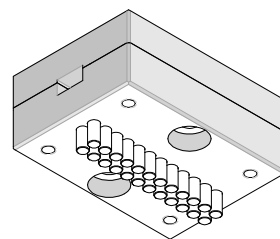


**Micro-Fit 3.0  
BMI / CPI™  
Insertion Tool**



**Application Tooling  
Specification Sheet**



**Order No. 62200-2700**

**FEATURES**

- Inserts Micro-Fit Compliant Pin Header Assemblies into a printed circuit board.
- The customer must supply a suitable board support fixture.
- Tool is adjustable for 4 to 24 circuits.

**SCOPE**

Products: 3.00mm (.118") Pitch Micro-Fit 3.0 BMI / CPI™ Vertical Header Assembly.

**Product List**

The following is a partial list of the product order numbers and their specifications this tool is designed to run. Updates to this list are available on [www.molex.com](http://www.molex.com).

Series No.	Circuit Size	Assembly Order Number					
45280	04	45280-0401	45280-0402	45280-0403	45280-0404	45280-0452	45280-0453
		45280-0481	45280-0482	45280-0483			
	06	45280-0601	45280-0602	45280-0603	45280-0604	45280-0631	45280-0652
		45280-0653	45280-0681	45280-0682	45280-0683		
	08	45280-0801	45280-0802	45280-0803	45280-0804	45280-0852	45280-0853
		45280-0881	45280-0882	45280-0883			
	10	45280-1001	45280-1002	45280-1003	45280-1004	45280-1032	45280-1033
		45280-1052	45280-1053	45280-1081	45280-1082	45280-1083	
	12	45280-1201	45280-1202	45280-1203	45280-1204	45280-1233	45280-1252
		45280-1253	45280-1281	45280-1282	45280-1283		
	14	45280-1401	45280-1402	45280-1403	45280-1404	45280-1452	45280-1453
		45280-1481	45280-1482	45280-1483			
	16	45280-1601	45280-1602	45280-1603	45280-1604	45280-1652	45280-1653
		45280-1681	45280-1682	45280-1683			
	18	45280-1801	45280-1802	45280-1803	45280-1804	45280-1852	45280-1853
		45280-1881	45280-1882	45280-1883			
	20	45280-2001	45280-2002	45280-2003	45280-2004	45280-2052	45280-2053
		45280-2081	45280-2082	45280-2083			
	22	45280-2201	45280-2202	45280-2203	45280-2204	45280-2252	45280-2253
		45280-2281	45280-2282	45280-2283			
	24	45280-2401	45280-2402	45280-2403	45280-2404	45280-2452	45280-2453
		45280-9453					

## Description

The Insertion Tool is made up of a backing plate, alignment pins, and a pin holder. It can also be mounted to a press using (2) M4 SHCS. This tool measures 43.0mm (1.69 in.) wide by 31.8mm (1.25 in.) deep by 19mm (.75 in.) high. See Figure 1.

