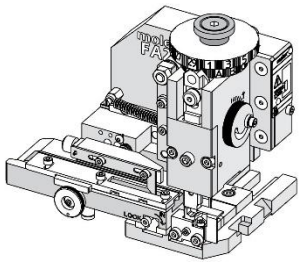
Order Number
215786-0100

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
- Fine adjustment of the bend is achieved using the bend adjust dial
- 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
- This applicator was designed for use in a wire processor only

SCOPE

Products: MX150 Receptacle Crimp Terminals, 22 AWG and 0.50mm^2 Wire.

Terminal Series No.	Terminal Order No.		Wire Size		Insulation Diameter		Strip Length (Ref)	
			AWG	mm^2	mm	In.	mm	In.
33001	33001-3005 33001-5003	33001-3023 33001-5023	22	N/A	1.50-1.65	.059-.065	4.70-5.60	.185-.220
33012	33012-3003	33012-3023						
34750	34750-1003							
33001	33001-3005 33001-5003	33001-3023 33001-5023	N/A	0.50	1.40-1.60	.055-.063	4.70-5.60	.185-.220
33012	33012-3003	33012-3023						
34750	34750-1003							

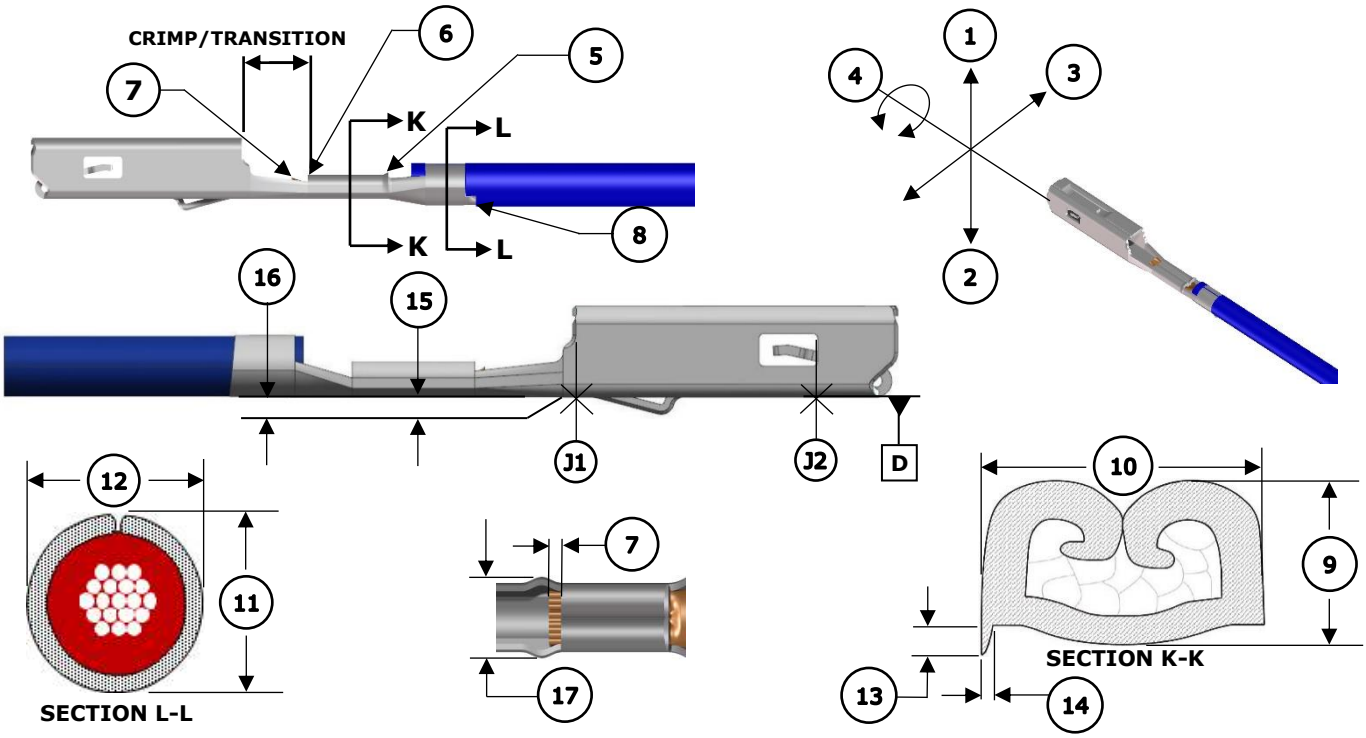
Terminals were validated per USCAR-21 using the following wire specifications:

- M1L-123A (TXL)
- M1L-126A1(metric-TXL)

Customers are required to complete validation testing if tooling is purchased outside of Molex or if wire specifications are different than above.

CAUTION: This applicator was designed for use in a wire processor only.

DEFINITION OF TERMS



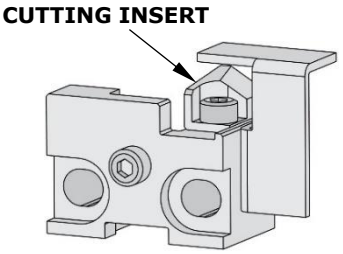
CRIMP SPECIFICATIONS

The following crimp specifications are based on document AS-33012-002 Rev. E2:

Feature	Requirement				
1. Bend Up	3° Max				
2. Bend Down	3° Max				
3. Twist	3° Max				
4. Roll	3° Max				
5. Bell Mouth Rear	0.30-0.70mm (.012-.028")				
6. Bell Mouth Front	Not Applicable				
7. Conductor Brush	0.40mm (.016") Max. Not to extend above conduct crimp/transition height				
8. Cut-Off Tab	0.50mm (.020") Max. No burrs				
Conductor Crimp	**Wire Size**	**9. Crimp Height**		**10. Crimp Width**	
	22 AWG	0.95-1.05mm	.038-.041 in.	1.50-1.70mm	.059-.067 in.
	0.50mm²	1.05-1.15mm	0.41-0.45 in.		
Insulation Crimp	**Wire Size**	**11. Crimp Height**		**12. Crimp Width**	
	22 AWG	1.75-1.95mm	.069-.077 in.	1.80-2.00mm	.071-.079 in.
	0.50mm²				
Pull Force	**Wire Size**	**Minimum Force**			
	22 AWG	50 N	11.3 lb.	To be measured with no influence from the insulation crimp.	
	0.50mm²	75 N	16.9 lb.		
13. Conductor Anvil Flash	Not to extend below lowest point of conductor grip				
14. Conductor Anvil Flash Width	0.10mm (.004") Max				
15. Conductor Grip Step	0.00-0.10mm (.000-.004") below datum D, 0.00-0.10 (.000-.004") above datum D				
16. Insulation Grip Step	0.00-0.10mm (.000-.004") below datum D, 0.00-0.10 (.000-.004") above datum D				
17. Crimp Bulge	2.65mm (.104") Max within crimp/transition area				

NOTES

Applicator Notes



- This applicator is for automatic wire processor use only.
- This applicator does not include a cutting insert.
- Installing a cutting insert will cause jamming in this applicator.

Specification Notes

- This applicator should only be run in a properly set up wire processor to consistently achieve the brush length

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 stranded copper wire only.

