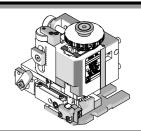
# FineAdjust Applicator



# **Application Tooling Specification Sheet**



Order No. 63902-2400

#### **FEATURES**

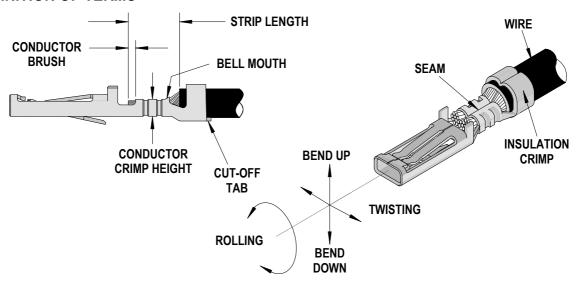
- Directly adapts to most automatic wire processing machines
- Quick punch removal with the push of a button for fast and easy tooling change
- Applicator designed to industry standard mounting and shut height 135.80mm (5.346")
- Quick set-up time; plus the crimp height, track and feed adjustments can 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:** Robot Conn 36P Crimp Terminals, 16-18 AWG.

| Tamainal   | Tamainal  | Wire Size |           |                   | Insulation | Strip Langth |         |              |         |
|--|---|-----------|-----------|-------------------|------------|--------------|---------|--------------|---------|
| Terminal Series No.  | Terminal<br>Order No.                                 |           |           | IPC/WHMA-A620 (1) |            | Termi        | nal (2) | Strip Length |         |
| Series No. Order No.   |   | AWG       | mm²       | mm                | ln.        | mm           | ln.     | mm           | ln.     |
| 503195   | 503195-1000   | 16-18     | 0.81-1.38 | 2.30-2.50         | .090098    | 2.00-2.50    | .079098 | 3.90-4.40    | .154173 |
| 503196   | 503196-1000   | 16-18     | 0.81-1.38 | 2.30-2.50         | .090098    | 2.00-2.50    | .079098 | 3.90-4.40    | .154173 |
| UL1007 or equivalent.  |   |           |           |                   |            |              |         |              |         |
| (1) To achieve optimum IPC-A620 Class 2 insulation crimps, use this insulation OD. |   |           |           |                   |            |              |         |              |         |
| (2) Ove  | (2) Overall insulation OD specification for terminal. |           |           |                   |            |              |         |              |         |

# **DEFINITION OF TERMS**



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# **CRIMP SPECIFICATION**

| Terminal Series No. | Bell n    | nouth   | uth Cut-off Tab Maximur |      |           | Conductor Brush |  |  |
|---------------------|-----------|---------|-------------------------|------|-----------|-----------------|--|--|
| Terminal Series No. | mm        | ln.     | mm                      | ln.  | mm        | ln.             |  |  |
| 503195              | 0.10-0.60 | .004024 | 0.00-0.20               | .008 | 0.10-1.00 | .004039         |  |  |
| 503196              | 0.10-0.60 | .004024 | 0.00-0.20               | .008 | 0.10-1.00 | .004039         |  |  |

| Terminal   | Bend up Bend down |           | Twist Roll     |   | Punch Width (Ref) |      |            |      | Seam                    |  |
|------------|-------------------|-----------|----------------|---|-------------------|------|------------|------|-------------------------|--|
| Series No. | Della up          | benu uown | I WIST IXUII   |   | Conductor         |      | Insulation |      |                         |  |
| Series No. | Degree Maximum    |           | Degree Maximum |   | mm                | In   | mm         | ln   | Seam shall not be open  |  |
| 503195     | 2                 | 2         | 3              | 5 | 2.20              | .087 | 3.20       | .126 | and no wire allowed out |  |
| 503196     | 2                 | 2         | 3              | 5 | 2.20              | .087 | 3.20       | .126 | of the crimping area    |  |

After crimping, the conductor profile should measure the following.

