molex®
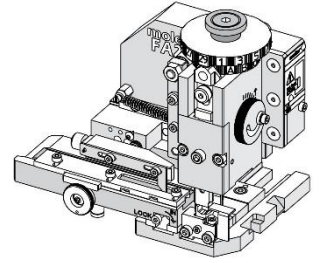
**Order Number
63808-8100**

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

SCOPE

Products: MX150 Receptacle Mat Seal Terminals, 14 AWG, 1.25mm^2 and 2.00mm^2 Wire.

Terminal Series No.	Terminal Order No.		Wire Type and Size		Insulation Diameter		Strip Length (Ref.)	
			Type	Wire Size	mm	In.	mm	In.
33001	33001-3003 33001-5001	33001-3021 33001-5021	AVSS	2.00mm^2	2.10-2.70	.083-.106	4.70-5.60	.185-.220
			TXL	14 AWG				
			AVS	1.25mm^2				
33012	33012-3001	33012-3021	AVSS	2.00mm^2	2.10-2.70	.083-.106	4.70-5.60	.185-.220
			TXL	14 AWG				
			AVS	1.25mm^2				
34075	34750-1001		AVSS	2.00mm^2	2.10-2.70	.083-.106	4.70-5.60	.185-.220
			TXL	14 AWG				
			AVS	1.25mm^2				

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

DEFINITION OF TERMS
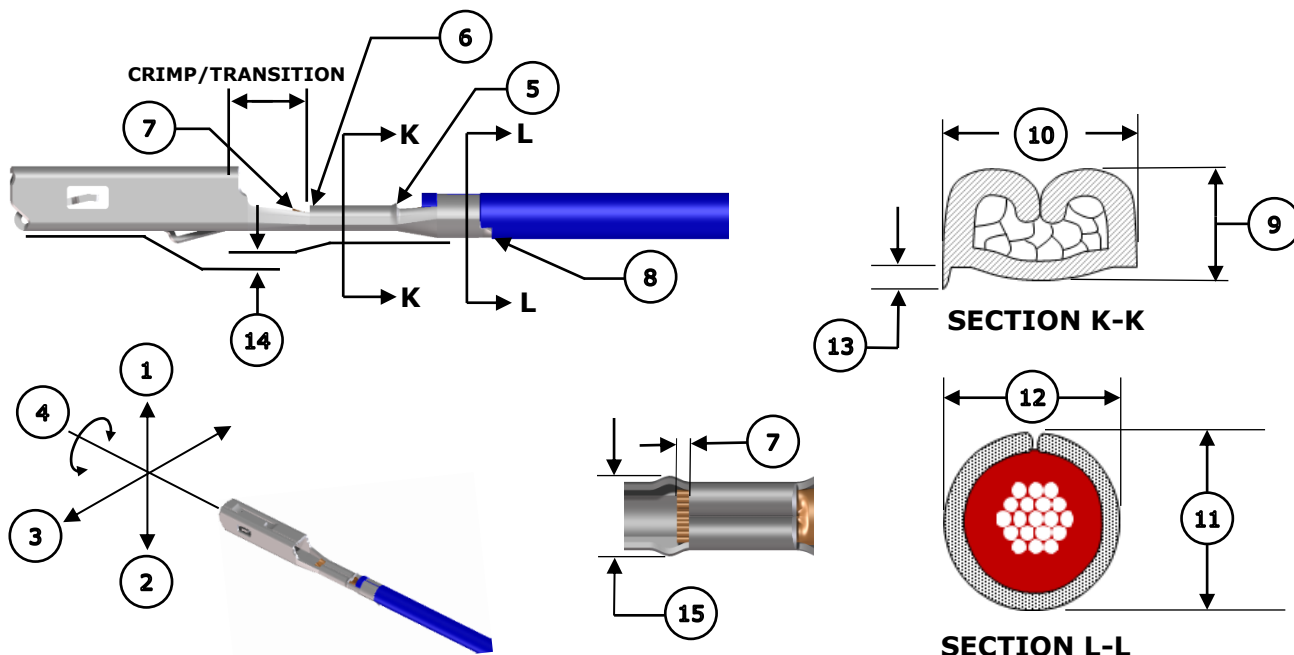
CRIMP SPECIFICATIONS

