



## FineAdjust Applicator Applicator Tooling Specification Sheet Order No. 63900-1000



### 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

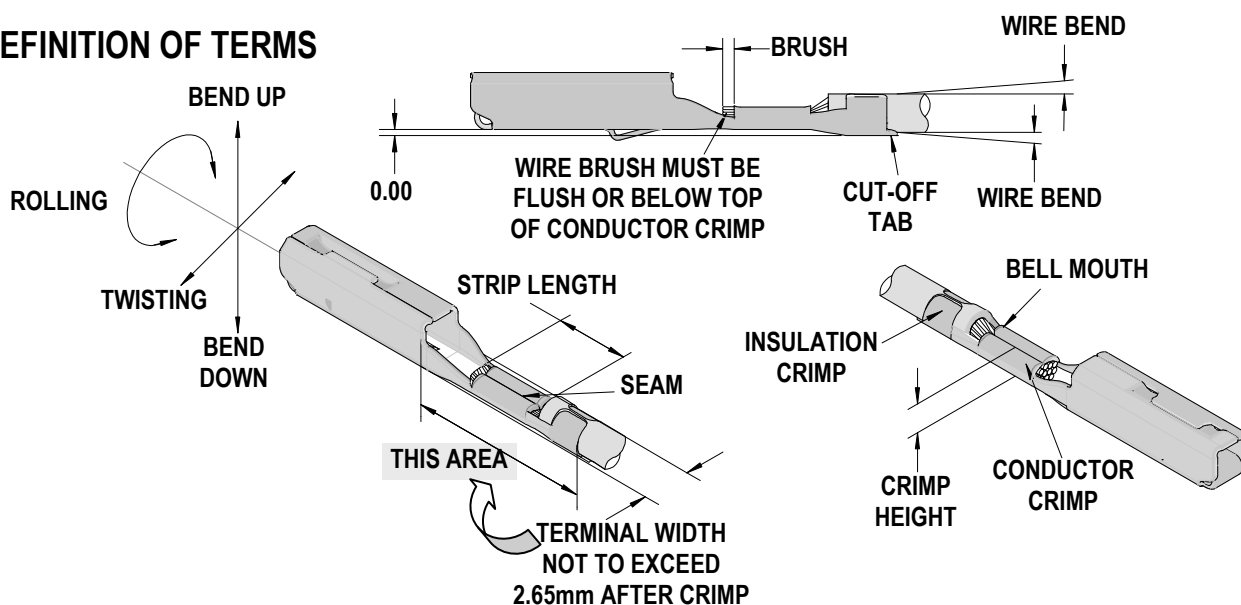
### SCOPE

Products: MX150™ Receptacle Terminals 0.50 metric and 22 AWG.

Terminal Series No.	Terminal Order No.		Wire Size		Insulation Diameter		Strip Length	
			AWG	mm <sup>2</sup>	mm	In.	mm	In.
33001	33001-3005	33001-3023	22	0.58	1.50-1.65	.059-.065	4.70-5.60	.185-.220
	33001-5003	33001-5023	Metric Only	0.50	1.40-1.60	.055-.063	4.70-5.60	.185-.220
33012	33012-3003	33012-3023	22	0.58	1.50-1.65	.059-.065	4.70-5.60	.185-.220
			Metric Only	0.50	1.40-1.60	.055-.063	4.70-5.60	.185-.220
34750	34750-1003		22	0.58	1.50-1.65	.059-.065	4.70-5.60	.185-.220
			Metric Only	0.50	1.40-1.60	.055-.063	4.70-5.60	.185-.220

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.
33001	0.30-0.70	.012-.028	0.50	.020	0.15-0.40	.006-.016
33012	0.30-0.70	.012-.028	0.50	.020	0.15-0.40	.006-.016
34750	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 (Ref)				Seam Seam shall not be open and no wire allowed out of the crimping area
					Conductor		Insulation		
	Degree		Degree		mm	In	mm	In	
33001	3	3	3	3	1.56	.061	1.86	.073	
33012	3	3	3	3	1.56	.061	1.86	.073	
34750	3	3	3	3	1.56	.061	1.86	.073	