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

FA2 Applicator 215786-0100				
Item	**Order No.**	**Engineering No.**	**Description**	**Quantity**
Perishable Tooling				
	215786-0170	215786-0170	Tool Kit (All "Y" Items)	Ref
1	200220-1802	200220-1802	Insulation Punch	1 Y
2	200216-1501	200216-1501	Conductor Punch	1 Y
3	200221-1801	200221-1801	Insulation Anvil	1 Y
4	200217-1600	200217-1600	Conductor Anvil	1 Y
5	63443-0034	63443-0034	Cut-Off Plunger	1 Y
Non-Perishable Components				
6	63443-0128	63443-0128	Front Plunger Retainer	1
7	63700-0539	63700-0539	Cut-Off Plunger Spring	1
8	63443-0117	63443-0117	Front Scrap Chute	1
9	200213-7518	200213-7518	Anvil Mount	1
10	63443-0090	63443-0090	Wire Stop Assembly	1
11	63443-2807	63443-2807	Front Plunger Striker	1
12	63443-2915	63443-2915	Wire Hold Down Plunger	1
13	63600-5776	63600-5776	Nose Hold Down	1
14	63600-5775	63600-5775	Nose Hold Down Shank	1
15	63443-4702	63443-4702	Terminal Guide	1
16	63600-0021	63600-0021	Compression Spring	1
17	63808-0220	63808-0220	Hold Down Block	1
18	63808-0229	63808-0229	Bend Adjust Dial	1
19	63808-0297	63808-0297	Feed Cam	1
Frame				
20	63808-0200	63808-0200	Applicator Core	1
21	63808-0197	63808-0197	Mechanical Feed Assembly	1
22	63808-0190	63808-0190	Track Assembly	1
Hardware				
23	—	—	M2.5 x 4 SHCS	1*
24	—	—	M3 Flat Washer Hard	1*
25	—	—	M3 Hex Nut	1*
26	—	—	M3 Inner Tooth Lock Washer	1*
27	—	—	M3 x 6 BHCS	2*
28	—	—	M3 x 12 SHCS	4*
29	—	—	M4 x 5 SSS	1*
30	—	—	M4 x 6 SHCS	1*
31	—	—	M4 X 8 SHCS	2*
32	—	—	M4 x 40 SHCS	2*
33	—	—	M5 x 12 SHCS	1*
34	—	—	M5 Hex Jam Nut	1*
35	—	—	M5 x 12 Long Cup Point SSS	1*
*Fastener parts can be purchased through most industrial suppliers by using the description in the table above.				

