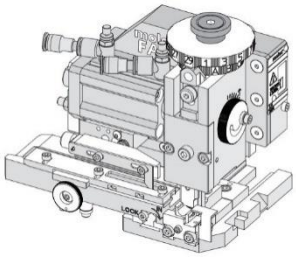
Order Number
63808-8010

molex®

Application Tooling Specification



FEATURES

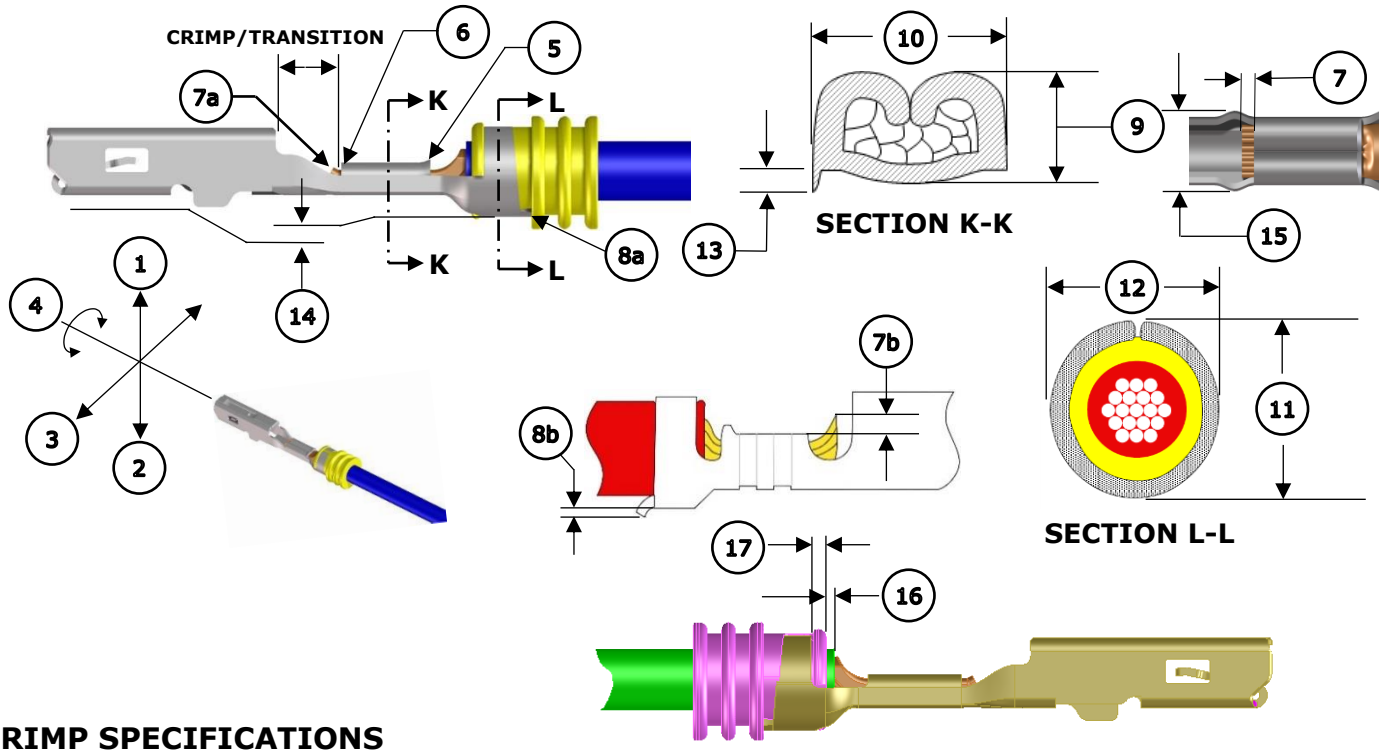
- Applicator designed to industry-standard mounting and 135.80mm (5.346”) shut height
- Quick setup time; plus, the crimp height, track and feed adjustments can be set without removing the applicator from the press
- Fine adjustment allows users to achieve target with little effort by adjusting in increments 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 control 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 is configured with a pneumatic feed, which requires a 4-way pneumatic valve for operation

SCOPE

Products: MX150 22 Grip Receptacle Wire Seal Terminals; 22 AWG and 0.50mm^2 wires.