|                    | Wire Size |                 |           | Pull Force |          |            |         |       |
|--------------------|-----------|-----------------|-----------|------------|----------|------------|---------|-------|
| Terminal Order No. | vvire     | Size            | Crimp     | Height     | Crimp Wi | dth (Ref.) | Minimum |       |
|                    | AWG       | mm <sup>2</sup> | mm        | ln.        | mm       | ln.        | N       | Lb.   |
| 503195             | 16        | 1.38            | 1.38-1.48 | .054058    | 2.20     | .087       | 127.0   | 28.55 |
| 503195             | 18        | 0.81            | 1.21-1.31 | .047051    | 2.20     | .087       | 88.2    | 19.83 |
| 503196             | 16        | 1.38            | 1.38-1.48 | .054058    | 2.20     | .087       | 127.0   | 28.55 |
| 303190             | 18        | 0.81            | 1.21-1.31 | .047051    | 2.20     | .087       | 88.2    | 19.83 |

|                    | Wire Size |                 | Insulation |        |                    |      |  |  |
|--------------------|-----------|-----------------|------------|--------|--------------------|------|--|--|
| Terminal Order No. | vvire     | Size            | Crimp      | Height | Crimp Width (Ref.) |      |  |  |
|                    | AWG       | mm <sup>2</sup> | mm         | ln.    | mm                 | ln.  |  |  |
| 503195             | 16        | 1.38            | 3.10       | .122   | 3.20               | .126 |  |  |
| 505195             | 18        | 0.81            | 3.00       | .118   | 3.20               | .126 |  |  |
| 503196             | 16        | 1.38            | 3.10       | .122   | 3.20               | .126 |  |  |
| 303190             | 18        | 0.81            | 3.00       | .118   | 3.20               | .126 |  |  |

# \* Tool Qualification Notes:

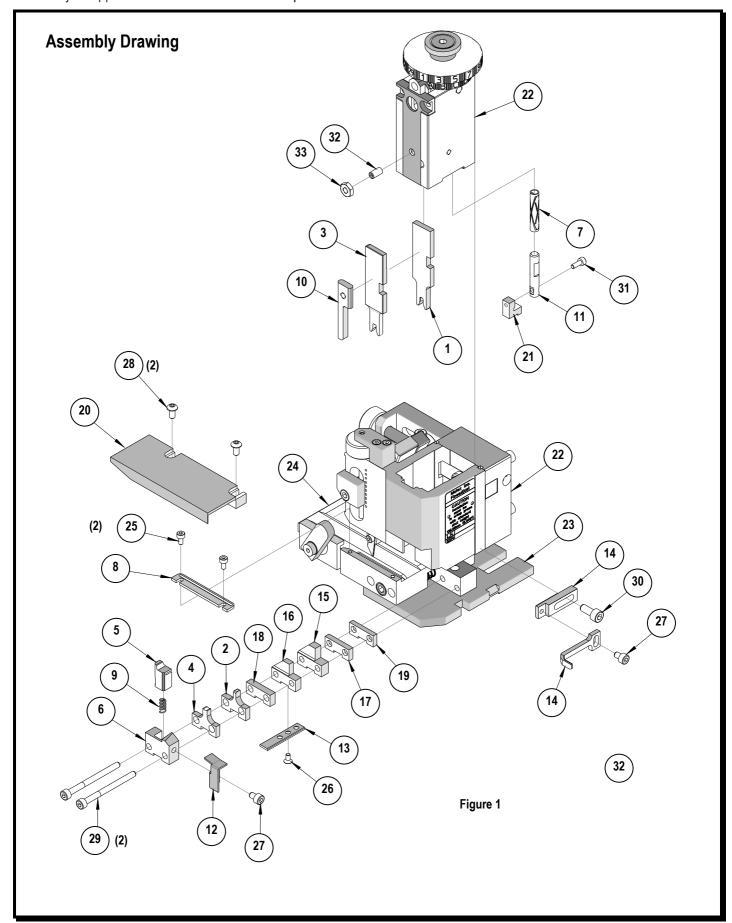
- 1. Pull Force should be measured with no influence from the insulation crimp.
- 2. The above specifications are guidelines to an optimum crimp.