ASSEMBLY DRAWING

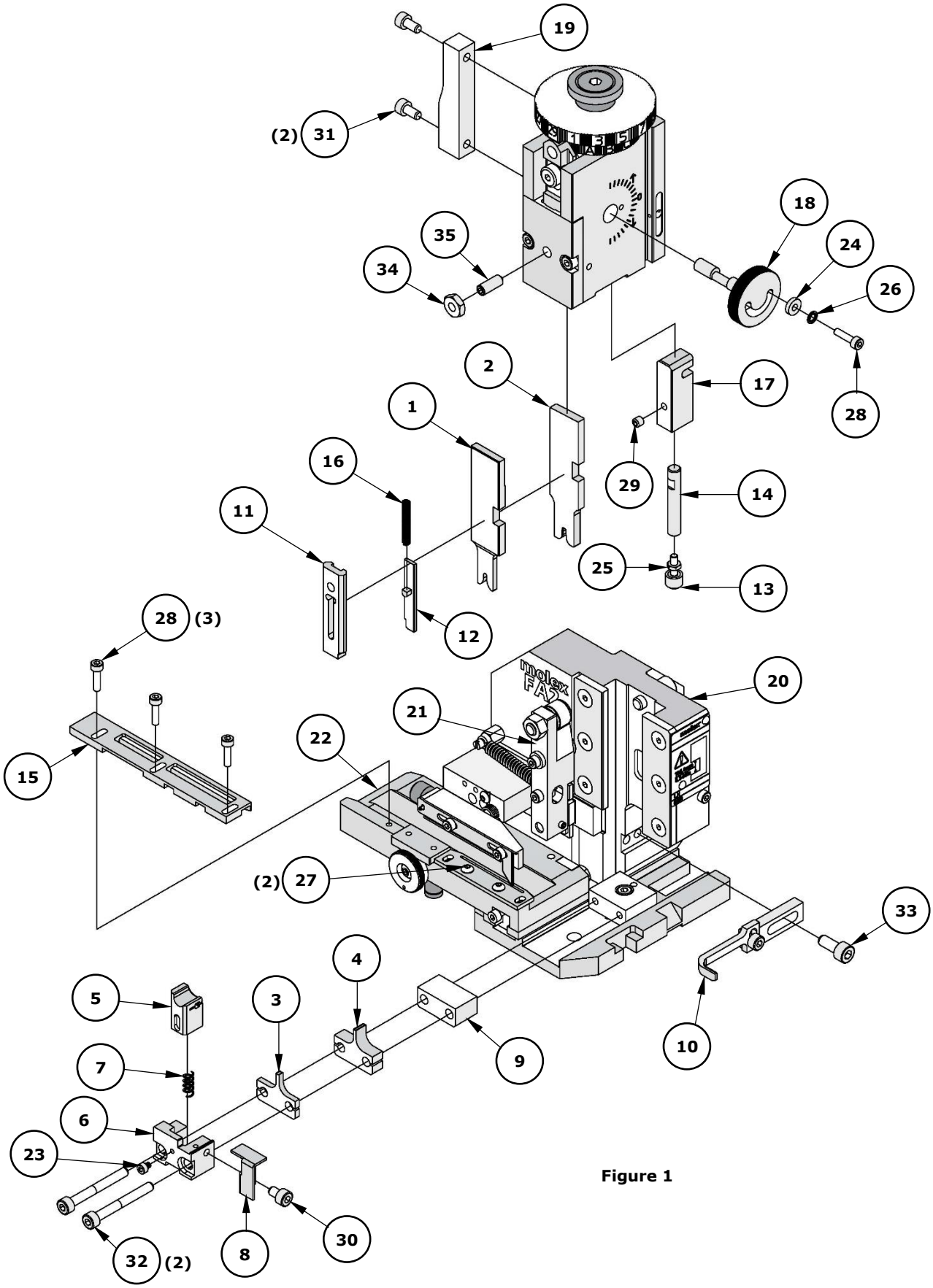


Figure 1

FACTORY SETTINGS

Feed Pawl Assembly

The FA2 applicator number 215786-0100 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 B.

