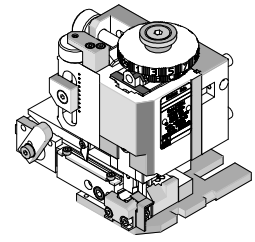




**FineAdjust  
Applicator**

**Application Tooling  
Specification Sheet**



**Order No. 63900-0400**

**FEATURES**

- 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
- Directly adapts to most automatic wire processing machines

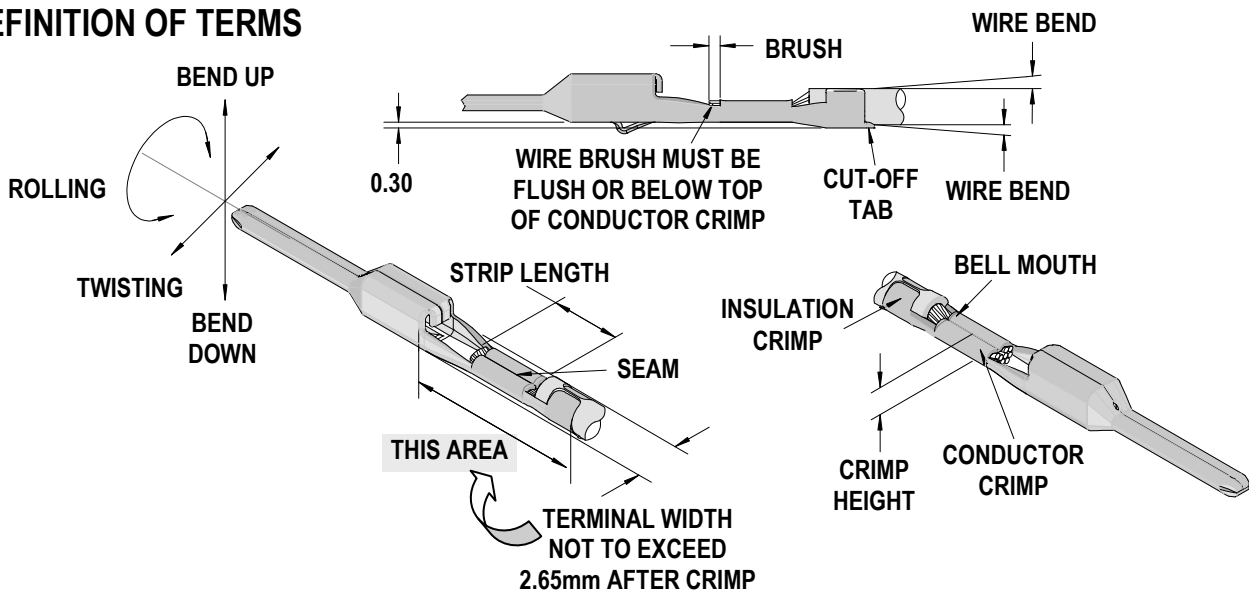
**SCOPE**

Products: MX150™ Blade Terminals 18 AWG.

| Terminal Series No. | Terminal Order No. |               | Wire Size |                 | Insulation Diameter |           | Strip Length |           |
|---------------------|--------------------|---------------|-----------|-----------------|---------------------|-----------|--------------|-----------|
|                     |                    |               | AWG       | mm <sup>2</sup> | mm                  | In.       | mm           | In.       |
| 33000               | 33000-1002         | Male (Tin)    | 18        | 0.80            | 1.91-2.06           | .075-.081 | 4.70-5.60    | .185-.220 |
| 33011               | 33011-0004         | Male (Gold)   | 18        | 0.80            | 1.91-2.06           | .075-.081 | 4.70-5.60    | .185-.220 |
|                     | 33011-3002         | Male (Silver) |           |                 |                     |           |              |           |

Terminals were validated per USCAR-21 using the following wire specifications:  
M1L-123A (TXL), M1L-135A1 (UTX), and M1L-126A1(metric-TXL)  
Customers are required to complete validation testing if tooling purchased outside Molex Inc.  
and/or wire specifications are different than above.

