6838                | 08-50-0024         | 08-50-0026 | 08-50-0028 | 08-50-0187 | 18 - 20   | 0.80-0.50       | *2.79               | *.110 | 2.54-3.18    | .100-.125 |
|                     | 08-50-0275         | 08-51-0106 | 08-52-0112 | 08-53-1101 |           |                 |                     |       |              |           |
|                     | 08-58-0102         | 08-58-0105 | 08-58-0108 | 08-58-0110 |           |                 |                     |       |              |           |
|                     | 08-58-0118         | 08-58-0131 | 08-58-0187 | 08-60-0001 |           |                 |                     |       |              |           |
| 8993                | 08-50-0011         | 08-50-0277 |            |            | 18 - 24   | 0.80-0.20       | *2.79               | *.110 | 2.54-3.18    | .100-.125 |

| Terminal Series No. | Terminal Order No. |             |             |             | Wire Size |                 | Insulation Diameter |       | Strip Length |           |
|---------------------|--------------------|-------------|-------------|-------------|-----------|-----------------|---------------------|-------|--------------|-----------|
|                     |                    |             |             |             | AWG       | mm <sup>2</sup> | mm                  | In.   | mm           | In.       |
| 172160              | 172160-1801        | 172160-1802 | 172160-1803 | 172160-1804 | 18 - 20   | 0.80-0.50       | *2.79               | *.110 | 2.54-3.18    | .100-.125 |
|                     | 172160-1805        | 172160-1806 |             |             |           |                 |                     |       |              |           |

\*Insulation below 1.65mm (.065 inch) diameter may produce loose insulation crimps.

### DEFINITION OF TERMS



\*Terminal is to be centrally located between the two (2) cut-off edges, within +/- 0.08mm (+/- .003").

### CRIMP SPECIFICATIONS

| Terminal Series No. |      |      |        | Bell mouth |           | *Cut-off Tab |           | Conductor Brush |           |
|---------------------|------|------|--------|------------|-----------|--------------|-----------|-----------------|-----------|
|                     |      |      |        | mm         | In.       | mm           | In.       | mm              | In.       |
| 2477                | 2878 | 6438 | 6838   | 0.20-0.50  | .008-.020 | 2.72±.08     | .107±.003 | 0.13-0.64       | .005-.025 |
| 2478                | 4838 | 8993 | 172160 |            |           |              |           |                 |           |

| Terminal Series No. | Locking Tang Height |           | Bend up Bend down |   | Twist Roll |   | Punch Width (Ref) |      |            |      | Seam<br>Seam shall not be open and no wire allowed out of the crimping area |
|---------------------|---------------------|-----------|-------------------|---|------------|---|-------------------|------|------------|------|---|
|                     | mm                  | In        | Degree            |   | Degree     |   | Conductor         |      | Insulation |      |   |
|                     |                     |           |                   |   |            |   | mm                | In   | mm         | In   |   |
| 2477                | 0.64-0.76           | .025-.030 | 3                 | 3 | 4          | 8 | 1.95              | .077 | 2.42       | .095 |   |
| 2478                | 0.64-0.76           | .025-.030 | 3                 | 3 | 4          | 8 | 1.95              | .077 | 2.42       | .095 |   |
| 2878                | 0.63-0.79           | .025-.031 | 3                 | 3 | 4          | 8 | 1.95              | .077 | 2.42       | .095 |   |
| 4838                | 0.64-0.76           | .025-.030 | 3                 | 3 | 4          | 8 | 1.95              | .077 | 2.42       | .095 |   |
| 6438                | 0.63-0.79           | .025-.031 | 3                 | 3 | 4          | 8 | 1.95              | .077 | 2.42       | .095 |   |
| 6838                | 0.63-0.79           | .025-.031 | 3                 | 3 | 4          | 8 | 1.95              | .077 | 2.42       | .095 |   |
| 8993                | 0.38-0.51           | .015-.020 | 3                 | 3 | 4          | 8 | 1.95              | .077 | 2.42       | .095 |   |
| 172160              | 0.63-0.79           | .025-.031 | 3                 | 3 | 4          | 8 | 1.95              | .077 | 2.42       | .095 |   |

After crimping, the conductor profile should measure the following.

