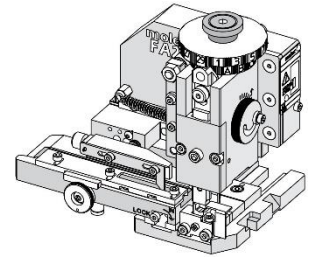**Order Number 63808-8600**

molex®

Application Tooling Specification

FEATURES

- 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 0.025mm (.001") 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
- Fine adjustment of the bend is achieved using the bend adjust dial

SCOPE

Products: ML-XT Male and Female Terminals, 22 AWG, 0.35mm^2 wire.

| Terminal Series No.	Terminal Order No.	Wire		Insulation Diameter				Strip Length	
				IPC/WHMA-A-620 (1)		Terminal (2)			
		Wire Type	Size	mm	In.	mm	In.	mm	In.
84524	84524-0032	UL1007	22 AWG	1.30-1.60	.051-.063	1.60	.063	3.81-5.11	.150-.201
	84524-0034	FLR2X-A	0.35mm^2	1.30-1.60	.051-.063	1.30	.051	3.81-5.11	.150-.201
84525	84525-0063	UL1007	22 AWG	1.30-1.60	.051-.063	1.60	.063	3.81-5.11	.150-.201
	84525-0067	FLR2X-A	0.35mm^2	1.30-1.60	.051-.063	1.30	.051	3.81-5.11	.150-.201
(1) To achieve optimum IPC/WHMA-A-620 insulation crimps, use this insulation OD range. **(2)** Overall insulation OD specification for terminal.									

CAUTION: Lubrication must be used when crimping ML-XT terminals to help prevent anvil flash. Use 63801-7240 oiler or equivalent.

Note

- This applicator is designed for use with 22 AWG UL2517 wire.
- This applicator was tested with 22 AWG UL1007 and 0.35mm^2 FLR2X-A wires, which are English and metric equivalents to 22 AWG UL2517 wire.

DEFINITION OF TERMS

SECTION K-K

SECTION L-L
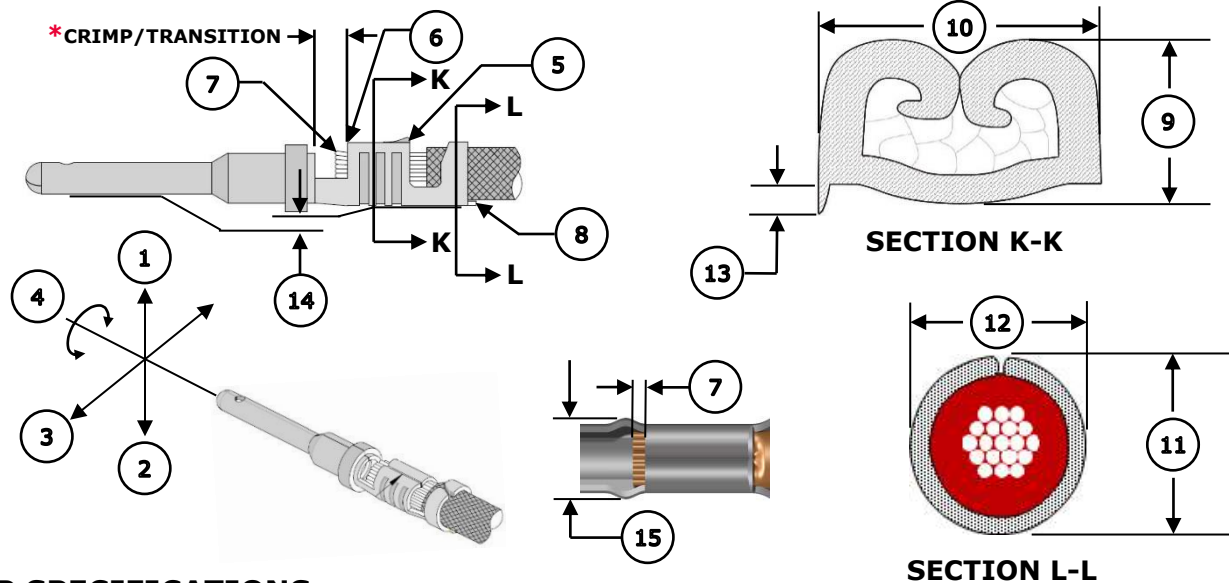
CRIMP SPECIFICATIONS

The following crimp specifications are based on document 845241000 PS Rev. A:

Feature	Requirement					
1. Bend Up	3° Max					
2. Bend Down	3° Max					
3. Twist	4° Max					
4. Roll	8° Max					
5. Bell Mouth Rear	0.30-0.60mm (.012-.024")					
6. Bell Mouth Front	0.00-0.40mm (.000-.016")					
7. Conductor Brush	0.30-0.80mm (.012-.031")					
8. Cut-Off Tab	0.20mm (.008") Max					
Conductor Crimp	**Wire Type**	**Wire Size**	**9. Crimp Height**		**10. Crimp Width**	
	UL1007	22 AWG	1.00-1.10mm	.039-.043 in.	1.30-1.50mm	.051-.059 in.
	FLR2X-A	0.35mm²	1.00-1.10mm	.039-.043 in.	1.30-1.50mm	.051-.059 in.
Insulation Crimp	**Wire Type**	**Wire Size**	**11. Crimp Height**		**12. Crimp Width**	
	UL1007	22 AWG	2.00-2.15mm	.079-.085 in.	1.90-2.00mm	.075-.079 in.
	FLR2X-A	0.35mm²	1.70-1.85mm	.067-.073 in.	1.85-1.95mm	.073-.077 in.
Pull Force	**Wire Type**	**Wire Size**	**Minimum Force**			
	UL1007	22 AWG	50 N	11.3 lb.	To be measured with no influence from the insulation crimp.	
	FLR2X-A	0.35mm²	50 N	11.3 lb.		
13. Conductor Anvil Flash	0.10mm (.004") Max					
14. Insulation Grip Step	0.19-0.35mm (.007-.014")					
15. Crimp Bulge	1.50mm (.059") Max within crimp/transition area					

NOTES

*Crimp/Transition Notes

In some cases, slight nicking may be present at the transition area. This does not affect product performance. See image below:

NICKING

CONDUCTOR CRIMP

TRANSITION AREA

INSULATION CRIMP
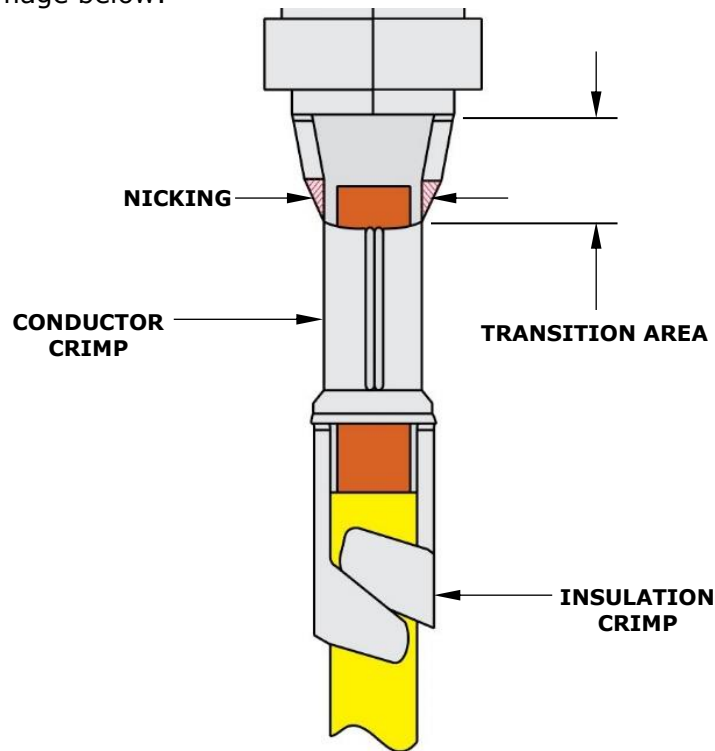
General Notes

1. Molex recommends that an extra perishable tooling kit be maintained at your facility.
2. Verify tooling alignment by hand 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 FA2 manual (TM-638080200).
6. Molex recommends crimping standard copper wire only.
7. Lubrication must be used when crimping gold and select gold terminals to prevent terminals from sticking in the conductor punch. Use 63801-7240 oiler or equivalent.

WARNINGS

CAUTION: This applicator must be installed in a press with a standard shut height of 135.80mm (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 tooling crimp specifications are valid only when used with Molex terminals and tooling manufactured by Molex and sold by Molex or authorized distributors ("Molex Tooling"). When using tooling other than Molex Tooling with Molex-specific connector systems listed in our ATS documents, the Molex Tooling qualification does not apply, and the responsibility for full qualification of the connector system is that of the customer. Molex accepts no liability for connector performance or tooling support where tooling other than Molex Tooling is used or where Molex Tooling is modified.