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				
8. Cut-Off Tab	0.50mm (.020") Max				
Conductor Crimp	Wire Type	Wire Size	**9. Crimp Height**		**10. Crimp Width**	
	AVSS	2.00mm²	1.55-1.65mm	.061-.065 in.	2.35-2.55mm	.093-.100 in.
	TXL	14 AWG	1.60-1.70mm	.063-.067 in.	2.35-2.55mm	.093-.100 in.
	AVS	1.25mm²	1.30-1.40mm	.051-.055 in.	2.35-2.55mm	.093-.100 in.
Insulation Crimp	Wire Type	Wire Size	**11. Crimp Height**		**12. Crimp Width**	
	AVSS	2.00mm²	2.80-3.00mm	.110-.118 in.	2.65-2.75mm	.104-.108 in.
	TXL	14 AWG	2.90-3.00mm	.114-.118 in.	2.65-2.75mm	.104-.108 in.
	AVS	1.25mm²	2.90-3.00mm	.114-.118 in.	2.65-2.75mm	.104-.108 in.
Pull Force	Wire Type	Wire Size	**Minimum Force**			
	AVSS	2.00mm²	180 N	40.5 lb.	To be measured with no influence from the insulation crimp.	
	TXL	14 AWG	180 N	40.5 lb.		
	AVS	1.25mm²	176.5 N	39.7 lb.		
13. Conductor Anvil Flash	0.10mm (.004") Max				
14. Insulation Grip Step	0.20-0.40mm (.008-.016")				
15. Crimp Bulge	2.65mm (.104") Max within crimp/transition area				

NOTES

Applicator Notes

CUTTING INSERT

- 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.
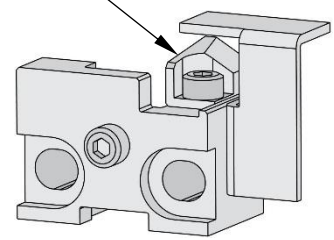
Specification Notes

- It is very important that the brush length is consistently within specification for this sealed connector system to work properly.
- 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.
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

| Item	Order No.	Engineering No.	Description	Quantity
Applicator 63808-8100				
Perishable Tooling				
	63808-8170	63808-8170	Tool Kit (All "Y" Items)	Ref
1	63454-0166	63454-0166	Insulation Punch	1 Y
2	63457-0116	63457-0116	Conductor Punch	1 Y
3	63456-0119	63456-0119	Insulation Anvil	1 Y
4	63455-0143	63455-0143	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	63443-7533	63443-7533	Anvil Mount	1
10	63443-0090	63443-0090	Wire Stop Assembly	1
11	63443-3662	63443-3662	Front Plunger Striker	1
12	63443-3702	63443-3702	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	63443-4711	63443-4711	Terminal Guide	1
16	63808-0220	63808-0220	Hold Down Block	1
17	63808-0229	63808-0229	Bend Adjust Dial	1
18	63443-4412	63443-4412	Feed Cam	1
Frame				
19	63808-0200	63808-0200	Applicator Core	1
20	63808-0197	63808-0197	Mechanical Feed Assembly	1
21	63808-0190	63808-0190	Track Assembly	1
Hardware				
22	—	—	M2.5 x 4 SHCS	1*
23	—	—	M3 Flat Washer Hard	1*
24	—	—	M3 Hex Nut	1*
25	—	—	M3 Inner Tooth Lock Washer	1*
26	—	—	M3 x 3 SSS	2*
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 50 SHCS	2*
33	—	—	M5 x 12 SHCS	1*
34	—	—	#10-32UNF x .2" BHCS	1*
*Fastener parts can be purchased through most industrial suppliers by using the description in the table above.				