| Terminal Series No. | Wire Size |                 | Crimp Height |           | Pull Force Minimum |     |
|---------------------|-----------|-----------------|--------------|-----------|--------------------|-----|
|                     | AWG       | mm <sup>2</sup> | mm           | In.       | N                  | Lb. |
| 2477                | 18        | 0.80            | 1.09-1.14    | .043-.045 | 110                | 25  |
|                     | 20        | 0.50            | 1.02-1.09    | .040-.043 | 66                 | 15  |
|                     | 22        | 0.35            | 0.97-1.02    | .038-.040 | 44                 | 10  |
|                     | 24        | 0.20            | 0.91-0.97    | .036-.038 | 35                 | 8   |
| * 08-52-0071        | 18        | 0.81            | 1.07-1.17    | .042-.046 | 110                | 25  |

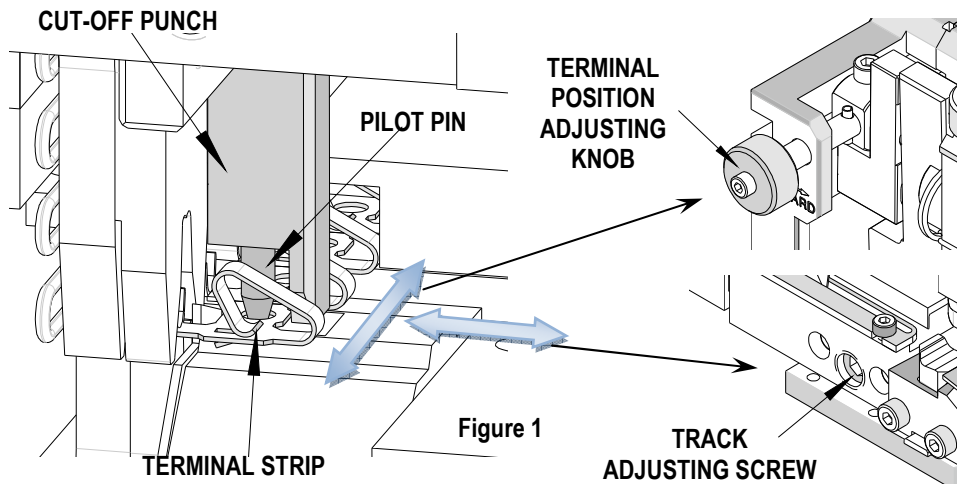
| Terminal Series No.  | Wire Size |                 | Crimp Height |           | Pull Force Minimum |      |
|--|-----------|-----------------|--------------|-----------|--------------------|------|
|  | AWG       | mm <sup>2</sup> | mm           | In.       | N                  | Lb.  |
| 2478   | 18        | 0.80            | 1.09-1.14    | .043-.045 | 111.2              | 25.0 |
|  | 20        | 0.50            | 1.02-1.09    | .040-.043 | 66.7               | 15.0 |
|  | 22        | 0.35            | 0.97-1.02    | .038-.040 | 44.5               | 10.0 |
|  | 24        | 0.20            | 0.91-0.97    | .036-.038 | 35.6               | 8.0  |
| 2878   | 18        | 0.80            | 1.09-1.14    | .043-.045 | 111.2              | 25.0 |
|  | 20        | 0.50            | 1.02-1.09    | .040-.043 | 66.7               | 15.0 |
| 4838   | 18        | 0.80            | 1.09-1.14    | .043-.045 | 111.2              | 25.0 |
|  | 20        | 0.50            | 1.02-1.09    | .040-.043 | 66.7               | 15.0 |
|  | 22        | 0.35            | 0.97-1.02    | .038-.040 | 44.5               | 10.0 |
| 6438   | 18        | 0.80            | 1.09-1.14    | .043-.045 | 111.2              | 25.0 |
|  | 20        | 0.50            | 1.02-1.09    | .040-.043 | 66.7               | 15.0 |
|  | 22        | 0.35            | 0.97-1.02    | .038-.040 | 44.5               | 10.0 |
|  | 24        | 0.20            | 0.91-0.97    | .036-.038 | 35.6               | 8.0  |
| 6838   | 18        | 0.80            | 1.09-1.14    | .043-.045 | 111.2              | 25.0 |
|  | 20        | 0.50            | 1.02-1.09    | .040-.043 | 66.7               | 15.0 |
| 8993   | 18        | 0.80            | 1.09-1.14    | .043-.045 | 111.2              | 25.0 |
|  | 20        | 0.50            | 1.02-1.09    | .040-.043 | 66.7               | 15.0 |
|  | 22        | 0.35            | 0.97-1.02    | .038-.040 | 44.5               | 10.0 |
|  | 24        | 0.20            | 0.91-0.97    | .036-.038 | 35.6               | 8.0  |
| 172160   | 18        | 0.80            | 1.09-1.14    | .043-.045 | 111.2              | 25.0 |
|  | 20        | 0.50            | 1.02-1.09    | .040-.043 | 66.7               | 15.0 |
| * Special for use with 18 AWG UL1015, 16 strand (.010") diameter wire only. 0.81mm <sup>2</sup> .254mm |           |                 |              |           |                    |      |