PARTS LIST

Applicator 63808-8600				
Item	**Order No.**	**Engineering No.**	**Description**	**Quantity**
Perishable Tooling				
	63808-8670	63808-8670	Tool Kit (All "Y" Items)	Ref
1	200220-1900	200220-1900	Insulation Punch	1 Y
2	200216-1402	200216-1402	Conductor Punch	1 Y
3	200221-1900	200221-1900	Insulation Anvil	1 Y
4	200217-1402	200217-1402	Conductor Anvil	1 Y
5	63443-0148	63443-0148	Cut-Off Plunger	1 Y
6	63443-0119	63443-0119	Cutting Insert	1 Y
Non-Perishable Components				
7	63443-0126	63443-0126	Front Plunger Retainer	1
8	63700-0539	63700-0539	Compression Spring	1
9	63443-0117	63443-0117	Scrap Chute	1
10	200213-7507	200213-7507	Anvil Mount	1
11	63443-0090	63443-0090	Wire Stop Assembly	1
12	63443-2805	63443-2805	Front Plunger Striker	1
13	63443-2913	63443-2913	Wire Hold Down Plunger	1
14	63600-0021	63600-0021	Compression Spring	1
15	63600-5776	63600-5776	Nose Hold Down	1
16	63600-5775	63600-5775	Nose Hold Down Shank	1
17	63443-7403	63443-7403	Hold Down Block	1
18	63443-4714	63443-4714	Terminal Guide	1
19	63808-0229	63808-0229	Bend Adjust Dial	1
20	63443-4407	63443-4407	Feed Cam	1
21	63600-2673	63600-2673	Mini Rod	1
22	63443-0149	63443-0149	Wire Hold Down Blade	1
23	11-18-4456	60769A109	Hold Down Spring	1
Frame				
24	63808-0200	63808-0200	Applicator Core	1
25	63808-0197	63808-0197	Mechanical Feed Assembly	1
26	63808-0191	63808-0191	Track Assembly	1
Hardware				
27	—	—	M2.5 x 4 SHCS	2*
28	—	—	M3 Flat Washer Hard	1*
29	—	—	M3 Hex Nut	1*
30	—	—	M3 Inner Tooth Lock Washer	1*
31	—	—	M3 x 6 BHCS	2*
32	—	—	M3 x 12 SHCS	4*
33	—	—	M4 x 5 SSS	1*
34	—	—	M4 x 6 SHCS	1*
35	—	—	M4 x 8 SHCS	2*
36	—	—	M4 x 35 SHCS	2*
37	—	—	M5 x 12 SHCS	1*
38	—	—	#10-32UNF x .25" BHCS	1*

*Fastener parts can be purchased through most industrial suppliers by using the description in the table above.

ASSEMBLY DRAWING

Figure 1

FACTORY SETTINGS

Feed Pawl Assembly

The FA2 applicator number 63808-8600 ships with the following factory settings. See Figure 2:

- The feed pawl shaft and M3 screw that holds the feed pawl spring are in position 2.
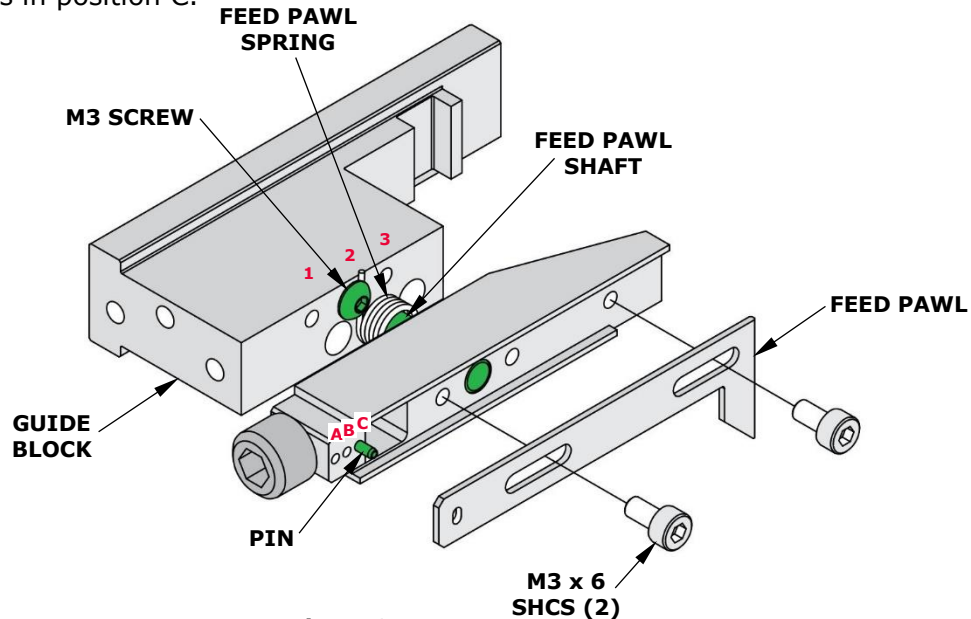- The pin is in position C.