ASSEMBLY DRAWING
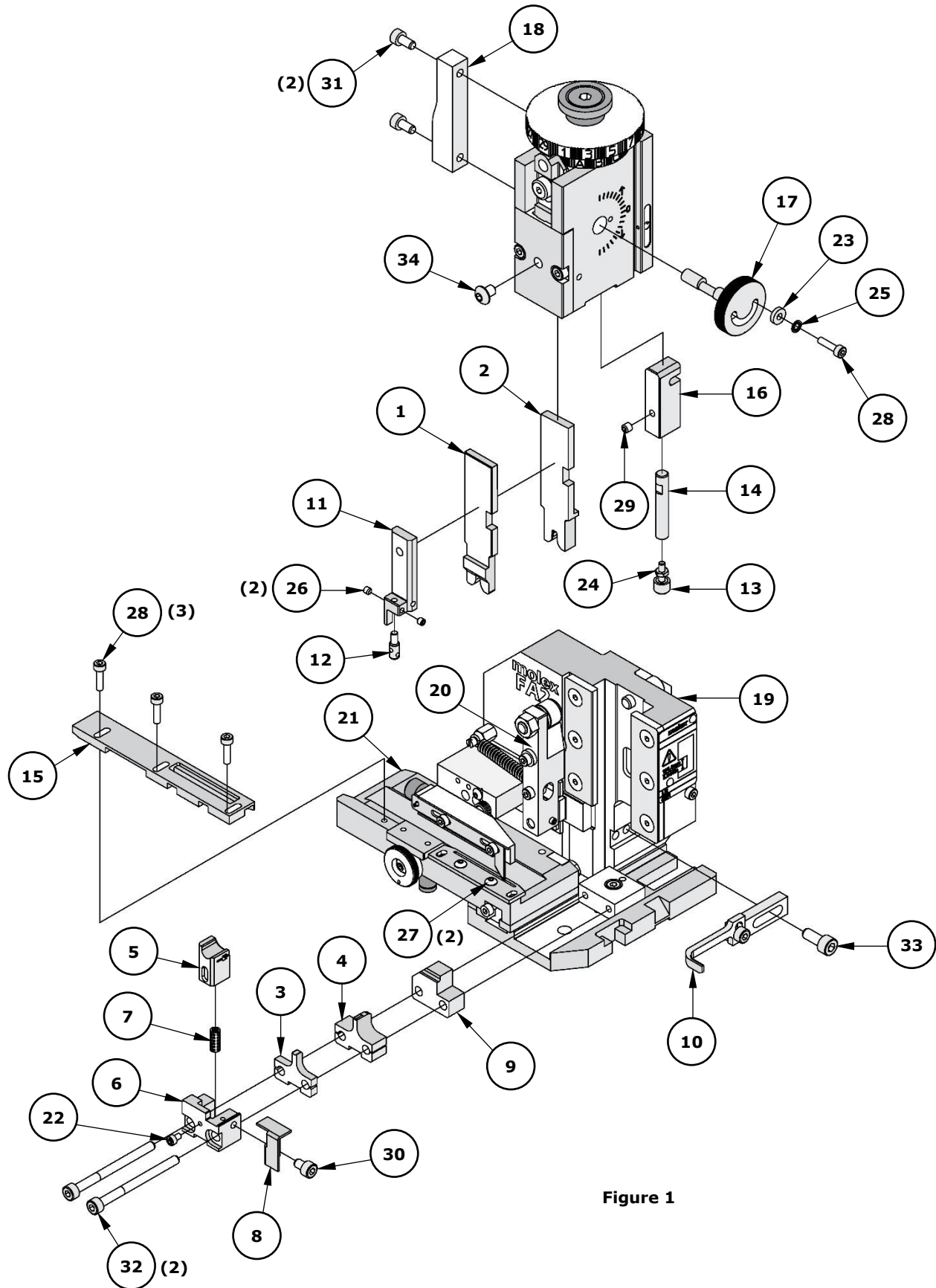
Figure 1

FACTORY SETTINGS

Feed Pawl Assembly

The FA2 applicator number 63808-8100 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 3.
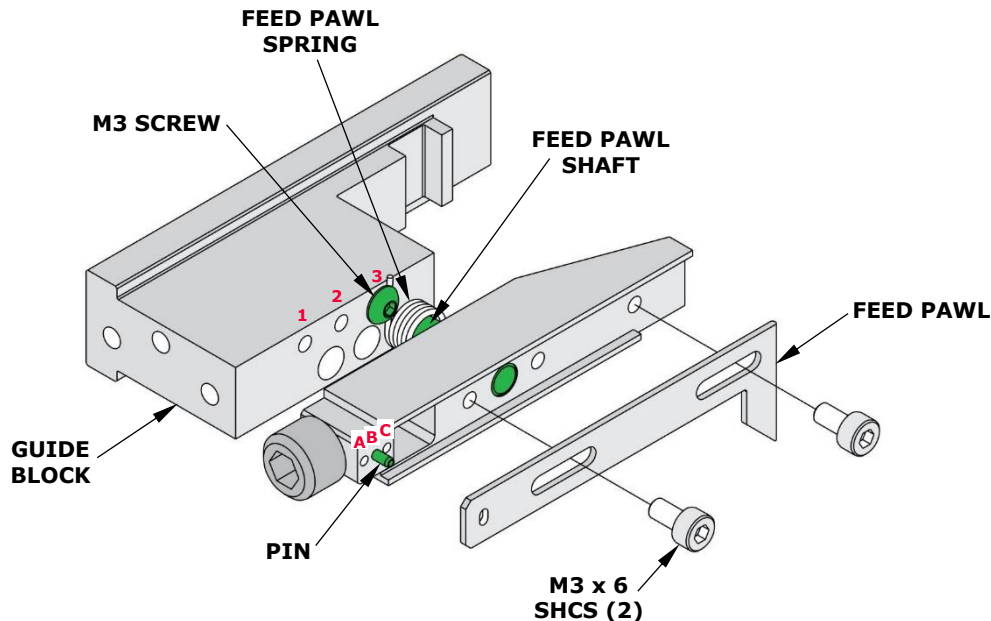- The pin is in position B.

