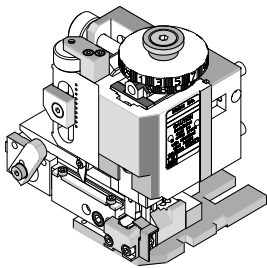


Order Number  
63902-5000



Application Tooling Specification



FEATURES

- Directly adapts to most automatic wire processing machines
- Quick punch removal with the push of a button for fast and easy tooling change
- Applicator designed to industry standard mounting and 135.80mm (5.346") shut height
- Quick setup 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 0.015mm (.0006") for conductor crimp height and 0.063mm (.0025") for insulation height
- Independent adjustment rings allow users to quickly adjust the conductor or insulation crimp height without affecting each other
- This tool is IPC/WHMA-A-620 Class 2 compliant, as indicated below

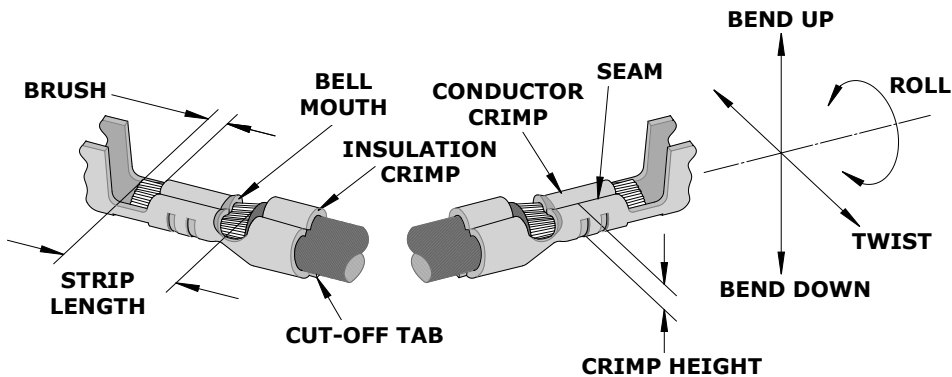
SCOPE

**Products:** 1.50mm (.059") Pitch CLIK-Mate Wire-to-Board Crimp Terminals, 24-28 AWG.

| Terminal Series No.   | Terminal Order No.                        | Wire Size |           | Insulation Diameter |           |              |           | Strip Length |           |
|---|---|-----------|-----------|---------------------|-----------|--------------|-----------|--------------|-----------|
|   |   |           |           | IPC/WHMA-A-620 (1)  |           | Terminal (2) |           |              |           |
|   |   | AWG       | Stranding | mm                  | In.       | mm           | In.       | mm           | In.       |
| 502579  | 502579-0000<br>502579-1000                | 24-28     | 7 strands | 0.90-1.20           | .035-.047 | 0.78-1.28    | .031-.050 | 1.50-1.90    | .059-.075 |
| 213028  | 213028-1000<br>213028-3000<br>213028-7000 | 24-26     | 7 strands | 0.90-1.20           | .035-.047 | 0.78-1.28    | .031-.050 |              |           |
| (1) To achieve optimum IPC/WHMA-A-620 insulation crimps, use this insulation OD range.<br>(2) Overall insulation OD specification for terminal. |   |           |           |                     |           |              |           |              |           |

**CAUTION:** Lubrication must be used to prevent gold-plated terminals from sticking in the conductor punch. Use 63801-7240 oiler or equivalent.

DEFINITION OF TERMS



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

**CRIMP SPECIFICATION**

| Terminal Series No. | Bell Mouth |           | Cut-Off Tab Maximum |      | Conductor Brush |           |
|---------------------|------------|-----------|---------------------|------|-----------------|-----------|
|                     | mm         | In.       | mm                  | In.  | mm              | In.       |
| 502579<br>213028    | 0.10-0.40  | .004-.016 | 0.10                | .004 | 0.10-0.60       | .004-.024 |

| Terminal Series<br>No. | Bend Up      | Bend Down | Twist        | Roll | Punch Width (Ref) |      |            |      | Seam  |
|------------------------|--------------|-----------|--------------|------|-------------------|------|------------|------|---|
|                        |              |           |              |      | Conductor         |      | Insulation |      |   |
|                        | Degree (Max) |           | Degree (Max) |      | mm                | In.  | mm         | In.  |   |
| 502579<br>213028       | 3            | 3         | 3            | 8    | 1.00              | .039 | 1.10       | .043 | Seam shall not be open<br>and no wire allowed out<br>of the crimping area |

