Order Number
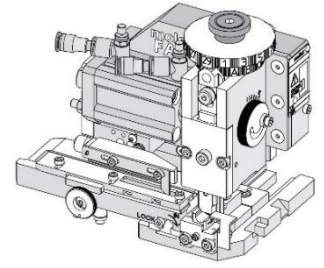**63808-7310**

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
- This applicator was designed for use in a wire processor only
- This applicator is configured with a pneumatic feed, which requires a 4-way pneumatic valve for operation

SCOPE

Products: CTX280 L Grip Receptacle Wire Seal, 5.00mm^2 and 4.00mm^2 wire.

Terminal Series No.	Terminal Order No.		Wire		Insulation Diameter		Strip Length	
			Wire Type	Size	mm	In.	mm	In.
98675	98675-1004 98675-1014 98675-1044 98675-1054	98675-1064 98675-1104 98675-1114	T3-ZHID	5.00mm² 4.00mm²	3.40-3.90	.134-.154	4.30-4.80	.169-.189
34865	34865-1004 34865-1044	34865-1064 34865-1104						
34808	34808-1004 34808-1044 34808-1064 34808-1074 34808-1104	34808-2004 34808-2012 34808-2020 34808-2028 34808-2180						

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

CAUTION: To operate the pneumatic feed, a 4-way pneumatic valve is required.

DEFINITION OF TERMS
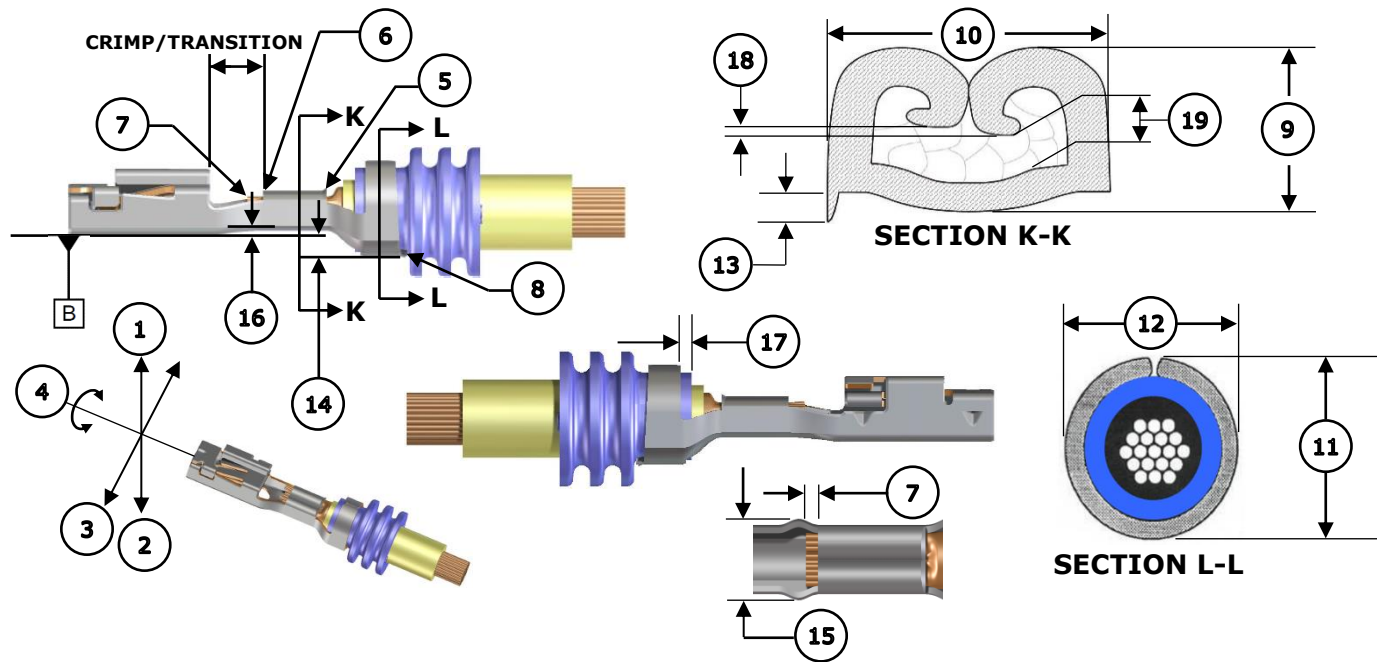
CRIMP SPECIFICATIONS

The following crimp specifications are based on document AS-98675-002 Revision F5:

Feature	Requirement				
1. Bend Up	1° Max				
2. Bend Down	1° Max				
3. Twist	2° Max				
4. Roll	3° Max				
5. Bell Mouth Rear	0.40-0.60mm (.016-.024")				
6. Bell Mouth Front	Not Applicable				
7. Conductor Brush	0.20-0.60mm (.008-.024")				
8. Cut-Off Tab	0.30mm (.012") Max				
Conductor Crimp	Wire Type	Wire Size	**9. Crimp Height**		**10. Crimp Width**	
	T3ZHID	5.00mm²	2.10-2.20mm	.083-.087 in.	3.40-3.60mm	.134-.142 in.
		4.00mm²	1.95-2.05mm	.077-.081 in.		
Insulation Crimp	Wire Type	Wire Size	**11. Crimp Height**		**12. Crimp Width**	
	T3ZHID	5.00mm²	5.25-5.45mm	.207-.215 in.	4.95-5.15mm	.195-.203 in.
		4.00mm²	4.90-5.10mm	.193-.201 in.		
Pull Force	Wire Type	Wire Size	**Minimum Force**			
	T3ZHID	5.00mm²	320 N	71.9 lb.	To be measured with no influence from the insulation crimp.	
		4.00mm²	320 N	71.9 lb.		
13. Conductor Anvil Flash	0.10mm (.004") Max				
14. Insulation Grip Step	1.35-1.55mm (.053-.061") Below Datum B				
15. Crimp Bulge	4.15mm (.163") Max within crimp/transition area				
16. Conductor Grip Step	0.00-0.10mm (.000-.004") Below Datum B, 0.00-0.10mm (.000-.004") Above Datum B				
Misc.	Wire Type	Wire Size	**17. Wire Seal Position (Terminal)**		**Wire Seal Color**	**Wire Seal No.**
	T3ZHID	5.00mm²	1.10-2.50mm	.043-.098 in.	Blue	64325-1366
		4.00mm²				
	Wire Type	Wire Size	**18. Wing Dissymmetry**		**19. Space Between Wing Tips and Crimp Bottom**	
	T3ZHID	5.00mm²	0.00-0.32mm	.000-.013 in.	0.16-2.50mm	.036-.098 in.
		4.00mm²				

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.
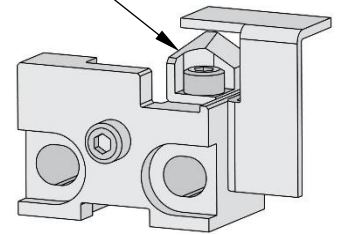
Specification Notes

- 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
FA2 Applicator 63808-7310				
Perishable Tooling				
	63808-7370	63808-7370	Tool Kit (All "Y" Items)	Ref
1	63454-0111	63454-0111	Insulation Punch	1 Y
2	63457-3402	63457-3402	Conductor Punch	1 Y
3	63456-4901	63456-4901	Insulation Anvil	1 Y
4	63455-3401	63455-3401	Conductor Anvil	1 Y
5	63443-0142	63443-0142	Cut-Off Plunger	1 Y
Non-Perishable Components				
6	63443-0135	63443-0135	Front Plunger Retainer	1
7	63700-0992	63700-0992	Cut-Off Plunger Spring	1
8	63443-0117	63443-0117	Front Scrap Chute	1
9	63443-7522	63443-7522	Anvil Mount	1
10	63443-0090	63443-0090	Wire Stop Assembly	1
11	63443-3601	63443-3601	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	63443-4757	63443-4757	Terminal Guide	1
16	63808-0220	63808-0220	Hold Down Block	1
17	63808-0229	63808-0229	Bend Adjust Dial	1
18	63443-1230	63443-1230	Feed Pawl	1
19	63443-4603	63443-4603	Carrier Cover	1
Frame				
20	63808-0200	63808-0200	Applicator Core	1
21	63808-0196	63808-0196	Pneumatic Feed Assembly	1
22	63808-0191	63808-0191	Track Assembly	1
Hardware				
23	—	—	M2.5 x 4 SHCS	1*
24	—	—	M3 Hex Nut	1*
25	—	—	M3 Flat Washer Hard	1*
26	—	—	M3 Inner Tooth Lock Washer	1*
27	—	—	M3 x 3 SSS	2*
28	—	—	M3 x 6 BHCS	2*
29	—	—	M3 x 12 SHCS	4*
30	—	—	M4 x 5 SSS	1*
31	—	—	M4 x 6 SHCS	1*
32	—	—	M4 x 50 SHCS	2*
33	—	—	M5 x 12 SHCS	1*
34	—	—	#10-32 Hex Jam Nut	1*
35	—	—	#10-32 by 3/8"Long Flat Point SSS	1*

