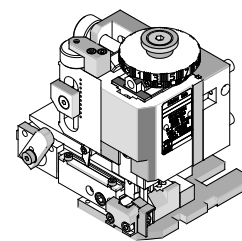


# FineAdjust Applicator

# molex

## Application Tooling Specification Sheet


**Order No. 63903-6700**

### 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 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

### SCOPE

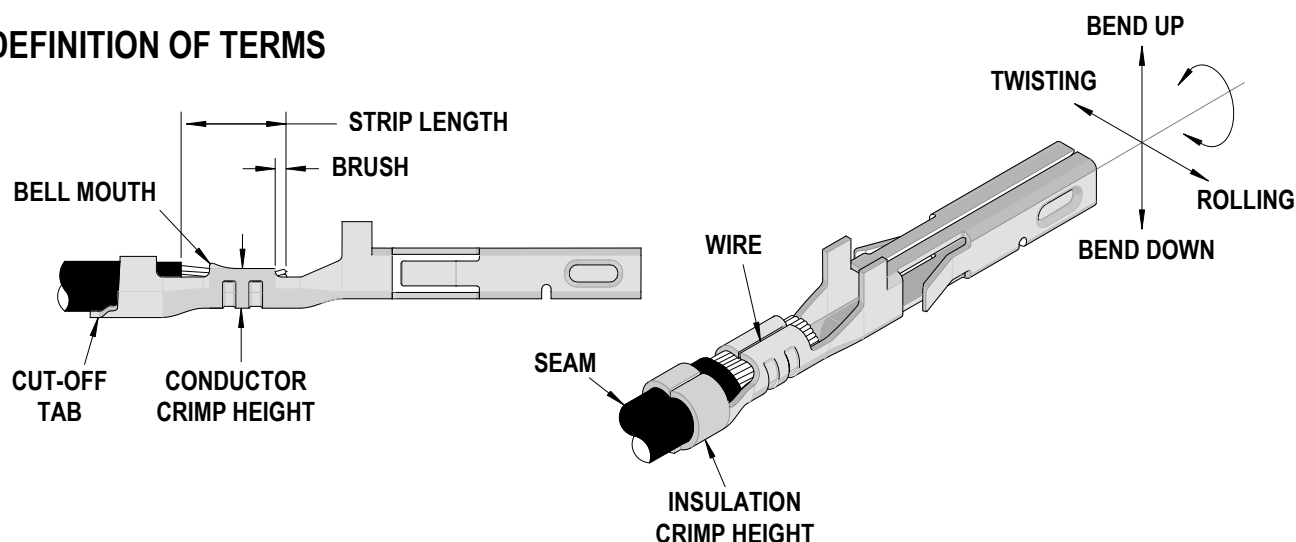
Products: Mini-Fit TPA 2.0 Crimp Terminals, 16 AWG wires.

| 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.       | mm           | In.       |
| 172718              | 172718-1111        | 16        | ---             | 1.98-2.55           | .078-.100 | 1.98-2.55    | .078-.100 | 3.20-3.80    | .126-.150 |
|                     | 172718-1121        |           |                 |                     |           |              |           |              |           |
| 172765              | 172765-1111        |           |                 |                     |           |              |           |              |           |
|                     | 172765-1121        |           |                 |                     |           |              |           |              |           |

(1) To achieve optimum IPC-A620 insulation crimps, use this insulation OD range.

(2) Overall insulation OD specification for terminal.

### DEFINITION OF TERMS



**CRIMP SPECIFICATION**

| Terminal Series No. | Bell mouth |           | Cut-off Tab Maximum |      | Conductor Brush |           |
|---------------------|------------|-----------|---------------------|------|-----------------|-----------|
|                     | mm         | In.       | mm                  | In.  | mm              | In.       |
| 172718              | 0.20-0.70  | .008-.028 | .30                 | .012 | 0.20-0.80       | .008-.032 |
| 172765              |            |           |                     |      |                 |           |

| Terminal Series No. | Bend up   Bend down |   | Twist   Roll |   | Punch Width (Ref) |      |            |      | Seam                                                                      |
|---------------------|---------------------|---|--------------|---|-------------------|------|------------|------|---------------------------------------------------------------------------|
|                     |                     |   |              |   | Conductor         |      | Insulation |      |                                                                           |
|                     | Degree (Max)        |   | Degree (Max) |   | mm                | In   | mm         | In   |                                                                           |
| 172718              | 3                   | 3 | 3            | 5 | 1.80              | .071 | 2.50       | .098 | Seam shall not be open<br>and no wire allowed out<br>of the crimping area |
| 172765              |                     |   |              |   |                   |      |            |      |                                                                           |