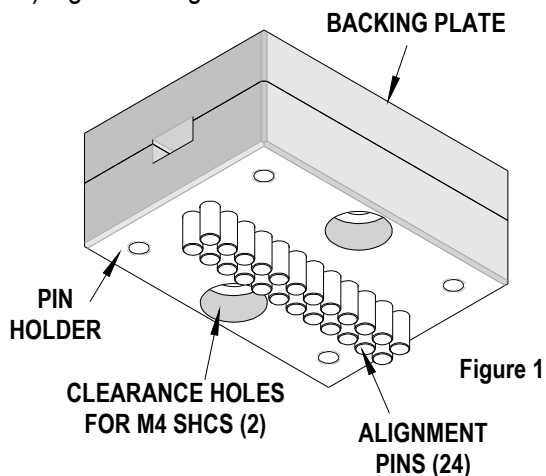


Figure 1

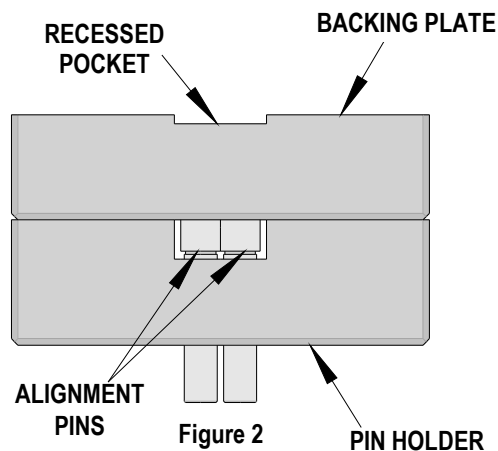


Figure 2

## Operation:

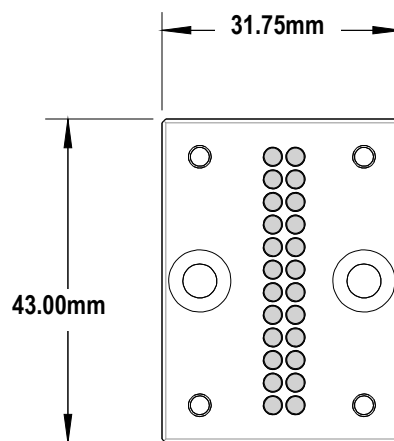
When Micro-Fit Headers have the same lengths of mating pins the tool is assembled with the recessed pocket in the backing plate is positioned as shown in Figure 2.

1. Remove the (4) screws from the backing plate.
2. Remove the backing plate from the pin holder.
3. Add or remove alignment pins to make the number of pins in the pin holder equal the circuit size of the connector to be inserted (24 maximum). The group of pins remaining in the pin holder must be centered in the pin holder.
4. Replace the backing plate and replace the (4) screws. Be sure the backing plate is assembled correctly to the pin holder shown in Figure 2.
5. Place the printed circuit board on the printed circuit board support fixture (provided by the customer).
6. Carefully position the header (connector) on the printed circuit board and start the terminals into the board.

**Caution:** There should be no components taller than the header assembly around the area of the header (connector); the Insertion tool could damage these components. See Figure 3 for details.

**NOTE:** This tooling is not polarized; therefore, the operator must make certain the Header assembly is correctly positioned on the board.

7. Position the assembled printed circuit board into the support fixture.



**DO NOT PUT ANY COMPONENTS TALLER THAN THE HEADER IN THE AREA AROUND THE HEADER ASSEMBLY**

Figure 3

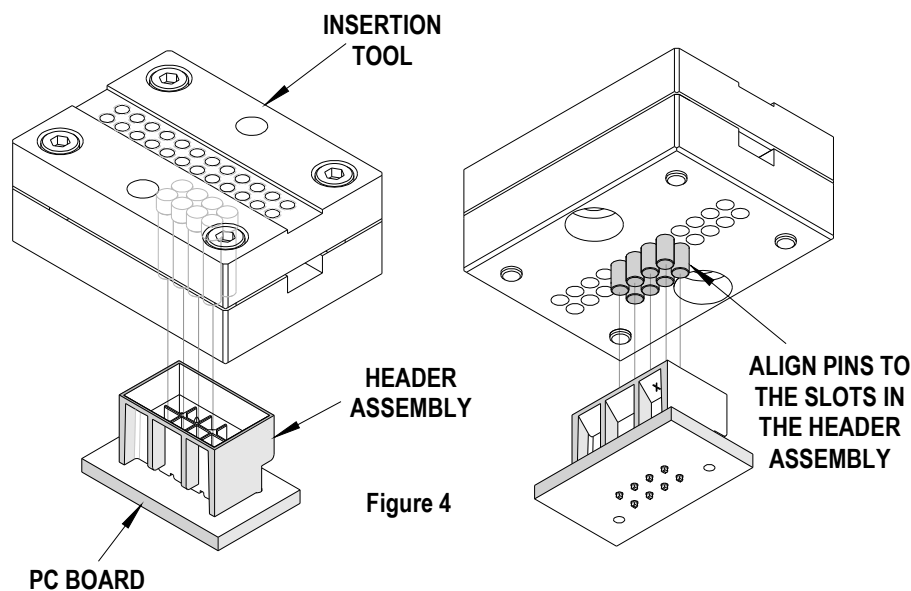


Figure 4

8. Place the insertion tool on top of the header aligning the pins in the slots of the header assembly. See Figure 4.
9. Lower the presses ram onto the backing plate and apply just enough pressure to press the connector pins into the printed circuit board until the Header housing is seated on the board.
10. Remove the insertion tool from the Header.

### Operation (Headers with Make-First-Break-Last Pins)

When Micro-Fit Headers with the Make-First-Break-Last mating pins, the tool is assembled with the recessed pocket in the backing plate positioned as shown in Figure 5. Certain Headers have varying lengths of mating pins. In these cases, the alignment pin must be adjusted up or down.