**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.

**Terminal Strip Adjustment**

The terminal strip hole must be aligned to the pilot pin before crimping under power. Hand cycle the press several times to check the alignment of the pilot pin to the terminal strip hole before crimping under power. Use the track adjusting screw and the terminal position adjusting knob to align the terminal strip hole to the pilot pin.



**PARTS LIST**

| <b>Mini-Mac Applicator 63888-5000</b> |                 |                        |                                 |                 |
|---------------------------------------|-----------------|------------------------|---------------------------------|-----------------|
| <b>Item</b>                           | <b>Order No</b> | <b>Engineering No.</b> | <b>Description</b>              | <b>Quantity</b> |
| <b>Perishable Tooling</b>             |                 |                        |                                 |                 |
|                                       | 63888-5070      | 63888-5070             | Tool Kit (All "Y" Items)        | REF             |
| 1                                     | 11-18-4108      | 60712-8                | Conductor Punch                 | 1 Y             |
| 2                                     | 11-18-4110      | 60712-10               | Conductor Anvil                 | 1 Y             |
| 3                                     | 11-18-4107      | 60712-7                | Insulation Punch                | 1 Y             |
| 4                                     | 11-18-4111      | 60712-11               | Insulation Anvil                | 1 Y             |
| 5                                     | 63820-0038      | 63820-0038             | Cut-Off Punch                   | 1 Y             |
| 6                                     | 11-18-4470      | 60712-24               | Cut-Off Insert                  | 1 Y             |
| <b>Other Components</b>               |                 |                        |                                 |                 |
| 7                                     | 11-18-4006      | 60703-8                | Stripper Blade Holder           | 1               |
| 8                                     | 11-18-4103      | 60712-3                | Cover Plate                     | 1               |
| 9                                     | 11-18-4332      | 60703-16               | Stripper                        | 1               |
| 10                                    | 11-18-4471      | 60712-25               | Retainer Block                  | 1               |
| 11                                    | 11-18-4631      | 60750A104              | Insulation Punch Spacer         | 1               |
| 12                                    | 11-18-4848      | 60800A123              | Spring Retainer                 | 1               |
| 13                                    | 11-18-4849      | 60800A124              | Wire Hold Down Spring           | 1               |
| 14                                    | 11-18-5015      | 60805A122              | Front Cover                     | 1               |
| 15                                    | 11-40-4085      | 8301-10                | Terminal Stop and Scrape Shield | 1               |
| 16                                    | 63803-5119      | 63803-5119             | Conductor Bushing               | 1               |
| 17                                    | 63820-0012      | 63820-0012             | Cover-Drag Frame                | 1               |
| 18                                    | 63600-4664      | 63600-4664             | Compression Spring              | 2               |
| <b>Frame</b>                          |                 |                        |                                 |                 |
| 19                                    | 63801-3201      | 63801-3201             | Top                             | 1               |
| 20                                    | 63801-3283      | 63801-3283             | Base                            | 1               |
| 21                                    | 63801-6950      | 63801-6950             | Track                           | 1               |
| <b>Hardware</b>                       |                 |                        |                                 |                 |
| 22                                    | N/A             | N/A                    | M3 by 6 Long SHCS               | 4**             |
| 23                                    | N/A             | N/A                    | M4 by 6 Long SHCS               | 2**             |
| 24                                    | N/A             | N/A                    | M4 by 12 Long BHCS              | 2**             |
| 25                                    | N/A             | N/A                    | M5 by 10 Long SHCS              | 1**             |
| 26                                    | N/A             | N/A                    | M8 by 20 Long BHCS              | 1**             |
| 27                                    | N/A             | N/A                    | #4-40 by 5/8" Long SHCS         | 2**             |
| 28                                    | N/A             | N/A                    | #6-32 by 3/8" Long BHCS         | 2**             |
| 29                                    | N/A             | N/A                    | #10-32 by 1.120" Long SHCS      | 1**             |