After crimping, the conductor profile should measure the following:

| Terminal Series No. | Wire Size | Conductor Crimp |           |                   |      | ✦ Pull Force Minimum |      |
|---------------------|-----------|-----------------|-----------|-------------------|------|----------------------|------|
|                     |           | Crimp Height    |           | Crimp Width (Ref) |      |                      |      |
|                     | AWG       | mm              | In.       | mm                | In.  | N                    | Lb.  |
| 502579              | 24        | 0.60-0.65       | .024-.026 | 1.00              | .039 | 29.4                 | 6.61 |
|                     | 26        | 0.59-0.64       | .023-.025 | 1.00              | .039 | 19.6                 | 4.41 |
|                     | ✦ 28      | 0.56-0.61       | .022-.024 | 1.00              | .039 | 9.8                  | 2.20 |
| 213028              | 24        | 0.60-0.65       | .024-.026 | 1.00              | .039 | 29.4                 | 6.61 |
|                     | 26        | 0.59-0.64       | .023-.025 | 1.00              | .039 | 19.6                 | 4.41 |

✦ **Note:** To achieve optimum pull force, a conductor crimp height of 0.54-0.59mm is recommended for 28 AWG wire. This will allow a minimum Cpk value of 1.67.  
This lower crimp height range produces a mechanically sound crimp. However, electrical performance may vary.

| Terminal Series No. | Wire Size | Insulation         |      |                   |      |
|---------------------|-----------|--------------------|------|-------------------|------|
|                     |           | Crimp Height (Max) |      | Crimp Width (Ref) |      |
|                     | AWG       | mm                 | In.  | mm                | In.  |
| 502579              | 24        | 1.65               | .065 | 1.10              | .043 |
|                     | 26        | 1.55               | .061 | 1.10              | .043 |
|                     | 28        | 1.45               | .057 | 1.10              | .043 |
| 213028              | 24        | 1.65               | .065 | 1.10              | .043 |
|                     | 26        | 1.55               | .061 | 1.10              | .043 |

**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.

## NOTES

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1. Molex recommends that 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 the work area.
4. Wear safety glasses at all times.
5. For recommended maintenance, refer to the FineAdjust manual.

**CAUTION:** This applicator should only be used in a press with a shut height of 135.8mm (5.346"). Tooling damage could result at a lower setting.

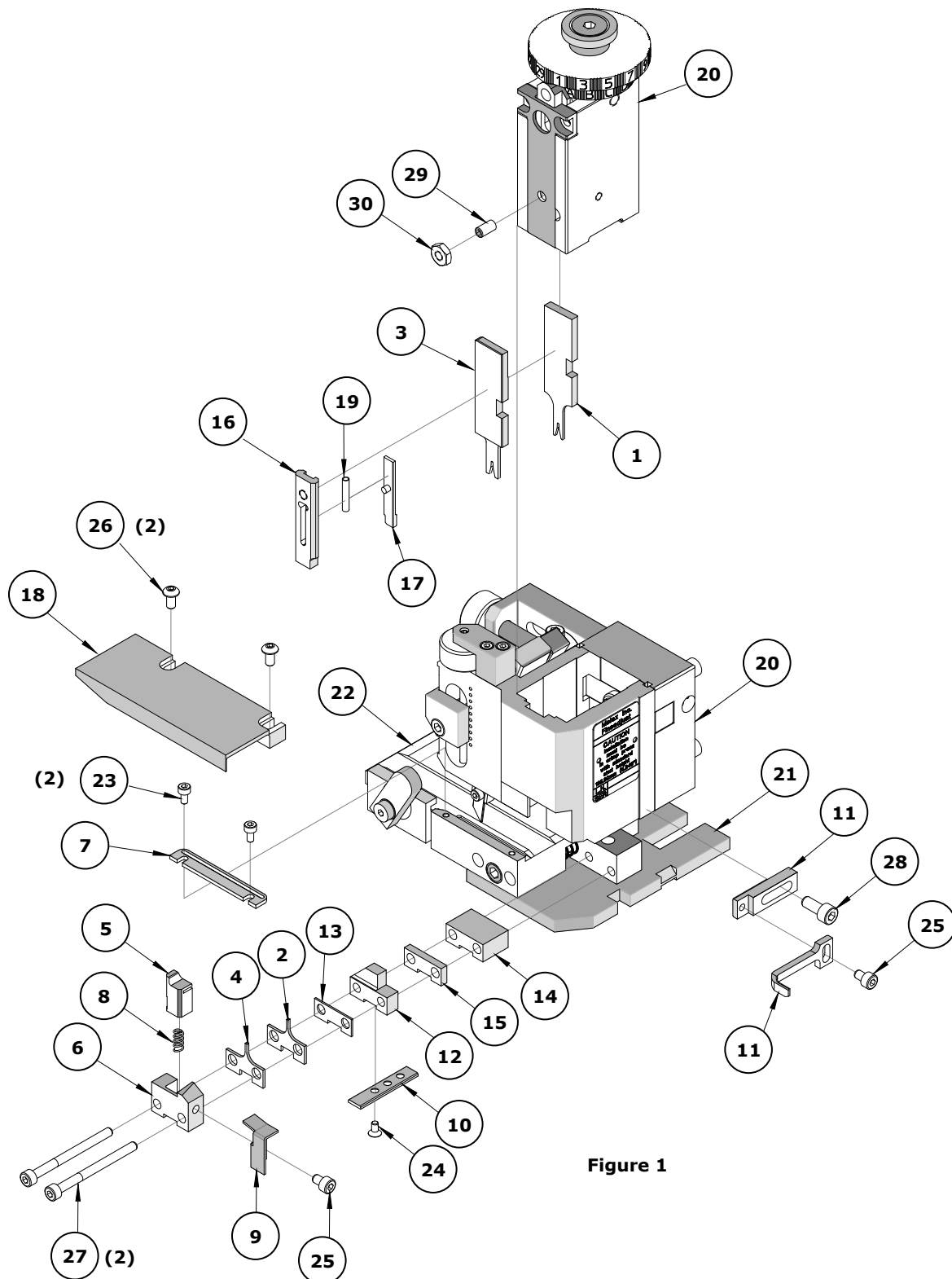
**CAUTION:** To prevent injury, never operate this applicator without the guards supplied with the press or wire-processing machine in place. Reference the press or wire processing manufacturer's instruction manual.