**DEFINITION OF TERMS**



### CRIMP SPECIFICATION

| Terminal Series No.   | Bell mouth |           | Cut-off Tab Maximum |      | * Conductor Brush |           |
|---|------------|-----------|---------------------|------|-------------------|-----------|
|   | mm         | In.       | mm                  | In.  | mm                | In.       |
| 33000   | 0.30-0.70  | .012-.028 | 0.50                | .020 | 0.15-0.40         | .006-.016 |
| 33011   | 0.30-0.70  | .012-.028 | 0.50                | .020 | 0.15-0.40         | .006-.016 |
| * Wire brush must be flush or below top of Conductor Crimp. |            |           |                     |      |                   |           |

| Terminal Series No. | Bend up Bend down |    | Twist | Roll | Punch Width mm (Ref) |      |           |      | Seam<br>Seam shall not be open<br>and no wire allowed out<br>of the crimping area |
|---------------------|-------------------|----|-------|------|----------------------|------|-----------|------|---|
|                     | Degree            |    |       |      | Degree               |      | Conductor |      |   |
|                     | mm                | In | mm    | In   | mm                   | In   | mm        | In   |   |
| 33000               | 3                 | 3  | 3     | 3    | 2.10                 | .082 | 2.26      | .089 |   |
| 33011               | 3                 | 3  | 3     | 3    | 2.10                 | .082 | 2.26      | .089 |   |

After crimping, the conductor profile should measure the following.

| Terminal Series No. | Wire Size |                 | Conductor    |           |             |           | Insulation   |           |             |           | Pull Force Minimum |      |
|---------------------|-----------|-----------------|--------------|-----------|-------------|-----------|--------------|-----------|-------------|-----------|--------------------|------|
|                     |           |                 | Crimp Height |           | Crimp Width |           | Crimp Height |           | Crimp Width |           |                    |      |
|                     | AWG       | mm <sup>2</sup> | mm           | In.       | mm          | In.       | mm           | In.       | mm          | In.       | N                  | Lb.  |
| 33000               | 18        | 0.80            | 1.20-1.30    | .047-.051 | 2.05-2.25   | .081-.089 | .190-2.10    | .075-.083 | 2.20-2.40   | .087-.094 | 90                 | 20.2 |
| 33011               | 18        | 0.80            | 1.20-1.30    | .047-.051 | 2.05-2.25   | .081-.089 | .190-2.10    | .075-.083 | 2.20-2.40   | .087-.094 | 90                 | 20.2 |

Tool Qualification Notes:

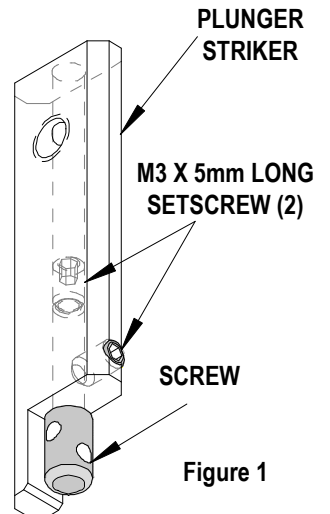
1. Pull Force should be measured with no influence from the insulation crimp.
2. The above specifications are guidelines to an optimum crimp.

### **Adjusting the Wire Bend Angle**

(See Item 11 in parts list and assembly drawing.)

**Note:** If the Wire Bend is present after crimping use the following method to remove the bend. This tooling may not be necessary for all wire gauges.

1. The screw is provided for wire straightening. See Figure 1.
2. Loosen the (2) M3 x 5mm long setscrews; see Figure 1, before turning the screw.
3. Start by adjusting the screw so it just touches the insulation outside diameter of the wire being crimped. If wire Bend Up exists, turn the screw a quarter turn clockwise (CW) to lengthen it.
4. Continue to adjust the length of the screw until the wire appears to be straight after crimping. If wire Bend Down exists, turn the screw a quarter turn counter clockwise (CCW) to shorten it. Continue to adjust the length of the screw until the wire appears to be straight after crimping.
5. Tighten the M3 x 5mm long setscrews, when finished adjusting the screw. Two M3 x 5mm long setscrews are provided; the top setscrew is to lock the screw after adjustments. The M3 x 5mm long setscrew on the side of plunger striker is used when making adjustments.