Terminal Series No.	Terminal Order No.	Wire		Insulation Diameter		Strip Length	
		Wire Type	Size	mm	In.	mm	In.
34081 34083 34751	34081-3005 34081-5003 34083-3003 34751-1003	M1L-123A4 (TXL)	22 AWG	1.20-1.70	.047-.067	4.70-5.60	.185-.220
		M1L-126A1	0.50mm^2				
		JASO D611 (AVSS)					
		FLR91X-A-XLPO					

DEFINITION OF TERMS



CRIMP SPECIFICATIONS

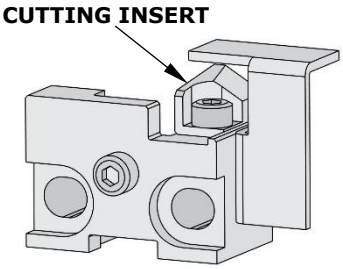
The following crimp specifications are based on document AS-34083-002 Rev. B2:

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	**a.** 0.40mm (.016”) Max		**b.** 0.40mm (.016”) Max above conductor crimp			
8. Cut-Off Tab	**a.** 0.50mm (.020”) Max		**b.** 0.30mm (.012”) Max curl			
Conductor Crimp	**Wire Type**	**Wire Size**	**9. Crimp Height**		**10. Crimp Width**	
	M1L-123A4	22 AWG	0.95-1.05mm	.037-.041 in.	1.50-1.70mm	.059-.067 in.
	M1L-126A1	0.50mm²	1.05-1.15mm	.041-.045 in.		
	JASO D611					
	FLR91X-A-XLPO					
Wire Seal Crimp	**Wire Type**	**Wire Size**	**11. Crimp Height**		**12. Crimp Width**	
	ALL	22 AWG	3.40-3.60mm	.134-.142 in.	3.35-3.55mm	.132-.140 in.
		0.50mm²				
Pull Force	**Wire Type**	**Wire Size**	**Minimum Force**			
	M1L-123A4	22 AWG	50 N	11.3 lb.	To be measured with no influence from the wire seal crimp.	
	ALL	0.50mm²	75 N	16.9 lb.		
13. Conductor Anvil Flash	0.10mm (.004”) Max; Not to extend below lowest point of conductor crimp					
14. Seal Grip Step	0.45-0.65mm (.018-.026”)					
15. Crimp Bulge	2.62mm (.103”) Max within crimp/transition area					
Misc.	**Wire Type**	**Wire Size**	**16. Wire Seal Position on Wire (Ref)**		**17. Wire Seal Position on Terminal**	
	M1L-123A4	22 AWG	0.20-0.40mm	.008-.016 in.	1.10mm Min	.043 in. Min
	ALL	0.50mm²				

Wire Seal Color	**Wire Seal No.**
Pink	E-1644-01

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

- 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

FA2 Applicator 63808-8010				
Item	**Order No.**	**Engineering No.**	**Description**	**Quantity**
Perishable Tooling				
	63808-8070	63808-8070	Tool Kit (All "Y" Items)	Ref
1	63454-0161	63454-0161	Insulation Punch	1 Y
2	63457-0110	63457-0110	Conductor Punch	1 Y
3	63456-3305	63456-3305	Insulation Anvil	1 Y
4	63455-0172	63455-0172	Conductor Anvil	1 Y
5	63443-0034	63443-0034	Front 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	63443-7532	63443-7532	Anvil Mount	1
10	63443-0090	63443-0090	Wire Stop	1
11	63890-0008	63890-0008	Front Plunger Striker	1
12	63600-5776	63600-5776	Nose Hold Down	1
13	63600-5775	63600-5775	Nose Hold Down Shank	1
14	63443-4759	63443-4759	Terminal Guide	1
15	63443-7403	63443-7403	Hold Down Block	1
16	63808-0229	63808-0229	Bend Adjust Dial	1
17	63443-3203	63443-3203	Wire Pusher	1
18	63600-5016	63600-5016	Compression Spring	1
Frame				
19	63808-0200	63808-0200	Applicator Core	1
20	63808-0190	63808-0190	Track Assembly	1
21	63808-0196	63808-0196	Pneumatic Feed Assembly	1
Hardware				
22	—	—	M2.5 x 4 SHCS	1*
23	—	—	M3 Hex Nut	1*
24	—	—	M3 Flat Washer Hard	1*
25	—	—	M3 Inner Tooth Lock Washer	1*
26	—	—	M3 x 6 BHCS	2*
27	—	—	M3 x 12 SHCS	4*
28	—	—	M4 x 6 SHCS	1*
29	—	—	M4 x 6 SSS	1*
30	—	—	M4 x 40 SHCS	2*
31	—	—	M5 x 12 SHCS	1*
32	—	—	#10-32UNF x .50” Cup Point SSS	1*
33	—	—	#10-32UNF Jam Nut	1*
*Fastener parts can be purchased through most industrial suppliers by using the description in the table above.				