After crimping, the crimp profiles should measure the following:

Terminal Series No.	Wire Size		Conductor				Insulation				Pull Force Minimum	
			Crimp Height		Crimp Width		Crimp Height		Crimp Width (Ref.)			
	AWG	mm <sup>2</sup>	mm	In.	mm	In.	mm	In.	mm	In.	N	Lb.
33001	22	0.36	0.95-1.05	.037-.041	1.50-1.70	.059-.067	1.75-1.95	.069-.077	1.80-2.00	.071-.079	50	11.3
	Metric Only	0.50	1.05-1.15	.041-.045	1.50-1.70	.059-.067	1.70-1.90	.067-.075	1.80-2.00	.071-.079	75	16.9
33012	22	0.36	0.95-1.05	.037-.041	1.50-1.70	.059-.067	1.75-1.95	.069-.077	1.80-2.00	.071-.079	50	11.3
	Metric Only	0.50	1.05-1.15	.041-.045	1.50-1.70	.059-.067	1.70-1.90	.067-.075	1.80-2.00	.071-.079	75	16.9
34750	22	0.36	0.95-1.05	.037-.041	1.50-1.70	.059-.067	1.75-1.95	.069-.077	1.80-2.00	.071-.079	50	11.3
	Metric Only	0.50	1.05-1.15	.041-.045	1.50-1.70	.059-.067	1.70-1.90	.067-.075	1.80-2.00	.071-.079	75	16.9

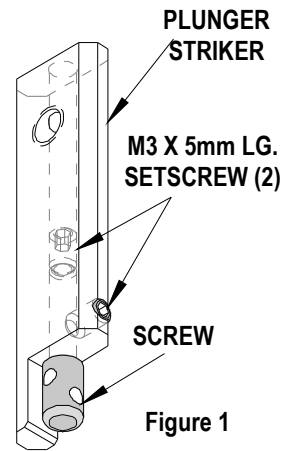
■ Tool Qualification Notes:

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 Item11 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 illustration page 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 Item13 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 63900-1000</b>				
<b>Item</b>	<b>Order No</b>	<b>Engineering No.</b>	<b>Description</b>	<b>Quantity</b>
<b>Perishable Tooling</b>				
	63900-1070	63900-1070	Tool Kit (All "Y" Items)	REF
1	63457-0057	63457-0057	Conductor Punch	1 Y
2	63455-0079	63455-0079	Conductor Anvil	1 Y
3	63454-0050	63454-0050	Insulation Punch	1 Y
4	63456-0064	63456-0064	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	63443-1709	63443-1709	17.90mm Height Spacer	1
16	63443-2205	63443-2205	5.00mm Coarse Spacer	1
17	63443-2208	63443-2208	8.00mm Coarse Spacer	1
18	63443-2306	63443-2306	3.30mm Fine Spacer	1
19	63443-6115	63443-6115	Rear Cover	1
20	63443-7101	63443-7101	Terminal Hold Down	1
21	63700-0539	63700-0539	Cut-off Plunger Spring	1
22	63868-2008	63868-2008	★ Checking Aid	REF
<b>Frame</b>				
23	63800-4901	63800-4901	Top	1
24	63801-3281	63801-3281	Base	1
25	63801-4650	63801-4650	Track	1
25	63459-0001	63459-0001	Terminal Track	1
<b>Hardware</b>				
26	N/A	N/A	M3 by 5 Long SHSS-Brass Tip	2**
27	N/A	N/A	M3 by 6 Long SHCS	2**
28	N/A	N/A	M3 by 6 Long FHCS	1**
29	N/A	N/A	M3 by 8 Long SHCS	1**
30	N/A	N/A	M4 by 6 Long SHCS	2**
31	N/A	N/A	M4 by 12 Long BHCS	2**
32	N/A	N/A	M4 by 50 Long SHCS	2**
33	N/A	N/A	M5 by 12 Long SHCS	1**
34	N/A	N/A	#10-32 by 3/8" Long Flat Point SSS	1**
35	N/A	N/A	#10-32 Hex Jam Nut	1**