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

# Assembly Drawing

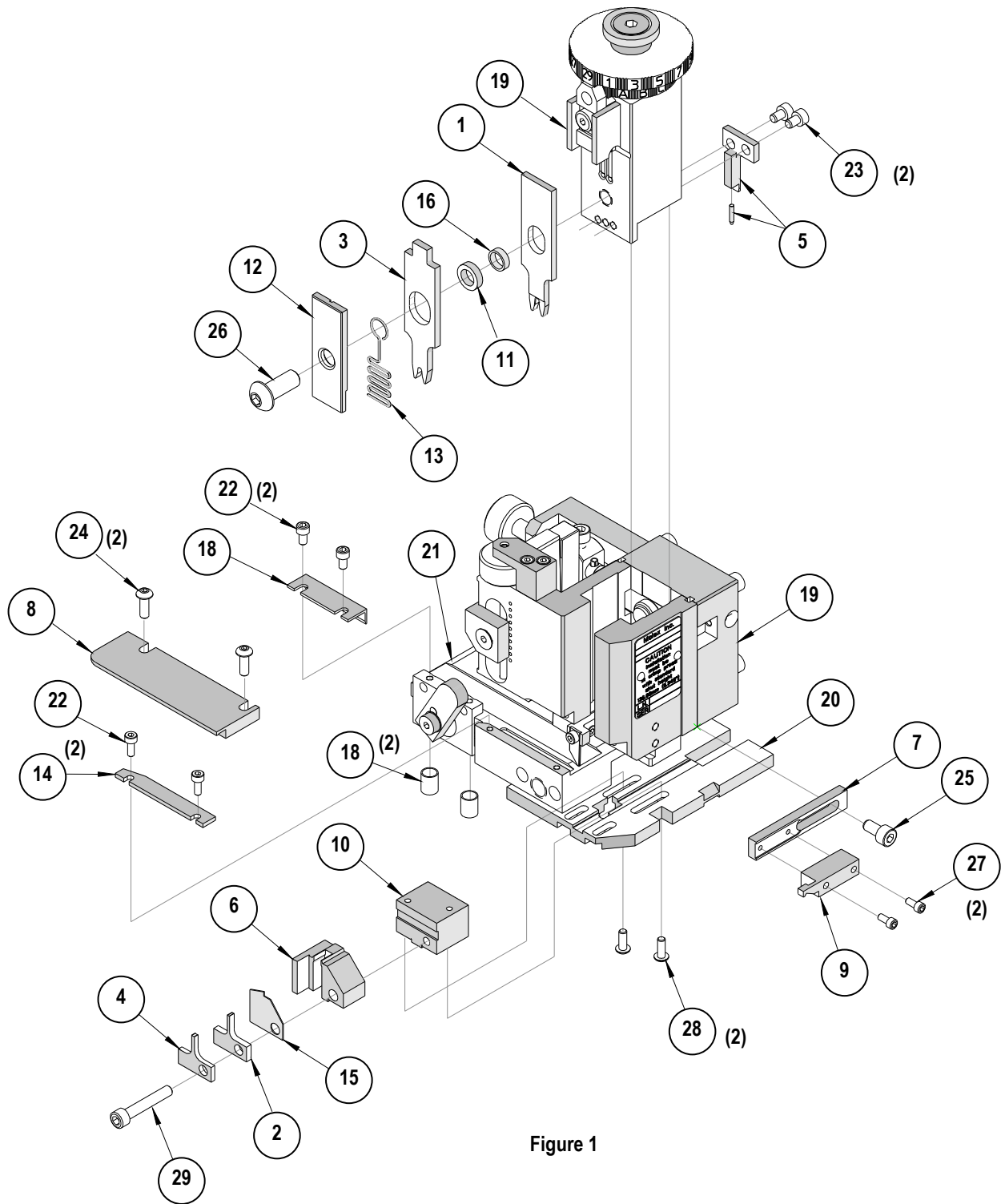


Figure 1

## NOTES

1. Molex recommends an extra perishable tooling kit be maintained at your facility.
2. Verify tooling alignment by manually cycling the press 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 135.8 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.

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