ASSEMBLY DRAWING

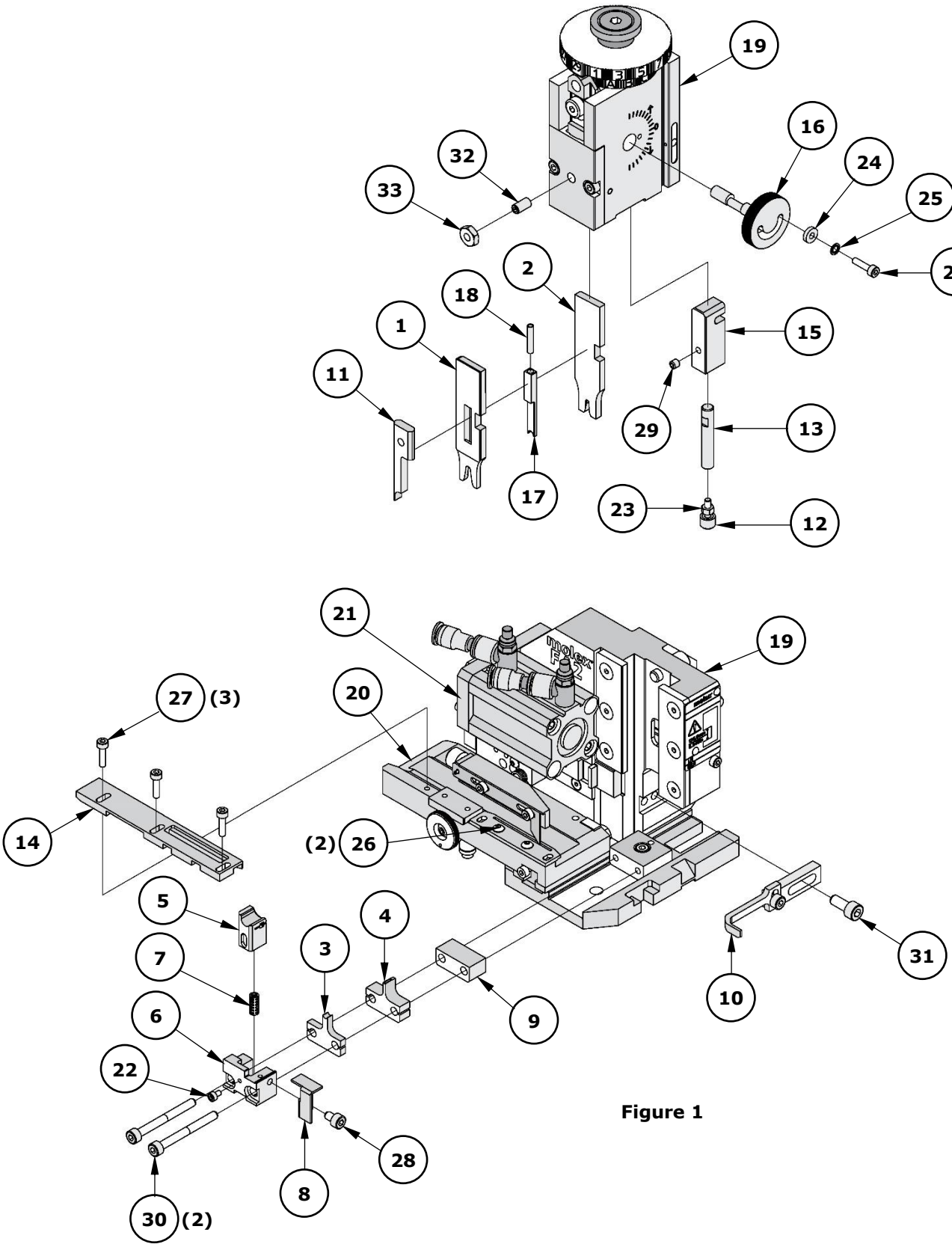


Figure 1

FACTORY SETTINGS

Feed Pawl Assembly

The FA2 applicator number 63808-8010 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 C.