1. Remove the (4) M3 screws from the backing plate.
2. Remove the backing plate from the pin holder.
3. Add or remove alignment pins to make the number of pins in the pin holder equal the circuit size of the connector to be inserted (24 maximum). The group of pins remaining in the pin holder must be centered in the pin holder.
4. Replace the backing plate and replace the (4) screws. Be sure the backing plate is assembled correctly to the pin holder shown in Figure 5.
5. Look at the mating side of the Mini-Fit header and identify which contact pins are longer than the others. The longer pins are for Make-First-Break-Last (MFBL) mating.
6. The tool alignment pins that support the longer connector pins must be raised into the pin holder. To do this, loosen the M2.5 x 5mm long setscrew above the pin. Allow the setscrew to come up to the top of the backing plate (but not above the surface.). See Figure 6.

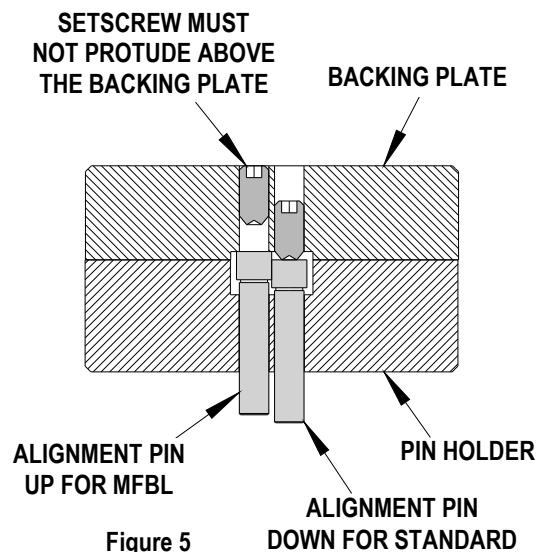


Figure 5

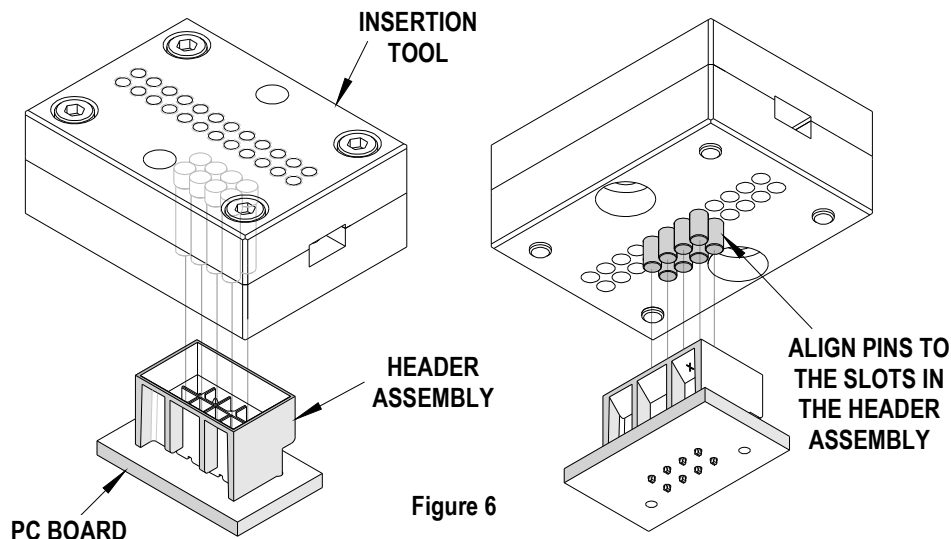


Figure 6

7. Repeat step 6 for the remaining MFBL positions. The “standard” pin positions must have the M2.5 x 5mm long setscrew tightened (gently) against the alignment pin. See Figure 6.
8. Place the printed circuit board on the printed circuit board support fixture (provided by the customer).
9. Carefully position the header (connector) on the printed circuit board and start the terminals into the board.

**Caution:** There should be no components taller than the header assembly around the area of the header (connector); the Insertion tool could damage these components. See Figure 3 for details.

**NOTE:** This tooling is not polarized; therefore, the operator must make certain the Header assembly is correctly positioned on the board.

10. Position the assembled printed circuit board into the support fixture.
11. Place the insertion tool on top of the header aligning the pins in the slots of the header assembly. See Figure 6.
12. Lower the press ram onto the backing plate and apply just enough pressure to press the connector pins into the printed circuit board until Headers housing is seated on the board.
13. Remove the insertion tool from the Header.

**CAUTION:** Molex application tooling specifications are valid only when used with Molex connectors and tooling.

### Contact Information

For more information on Molex application tooling please contact Molex at 1-800-786-6539.

Visit our Web site at <http://www.molex.com>