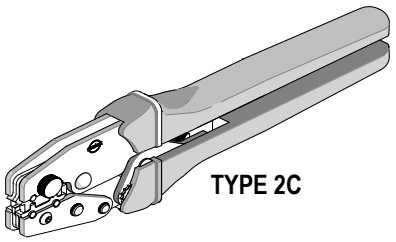


molex

Application Tooling Specification Sheet



Tool Kit
Order No. 63819-3270

Hand Crimp Tool
Order No. 63819-3200

FEATURES

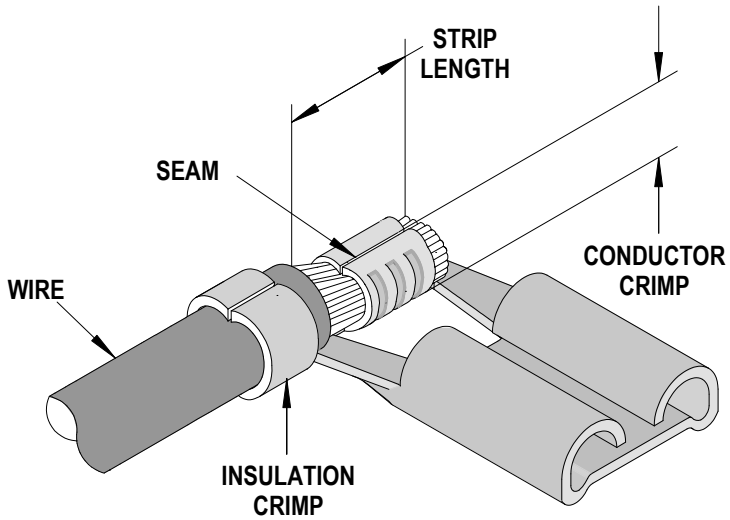
- A full cycle ratcheting hand tool ensures complete crimps
- Ergonomically designed soft handles
- Precisely designed crimping profiles with simple contact positioning
- Easy handling due to outstanding force ratio
- Tool kits are easily installed into the Hand Crimp Tool or the 63816-0300 Power Crimp Head which is installed into the 63816-0200 (110 V) or the 63816-0250 (220 V) Battery Powered Tool.
- Many different Tool kits can be used with a single Battery Powered Tool.
- This tool is IPC/WHMA-A-620 Class 2 and RoHS compliant.

SCOPE

Products: Quick Disconnect, Female, Flag, for 0.50 and 0.80mm² (20 and 18 AWG) wires.

Terminal Series No.	Terminal Order No. ✳Reel	Wire Size AWG	Wire Size mm²	Insulation Diameter mm	Insulation Diameter In.	Strip Length mm	Strip Length In.
94030	94030-5000 94030-5001		0.50	2.10-2.60	.083-.102	6.0-7.0	.236-.276
		20	(0.52)				
			0.80				
		18	(0.82)				
✳Customer to cut off terminal from reel. Cut tab flush with terminal on both ends.							

DEFINITION OF TERMS



CONDITIONS:

After crimping, the conductor profiles should measure the following (see notes below).

Terminal Series No.	Wire Size		Conductor Crimp				Profile	
			Height (Ref.)		Width (Ref.)			
	AWG	mm²	mm	In.	mm	In.	A	B
94030		0.50	1.40 - 1.50	.055 - .059	2.35	.093		X
	20	(0.52)	1.40 - 1.50	.055 - .059	2.35	.093		X
		0.80	1.50 – 1.60	.059 - .063	2.35	.093	X	
	18	(0.82)	1.50 – 1.60	.059 - .063	2.35	.093	X	

Terminal Series No.	Wire Size		Insulation Crimp				Pull Force Minimum	
			Height (Ref.)		Width (Ref.)			
	AWG	mm²	mm	In.	mm	In.	N	Lb.
94030		0.50	2.80 – 2.90	.110 - .114	3.45 max	.136 max	78.45	17.6
	20	(0.52)	2.80 – 2.90	.110 - .114	3.45 max	.136 max	78.45	17.6
		0.80	2.90 – 3.00	.114 - .118	3.45 max	.136 max	117.68	26.4
	18	(0.82)	2.90 – 3.00	.114 - .118	3.45 max	.136 max	117.68	26.4

Tool Qualification Notes:

1. Pull Force should be measured with no influence from the insulation crimp.
2. The above specifications are guidelines to an optimum crimp.