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

★ The Crimped Terminal Checking Aid 63868-2008 to be ordered separately if required.  
 (This item is not included with the Applicator and is shown for Reference purpose only)

# Assembly Drawing

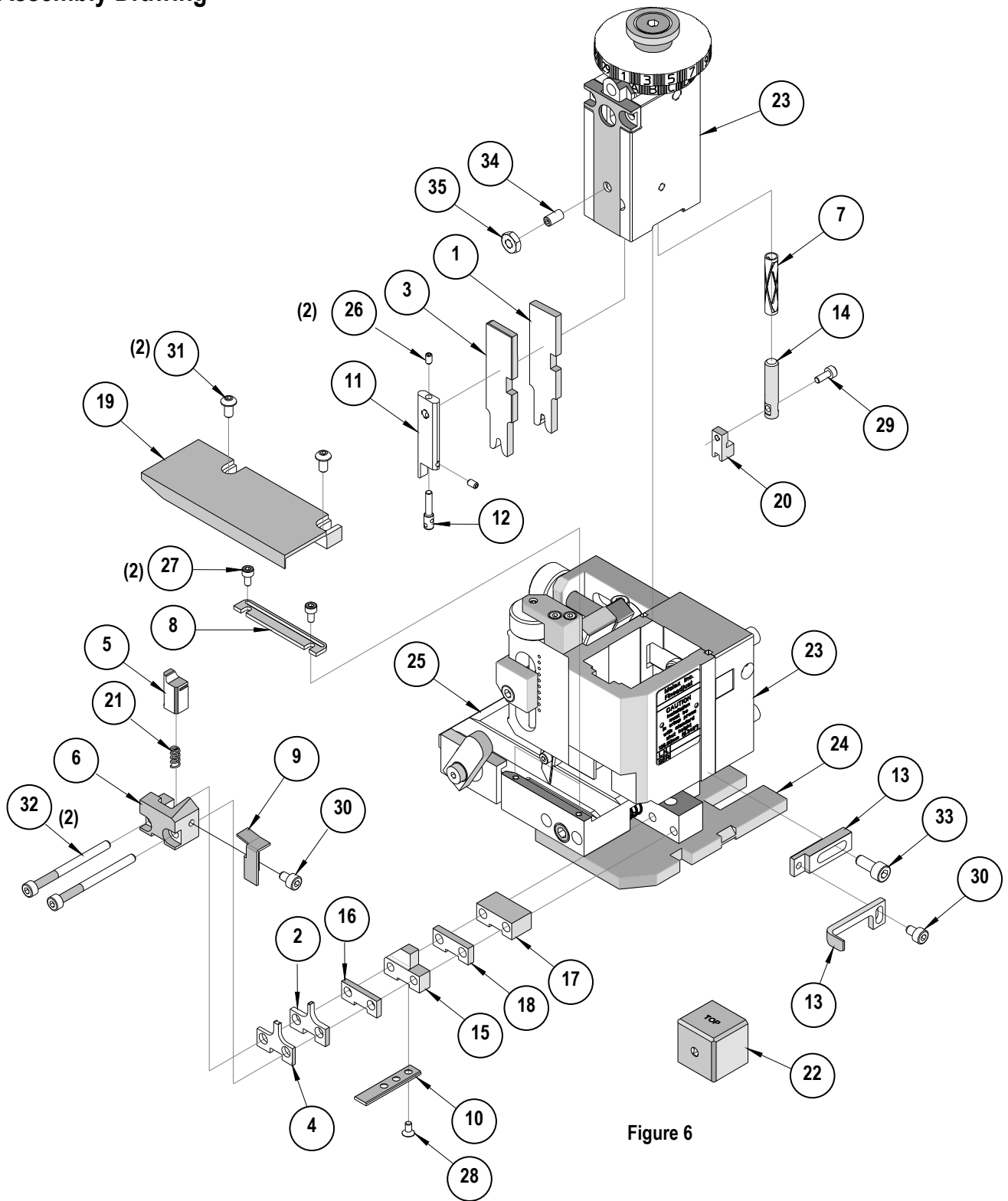


Figure 6

## 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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