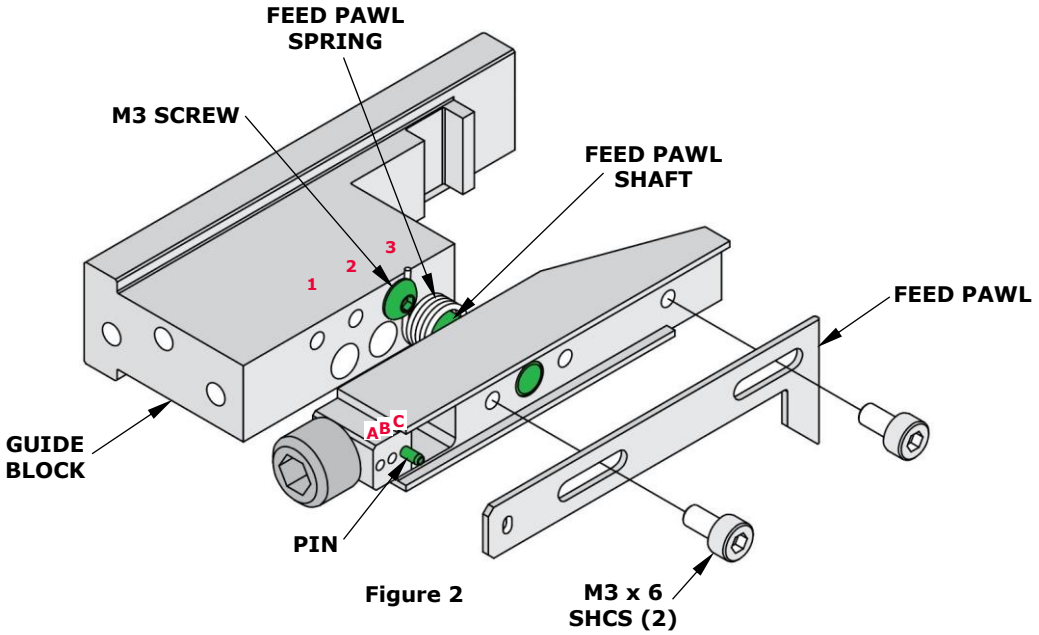


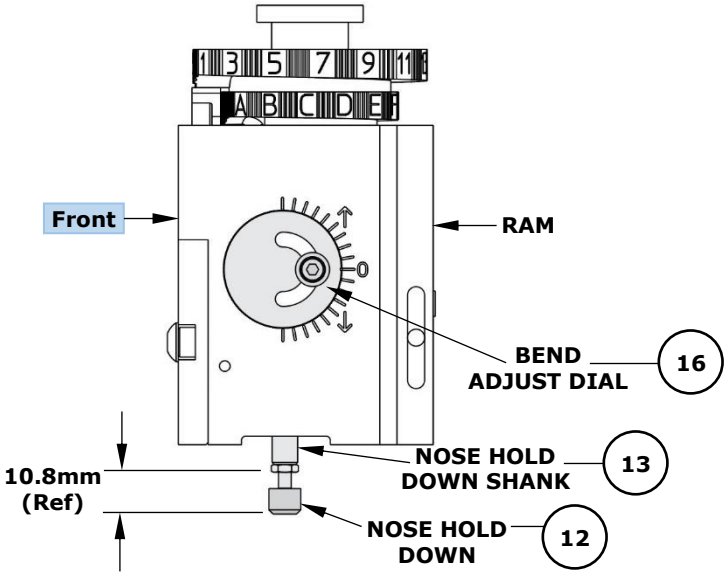
Figure 2

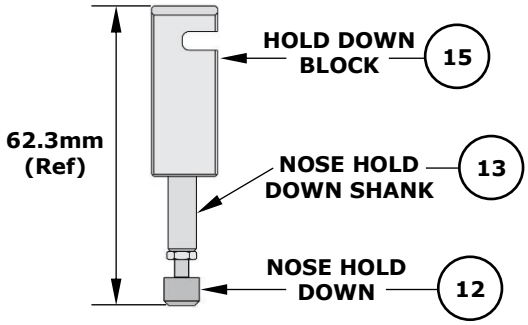
Note

This information is included as a reference only. 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

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





Mounting Datum Location

This applicator was assembled and tested by Molex with the mounting datum in the location shown in Figure 3. Do not remove the mounting datum.