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# **PARTS LIST**

| FineAdjust Applicator 63902-2400 |  |            |                                   |          |  |  |  |  |  |
|----------------------------------|--|------------|-----------------------------------|----------|--|--|--|--|--|
| Item                             | Order No Engineering No. Description   |            |                                   |          |  |  |  |  |  |
|                                  |  | Perish     | nable Tooling                     | Quantity |  |  |  |  |  |
|                                  | 63902-2470   | 63902-2470 | Tool Kit (All "Y" Items)          | REF      |  |  |  |  |  |
| 1                                | 63444-2215   | 63444-2215 | Conductor Punch                   | 1 Y      |  |  |  |  |  |
| 2                                | 63445-2247   | 63445-2247 | Conductor Anvil                   | 1 Y      |  |  |  |  |  |
| 3                                | 63446-3227   | 63446-3227 | Insulation Punch                  | 1 Y      |  |  |  |  |  |
| 4                                | 63445-3240   | 63445-3240 | Insulation Anvil                  | 1 Y      |  |  |  |  |  |
| 5                                | 63443-0002   | 63443-0002 | Front Cut-Off Plunger             | 1 Y      |  |  |  |  |  |
| 6                                | 63443-0012   | 63443-0012 | Front Plunger Retainer            | 1 Y      |  |  |  |  |  |
|                                  |  | Other      | Components                        |          |  |  |  |  |  |
| 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                               | 11-40-4039   | 8302-5     | Plunger Striker                   | 1        |  |  |  |  |  |
| 11                               | 63443-0093   | 63443-0093 | Shank - Terminal Hold Down        | 1        |  |  |  |  |  |
| 12                               | 63443-0009   | 63443-0009 | Front Scrap Chute                 | 1        |  |  |  |  |  |
| 13                               | 63443-0024   | 63443-0024 | Key                               | 1        |  |  |  |  |  |
| 14                               | 63443-0090   | 63443-0090 | Wire Stop                         | 1        |  |  |  |  |  |
| 15                               | 63443-1727   | 63443-1727 | Height Spacer                     | 1        |  |  |  |  |  |
| 16                               | 63443-1743   | 63443-1743 | Height Spacer                     | 1        |  |  |  |  |  |
| 17                               | 63443-2204   | 63443-2204 | Coarse Spacer (3.50mm)            | 1        |  |  |  |  |  |
| 18                               | 63443-2205   | 63443-2205 | Coarse Spacer (5.0mm)             | 1        |  |  |  |  |  |
| 19                               | 63443-2310   | 63443-2310 | Fine Spacer (4.00mm)              | 1        |  |  |  |  |  |
| 20                               | 63443-6115   | 63443-6115 | Rear Cover                        | 1        |  |  |  |  |  |
| 21                               | 63443-7116   | 63443-7116 | Terminal Hold Down                | 1        |  |  |  |  |  |
|                                  | Frame  |            |                                   |          |  |  |  |  |  |
| 22                               | 63800-4901   | 63800-4901 | Тор                               | 1        |  |  |  |  |  |
| 23                               | 63801-3281   | 63801-3281 | Base                              | 1        |  |  |  |  |  |
| 24                               | 63801-4650   | 63801-4650 | Track                             | 1        |  |  |  |  |  |
|                                  |  | Н          | ardware                           |          |  |  |  |  |  |
| 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        | M4 by 6 Long SHCS                 | 2**      |  |  |  |  |  |
| 28                               | N/A  | N/A        | M4 by 12 Long BHCS                | 2**      |  |  |  |  |  |
| 29                               | N/A  | N/A        | M4 by 50 Long SHCS                | 2**      |  |  |  |  |  |
| 30                               | N/A  | N/A        | M5 by 12 Lg SHCS                  | 1**      |  |  |  |  |  |
| 31                               | N/A  | N/A        | M3 by 8 Long SHCS                 | 1**      |  |  |  |  |  |
| 32                               | N/A  | N/A        | #10-32 by 3/8"Long Flat Point SSS | 1**      |  |  |  |  |  |
| 33                               |  |            |                                   |          |  |  |  |  |  |
| ,                                | ** Available from an industrial supply company such as MSC (1-800-645-7270). |            |                                   |          |  |  |  |  |  |

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# **Optional Applicator Parts:**

The following parts are *not included* with this Applicator and may be purchased separately.

# 63443-0017 Cut-Off Plunger Retainer

#### For wire processing applications:

It is recommended for fully automatic, high speed operations, where the press and the applicator are mounted to a wire processing machine.

Applicator down time for scrap clean-up may be reduced.

This cut-off plunger retainer leaves the scrap terminal carrier intact.

Not recommended for bench operation, where a continuous scrap strip can tangle or build up inside of the safety guards resulting in jams or tooling damage.

# **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.

http://www.molex.com

CUT-OFF PLUNGER
RETAINER
CONTINUOUS
CARRIER STRIP

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