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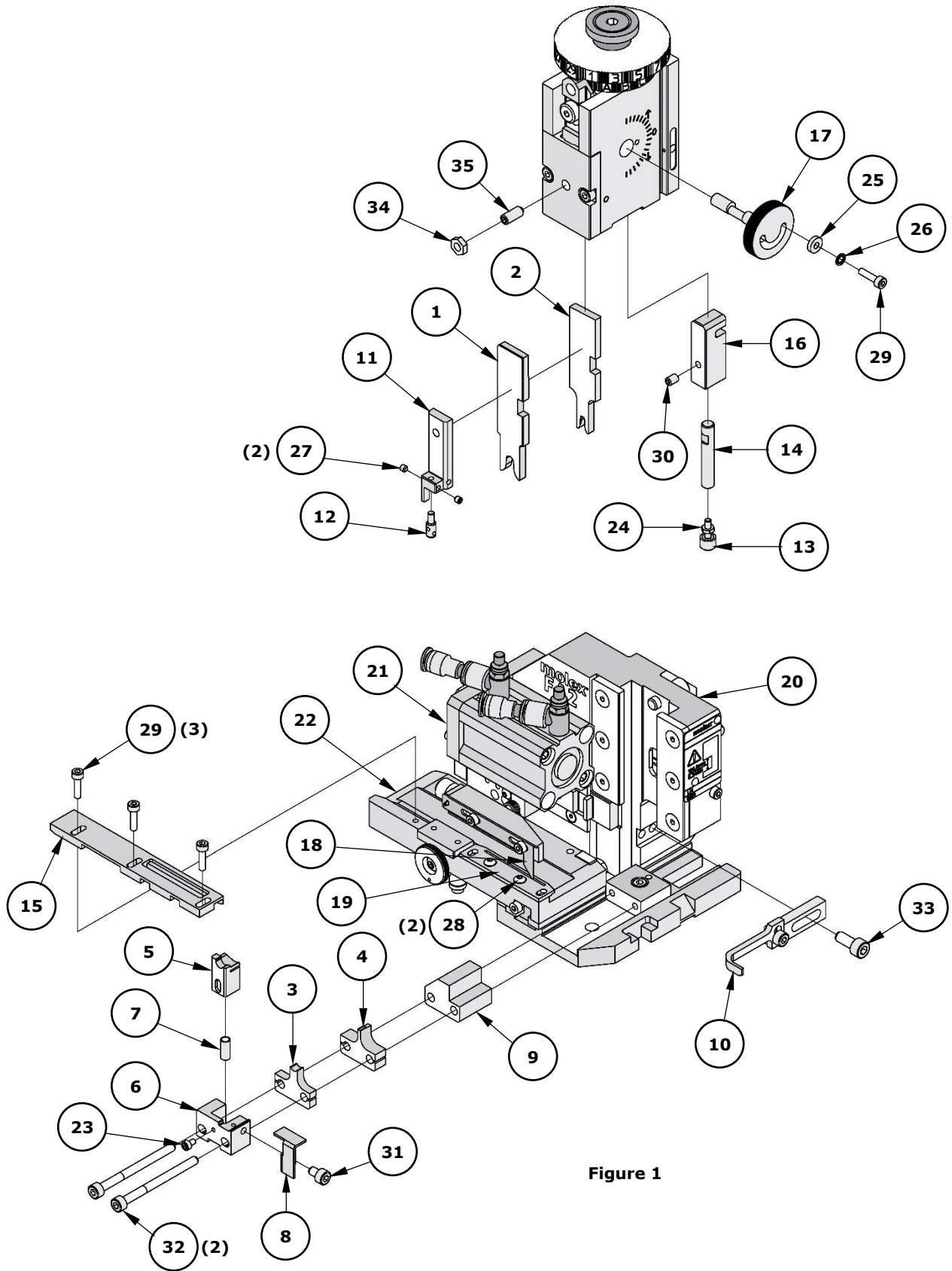
ASSEMBLY DRAWING