### **Adjusting the Wire Brush Length**

(See Item 13 in parts list and assembly drawing.)

1. If the wire brush is too long or extends above the top of the conductor crimp, adjust the Wire Stop, Item 13, closer to the conductor punch.
2. If the wire brush is too short, adjust the Wire Stop further away from the conductor punch.

**PARTS LIST**

| <b>FineAdjust Applicator 63900-0400</b>                                      |                 |                        |                                    |                 |
|--|-----------------|------------------------|------------------------------------|-----------------|
| <b>Item</b>  | <b>Order No</b> | <b>Engineering No.</b> | <b>Description</b>                 | <b>Quantity</b> |
| <b>Perishable Tooling</b>  |                 |                        |                                    |                 |
|  | 63900-0470      | 63900-0470             | Tool Kit (All "Y" Items)           | REF             |
| 1  | 63444-2137      | 63444-2137             | Conductor Punch                    | 1 Y             |
| 2  | 63445-2168      | 63445-2168             | Conductor Anvil                    | 1 Y             |
| 3  | 63454-0048      | 63454-0048             | Insulation Punch                   | 1 Y             |
| 4  | 63456-0041      | 63456-0041             | Insulation Anvil                   | 1 Y             |
| 5  | 63443-0037      | 63443-0037             | Cut-Off Plunger                    | 1 Y             |
| 6  | 63443-0038      | 63443-0038             | Front Plunger Retainer             | 1 Y             |
| <b>Other Components</b>  |                 |                        |                                    |                 |
| 7  | 11-17-0022      | 1739-21                | Hold Down Spring                   | 1               |
| 8  | 11-18-4094      | 60709A111              | Feed Guide                         | 1               |
| 9  | 63443-0009      | 63443-0009             | Scrap Chute                        | 1               |
| 10   | 63443-0024      | 63443-0024             | Key                                | 1               |
| 11   | 63443-0082      | 63443-0082             | Front Plunger Striker              | 1               |
| 12   | 63443-0083      | 63443-0083             | Striker Screw                      | 1               |
| 13   | 63443-0090      | 63443-0090             | Wire Stop                          | 1               |
| 14   | 63443-0093      | 63443-0093             | Shank                              | 1               |
| 15   | 63443-1719      | 63443-1719             | Height Spacer (18.90mm)            | 1               |
| 16   | 63443-2205      | 63443-2205             | Coarse Spacer (5.00mm)             | 1               |
| 17   | 63443-2209      | 63443-2209             | Coarse Spacer (9.00mm)             | 1               |
| 18   | 63443-2306      | 63443-2306             | Fine Spacer (3.30mm)               | 1               |
| 19   | 63443-6122      | 63443-6122             | Rear Cover                         | 1               |
| 20   | 63443-7102      | 63443-7102             | Terminal Hold Down                 | 1               |
| 21   | 63700-0539      | 63700-0539             | Cut-off 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               |
| 24A  | 63459-0001      | 63459-0001             | Terminal Track                     | 1               |
| <b>Hardware</b>  |                 |                        |                                    |                 |
| 25   | N/A             | N/A                    | M3 by 5Lg. SHSS-Brass Tip          | 2**             |
| 26   | N/A             | N/A                    | M3 by 6 Long SHCS                  | 2**             |
| 27   | N/A             | N/A                    | M3 by 6 Long FHCS                  | 1**             |
| 28   | N/A             | N/A                    | M3 by 8 Long SHCS                  | 1**             |
| 29   | N/A             | N/A                    | M4 by 6 Long SHCS                  | 2**             |
| 30   | N/A             | N/A                    | M4 by 12 Long BHCS                 | 2**             |
| 31   | N/A             | N/A                    | M4 by 50 Long SHCS                 | 2**             |
| 32   | N/A             | N/A                    | M5 by 12 Long SHCS                 | 1**             |
| 33   | N/A             | N/A                    | #10-32 by 3/8" Long Flat Point SSS | 1**             |
| 34   | 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