Figure 2

Note: Each applicator is configured and tested by Molex prior to shipping, and the above settings were used to produce the included sample crimps.

Third Dial/Ram Assembly

Indicates item number on the Parts List and Assembly Drawing
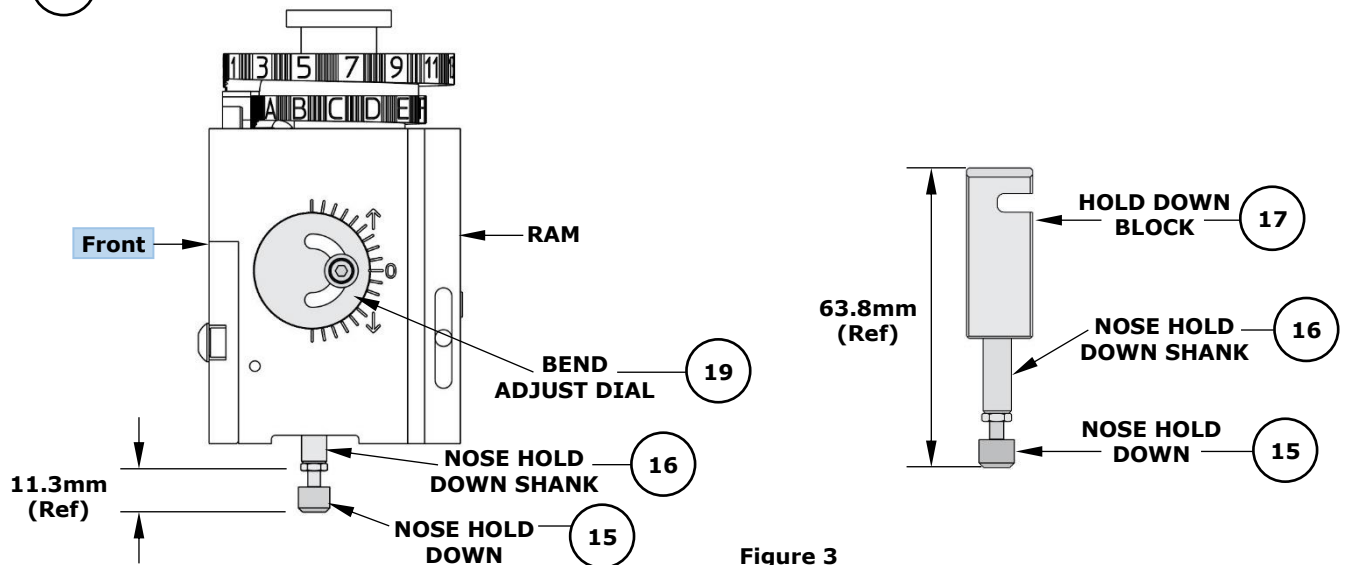
Figure 3

Note: The above dimensions were measured during setup and are included as a reference only. Additional adjustments may be required before crimping for production.

Mounting Datum Location

This applicator was assembled and tested by Molex with the mounting datum in the location shown in Figure 4. Do not remove the mounting datum.
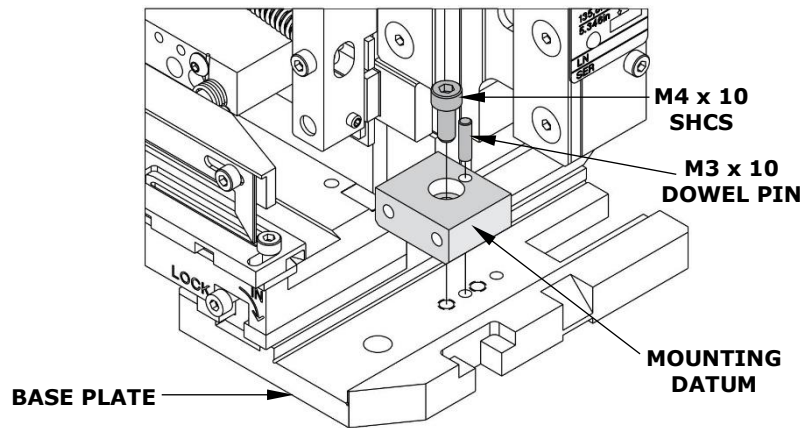

Figure 4

Application Tooling Support

Phone: (402) 458-TOOL (8665)
E-Mail: applicationtooling@molex.com
Website: www.molex.com/applicationtooling