Figure 1

FACTORY SETTINGS

Feed Pawl Assembly

The FA2 applicator number 63808-7310 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.
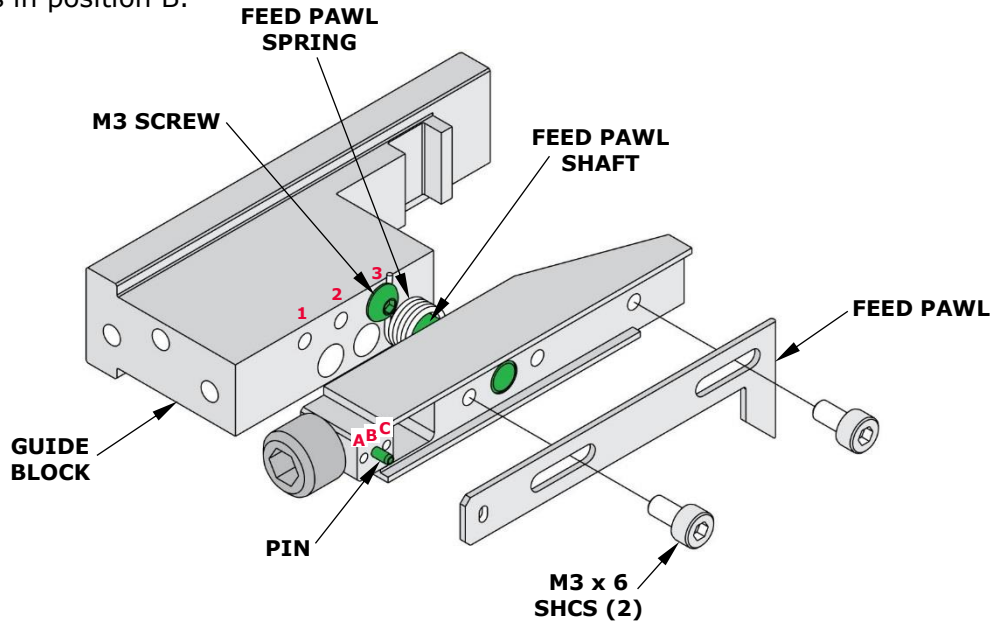- The pin is in position B.

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
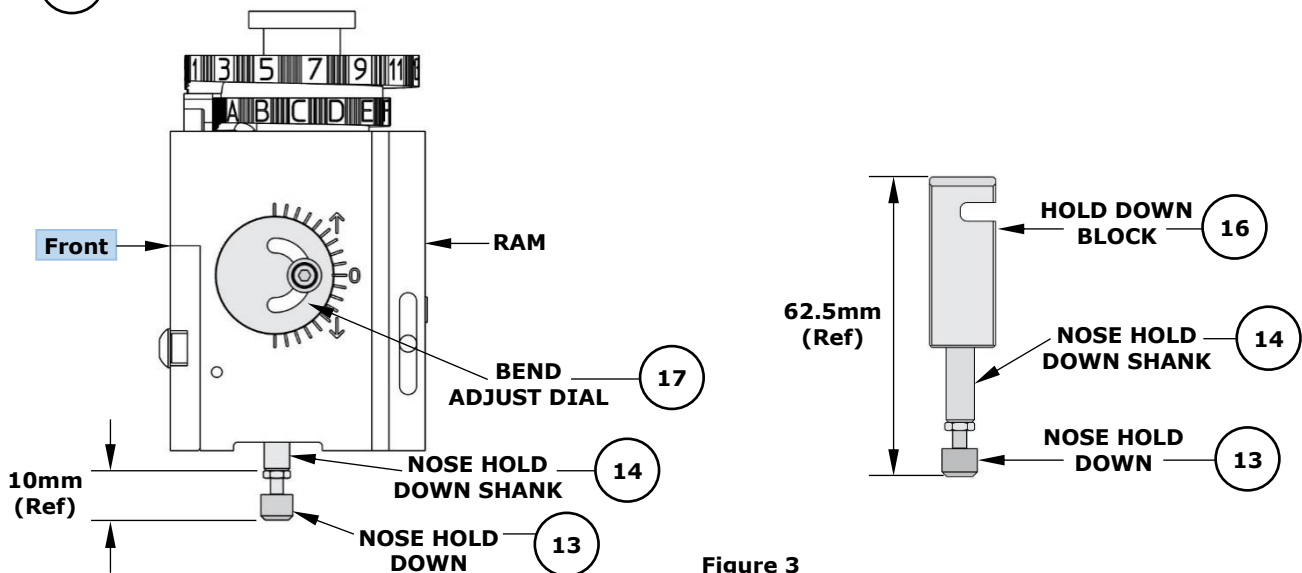
Figure 3