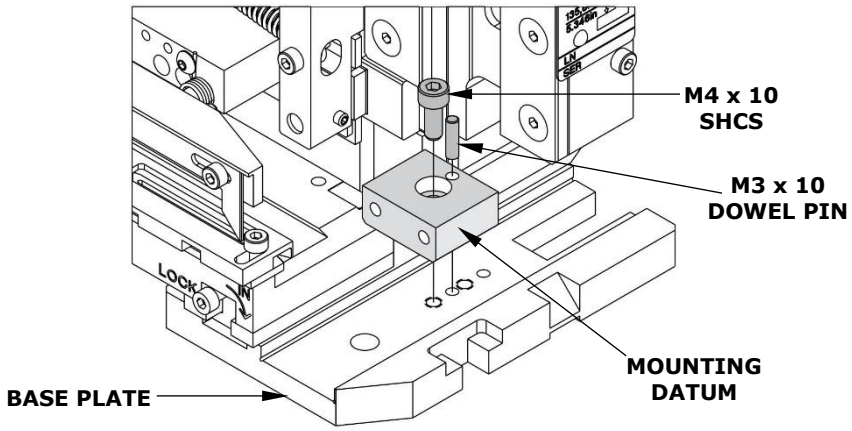


Figure 3

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 4. 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 5.

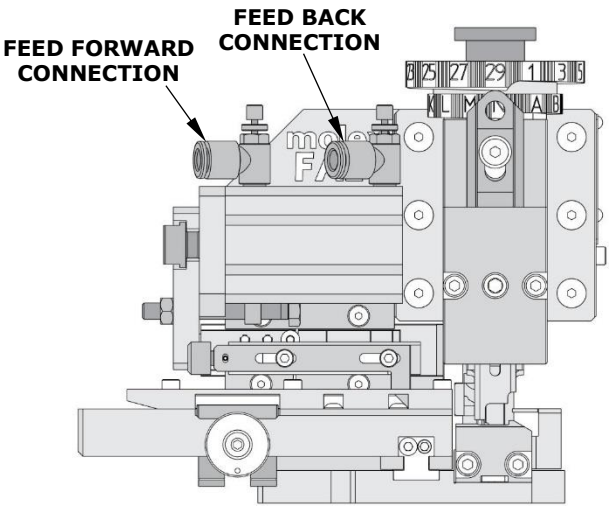


Figure 4

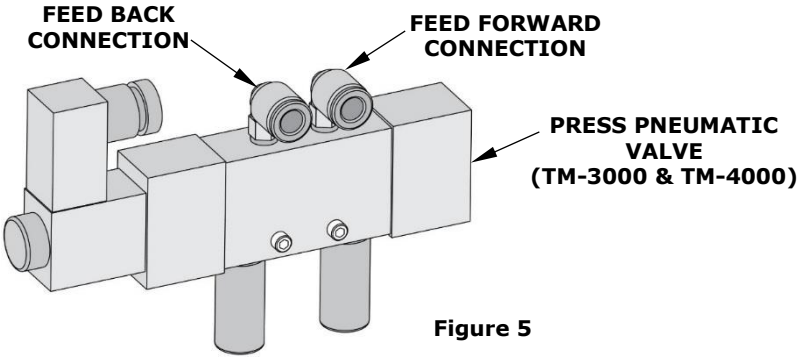


Figure 5

Application Tooling Support

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