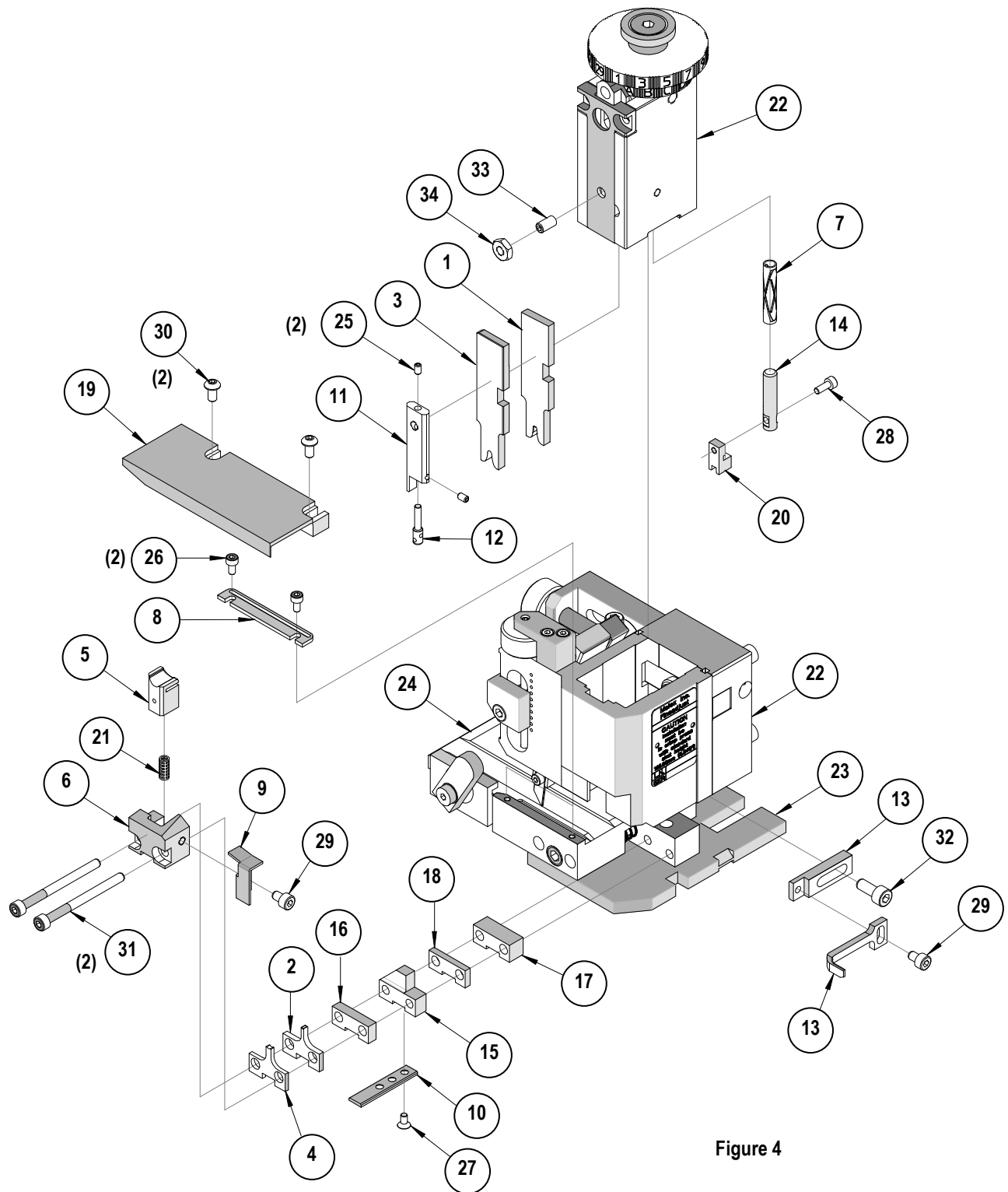


Figure 4

## 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 135.80 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.

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