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.
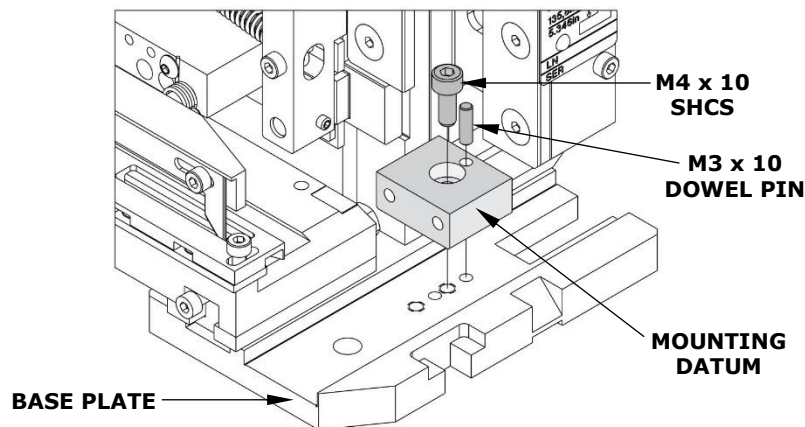

M4 x 10 SHCS

M3 x 10 DOWEL PIN

MOUNTING DATUM

BASE PLATE

Figure 4

PNEUMATIC CONNECTION (AIR FEED)

- The pneumatic feed applicator uses a double-acting air cylinder that must be actuated by a 4-way pneumatic valve.
- The air cylinder is equipped with push-in fittings for 6mm diameter vinyl or Nylon tube. Adapters are included for ¼" diameter and 4mm diameter vinyl or Nylon tube.

   Note: The TM-3000 and TM-4000 presses have pneumatic valves with ¼" diameter tube fittings. Be sure to install the ¼" diameter adapters in the air cylinder fittings and use ¼" diameter vinyl or Nylon tube.

- Pneumatic tubes must be connected as shown in Figure 5. Tubes are typically connected so the terminal feed is forward when the applicator ram is up.
- When using the TM-3000 or TM-4000 presses, connect the tubes to the press pneumatic valve as shown in Figure 6.
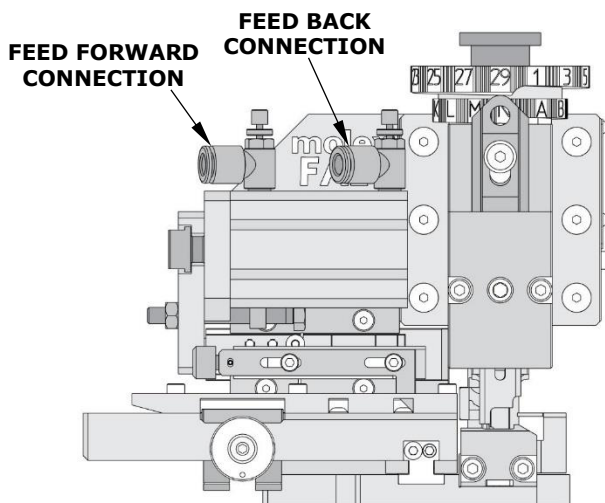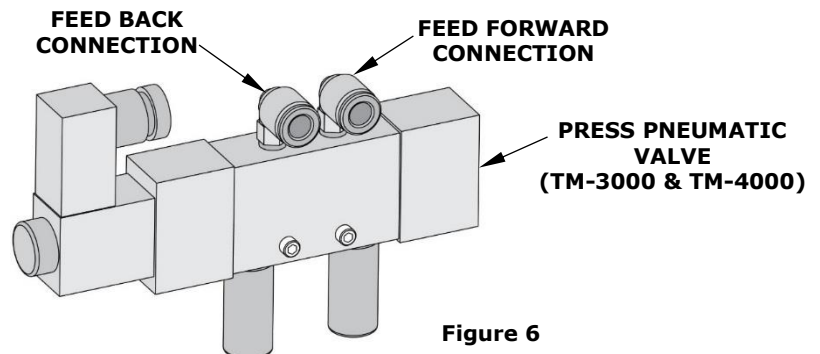

FEED FORWARD CONNECTION

FEED BACK CONNECTION

FEED BACK CONNECTION

FEED FORWARD CONNECTION

PRESS PNEUMATIC VALVE (TM-3000 & TM-4000)

Figure 6

Figure 5

Application Tooling Support

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