**CAUTION:** Molex crimp specifications are valid only when used with Molex terminals, applicators and tooling.

**PARTS LIST**

| <b>FineAdjust Applicator 63902-5000</b>        |                  |                        |                                    |                 |
|--|------------------|------------------------|------------------------------------|-----------------|
| <b>Item</b>                                    | <b>Order No.</b> | <b>Engineering No.</b> | <b>Description</b>                 | <b>Quantity</b> |
| <b>Perishable Tooling</b>                      |                  |                        |                                    |                 |
|  | 63902-5070       | 63902-5070             | Tool Kit (All "Y" Items)           | REF             |
| 1  | 63444-1007       | 63444-1007             | Conductor Punch                    | 1 Y             |
| 2  | 63445-1009       | 63445-1009             | Conductor Anvil                    | 1 Y             |
| 3  | 63446-1107       | 63446-1107             | Insulation Punch                   | 1 Y             |
| 4  | 63445-1106       | 63445-1106             | Insulation Anvil                   | 1 Y             |
| 5  | 63443-0005       | 63443-0005             | Front Cut-Off Plunger              | 1 Y             |
| 6  | 63443-0012       | 63443-0012             | Front Plunger Retainer             | 1 Y             |
| <b>Other Components</b>                        |                  |                        |                                    |                 |
| 7  | 11-18-4083       | 60707-8                | Feed Guide                         | 1               |
| 8  | 11-24-1067       | 4996-4                 | Cut-Off Plunger Spring             | 1               |
| 9  | 63443-0009       | 63443-0009             | Front Scrap Chute                  | 1               |
| 10   | 63443-0024       | 63443-0024             | Key                                | 1               |
| 11   | 63443-0090       | 63443-0090             | Wire Stop                          | 1               |
| 12   | 63443-1720       | 63443-1720             | Height Spacer                      | 1               |
| 13   | 63443-2201       | 63443-2201             | Coarse Spacer (1.00mm)             | 1               |
| 14   | 63443-2216       | 63443-2216             | Coarse Spacer (16.00mm)            | 1               |
| 15   | 63443-2304       | 63443-2304             | Fine Spacer (3.20mm)               | 1               |
| 16   | 63443-2805       | 63443-2805             | Front Plunger Striker              | 1               |
| 17   | 63443-2904       | 63443-2904             | Wire Hold Down Plunger             | 1               |
| 18   | 63443-6111       | 63443-6111             | Rear Cover                         | 1               |
| 19   | 63600-0021       | 63600-0021             | Wire Hold Down Spring              | 1               |
| <b>Frame</b>                                   |                  |                        |                                    |                 |
| 20   | 63800-4901       | 63800-4901             | Top                                | 1               |
| 21   | 63801-3281       | 63801-3281             | Base                               | 1               |
| 22   | 63801-4650       | 63801-4650             | Track                              | 1               |
| <b>Hardware</b>                                |                  |                        |                                    |                 |
| 23   | —                | —                      | M3 by 6 Long SHCS                  | 2*              |
| 24   | —                | —                      | M3 by 6 Long FHCS                  | 1*              |
| 25   | —                | —                      | M4 by 6 Long SHCS                  | 2*              |
| 26   | —                | —                      | M4 by 12 Long BHCS                 | 2*              |
| 27   | —                | —                      | M4 by 50 Long SHCS                 | 2*              |
| 28   | —                | —                      | M5 by 12 Long SHCS                 | 1*              |
| 29   | —                | —                      | #10-32 by 3/8" Long Flat Point SSS | 1*              |
| 30   | —                | —                      | #10-32 Hex Jam Nut                 | 1*              |
| * Available from an industrial supply company. |                  |                        |                                    |                 |

## ASSEMBLY DRAWING



**Application Tooling Support**

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