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.  |
| 172718              | 16        | ---             | 1.18-1.28    | .046-.050 | 1.80              | .071 | 133.5              | 30.0 |
| 172765              |           |                 |              |           |                   |      |                    |      |

| Terminal Series No. | Wire Size |                 | Insulation         |      |                   |      |
|---------------------|-----------|-----------------|--------------------|------|-------------------|------|
|                     |           |                 | Crimp Height (Ref) |      | Crimp Width (Ref) |      |
|                     | AWG       | mm <sup>2</sup> | mm                 | In.  | Mm                | In.  |
| 172718              | 16        | ---             | 2.50               | .098 | 2.60              | .102 |
| 172765              |           |                 |                    |      |                   |      |

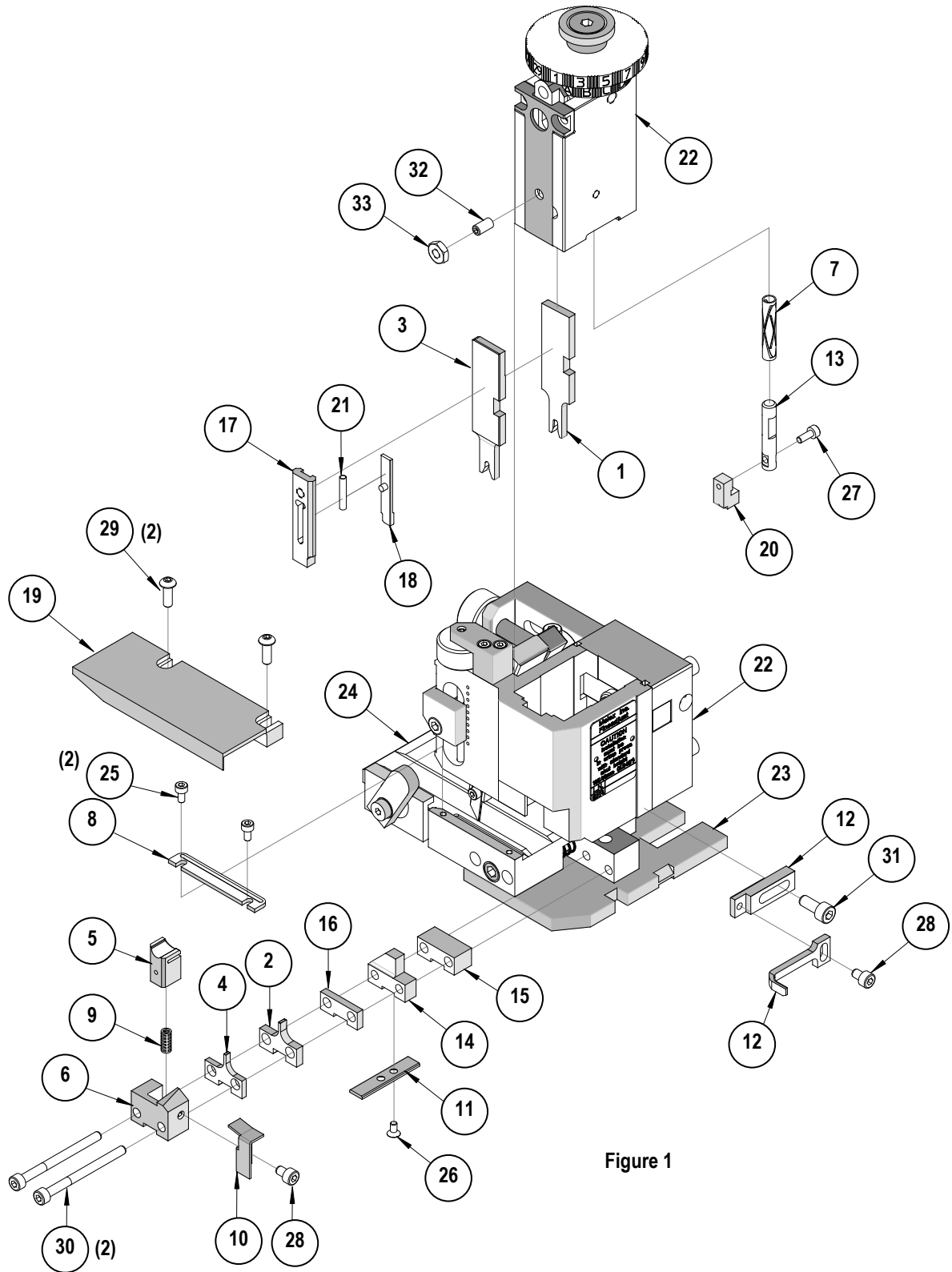
**Tool Qualification Notes:**

1. Pull Force should be measured with no influence from the insulation crimp.
2. The above specifications are guidelines to an optimum crimp.