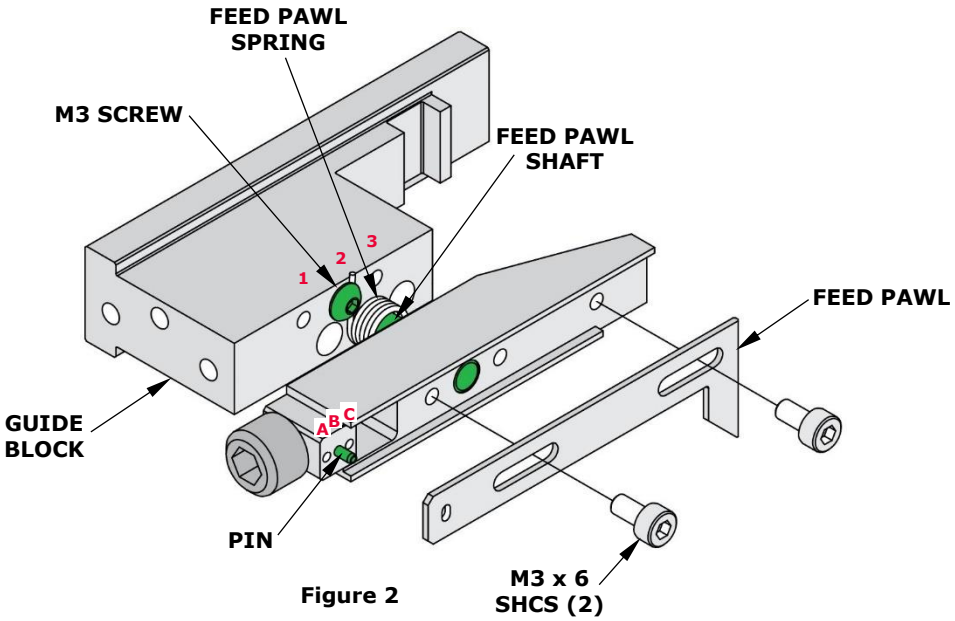


Figure 2

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

(17) Indicates item number on the Parts List and Assembly Drawing

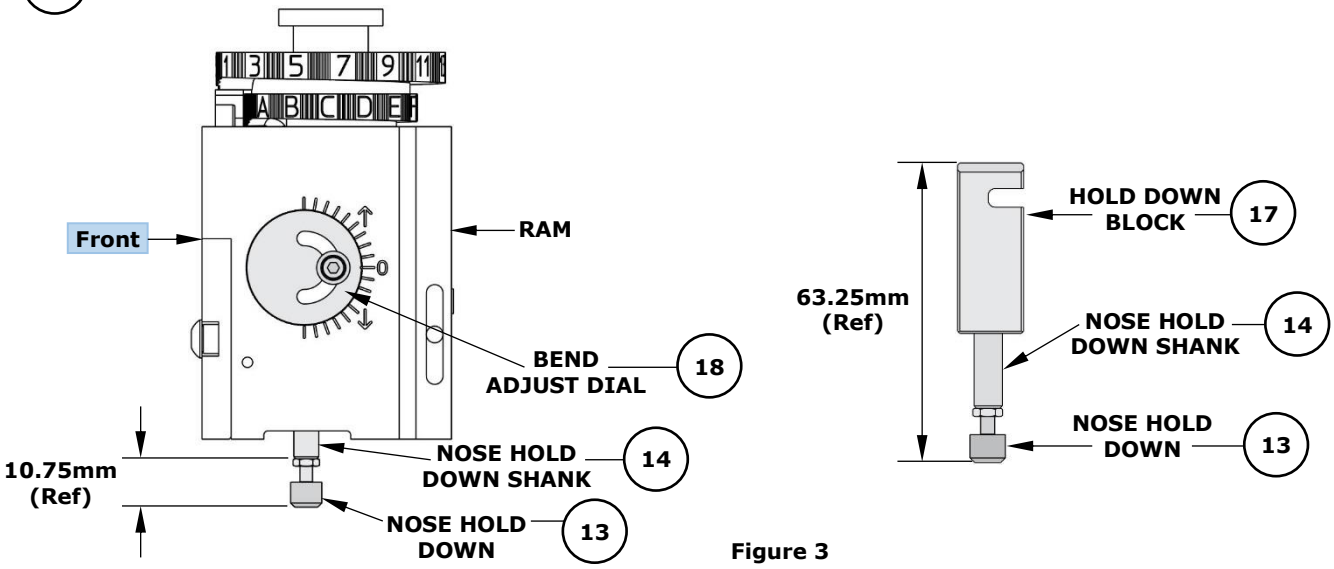


Figure 3

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.

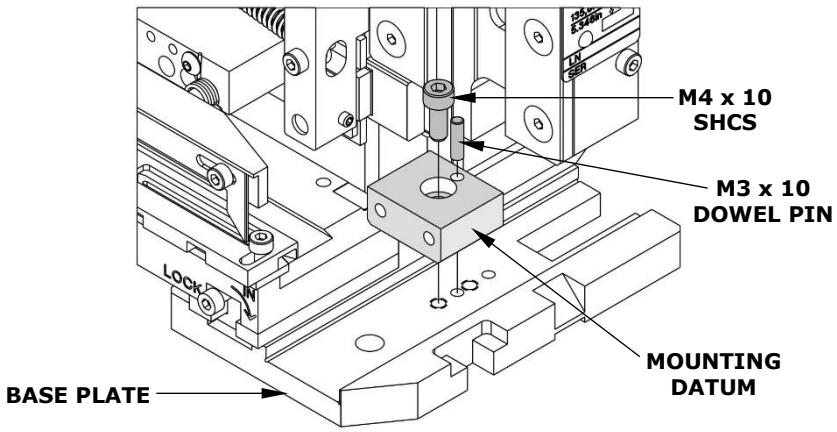


Figure 4

Application Tooling Support

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