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

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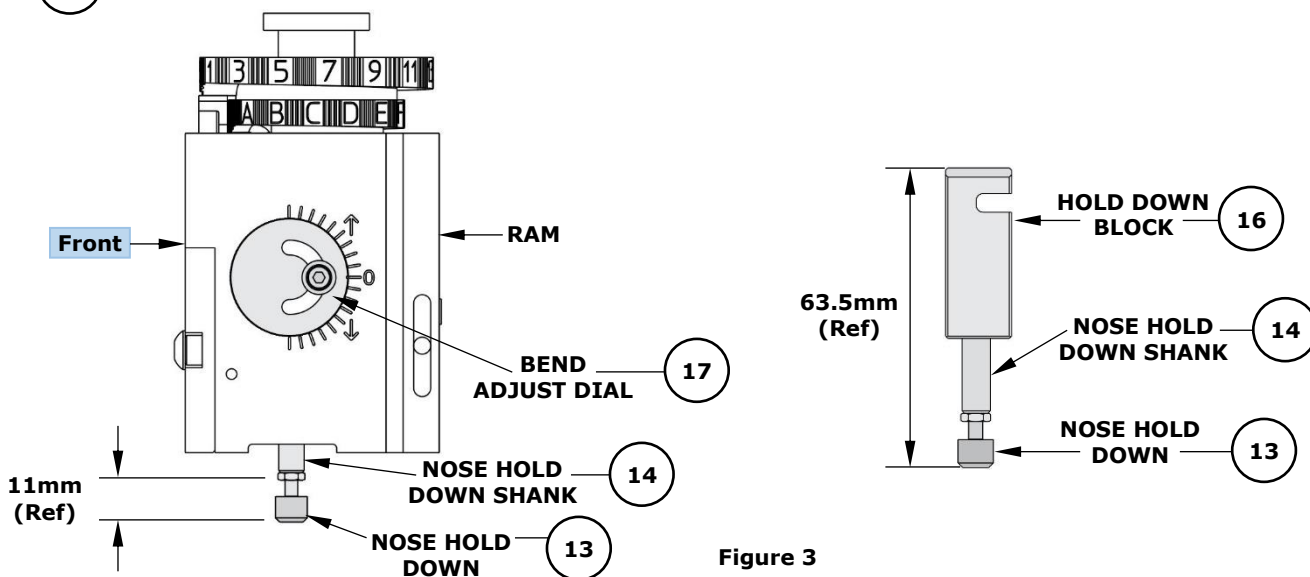
Figure 3

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.
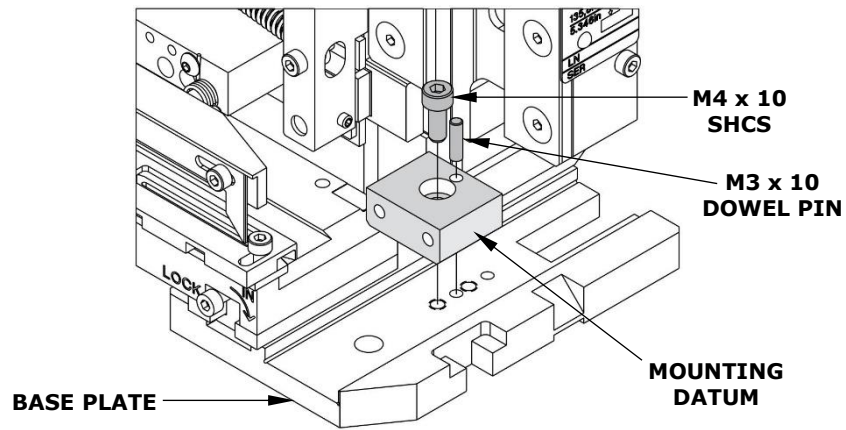

Figure 4

Application Tooling Support

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