**PARTS LIST**

| <b>FineAdjust Applicator 63903-6700</b>                                      |                 |                        |                                    |                 |
|------------------------------------------------------------------------------|-----------------|------------------------|------------------------------------|-----------------|
| <b>Item</b>                                                                  | <b>Order No</b> | <b>Engineering No.</b> | <b>Description</b>                 | <b>Quantity</b> |
| <b>Perishable Tooling</b>                                                    |                 |                        |                                    |                 |
|                                                                              | 63903-6770      | 63903-6770             | Tool Kit (All "Y" Items)           | REF             |
| 1                                                                            | 63457-1803      | 63457-1803             | Conductor Punch                    | 1 Y             |
| 2                                                                            | 63455-1802      | 63455-1802             | Conductor Anvil                    | 1 Y             |
| 3                                                                            | 63446-2525      | 63446-2525             | Insulation Punch                   | 1 Y             |
| 4                                                                            | 63445-2541      | 63445-2541             | 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                                                                            | 11-17-0022      | 1739-21                | Hold Down Spring                   | 1               |
| 8                                                                            | 11-18-4083      | 60707-8                | Feed Guide                         | 1               |
| 9                                                                            | 11-24-1067      | 4996-4                 | Cut-Off Plunger Spring             | 1               |
| 10                                                                           | 63443-0009      | 63443-0009             | Front Scrap Chute                  | 1               |
| 11                                                                           | 63443-0024      | 63443-0024             | Key                                | 1               |
| 12                                                                           | 63443-0090      | 63443-0090             | Wire Stop                          | 1               |
| 13                                                                           | 63443-0093      | 63443-0093             | Shank                              | 1               |
| 14                                                                           | 63443-1722      | 63443-1722             | Height Spacer (19.20mm)            | 1               |
| 15                                                                           | 63443-2215      | 63443-2215             | Spacer (15.0mm)                    | 1               |
| 16                                                                           | 63443-2307      | 63443-2307             | Spacer (3.35mm)                    | 1               |
| 17                                                                           | 63443-2806      | 63443-2806             | Front Plunger Striker              | 1               |
| 18                                                                           | 63443-2911      | 63443-2911             | Striker Plunger                    | 1               |
| 19                                                                           | 63443-6117      | 63443-6117             | Rear Cover                         | 1               |
| 20                                                                           | 63903-6905      | 63903-6905             | Terminal Hold Down                 | 1               |
| 21                                                                           | 63600-1057      | 63600-1057             | Striker Plunger Spring             | 1               |
| <b>Frame</b>                                                                 |                 |                        |                                    |                 |
| 22                                                                           | 63800-4901      | 63800-4901             | Top                                | 1               |
| 23                                                                           | 63801-3281      | 63801-3281             | Base                               | 1               |
| 24                                                                           | 63801-4650      | 63801-4650             | Track                              | 1               |
| <b>Hardware</b>                                                              |                 |                        |                                    |                 |
| 25                                                                           | N/A             | N/A                    | M3 by 6 Long SHCS                  | 2**             |
| 26                                                                           | N/A             | N/A                    | M3 by 6 Long FHCS                  | 1**             |
| 27                                                                           | N/A             | N/A                    | M3 by 8 Long SHCS                  | 1**             |
| 28                                                                           | N/A             | N/A                    | M4 by 6 Long SHCS                  | 2**             |
| 29                                                                           | N/A             | N/A                    | M4 by 12 Long BHCS                 | 2**             |
| 30                                                                           | N/A             | N/A                    | M4 by 50 Long SHCS                 | 2**             |
| 31                                                                           | N/A             | N/A                    | M5 by 12 Lg SHCS                   | 1**             |
| 32                                                                           | N/A             | N/A                    | #10-32 by 3/8" Long Flat Point SSS | 1**             |
| 33                                                                           | N/A             | N/A                    | #10-32 Hex Jam Nut                 | 1**             |
| ** Available from an industrial supply company such as MSC (1-800-645-7270). |                 |                        |                                    |                 |

# Assembly Drawing



## 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 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.

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