Note:
A crimp height chart is provided with this manual as Reference Only. Due to the wide range of wires, strands, insulation diameters, and durometers, actual crimp height measurements may very slightly. An occasional, destructive, pull force test should be preformed to check hand tool crimp. Pull Force value must exceed the minimum pull force specifications listed.

CAUTION: Install only Molex terminals listed above with this tool. Do not crimp hardened objects as damage can occur to the tool or die.

INSTALLATION

To install the Tool Kit into the Power Crimp Head follow the steps below:

Anvils and Punches Installation

1. Insert the Anvils into the bottom slots of the nest. Install the M4 x 10 long BHCS and tighten in place.
2. Insert the Punches into the top slots of the nest. Install the M4 x 18 long BHCS and tighten in place. See Figure 1.

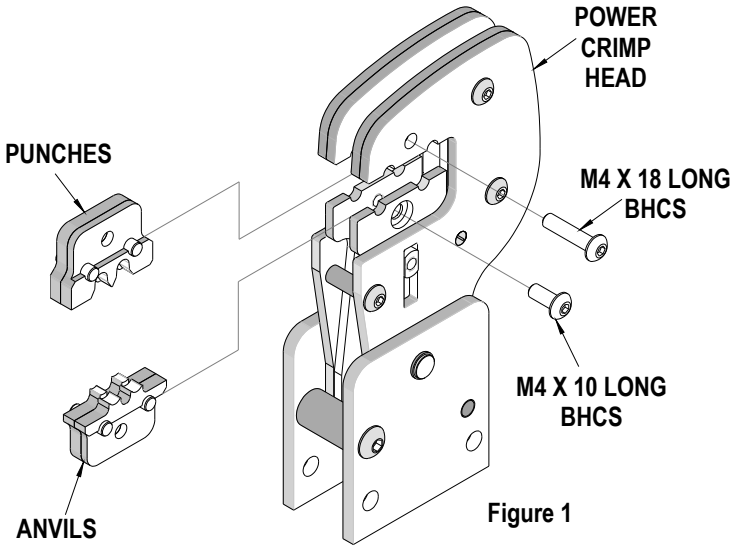


Figure 1

OPERATION

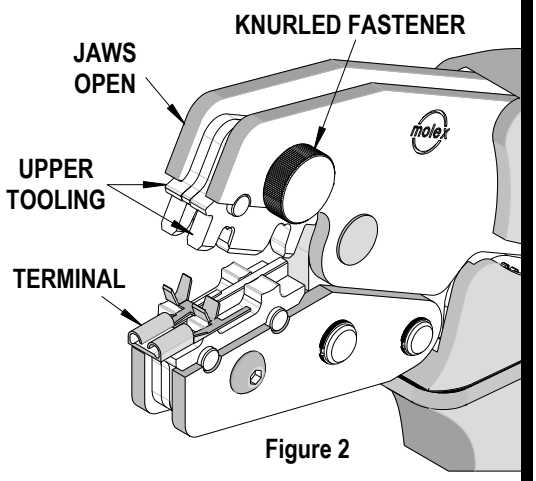


Figure 2

Open the tool by squeezing the handles together, at the end of the closing stroke, the ratchet mechanism will release the handles, and the hand tool will spring open.

Crimping Terminals

1. Select the desired terminal listed in the preceding charts.
2. Before attempting to crimp any terminals, make sure all the upper tooling is correctly placed into the upper jaw. The desired nest being used for the proper wire size should be in the forward position, (The marking on the upper tooling "A" for 0.8mm ² or "B" for 0.5mm²). This is done by removing the knurled fastener that holds the upper tooling in place and then rotating it 180° to the correct position. Then, re-installing the fastener. See Figure 2.
3. Place the terminal into the nest profile, centered on the nest as shown, with the outer edges of the crimp grips flush with each side of the crimp die and the opening in the terminal centered below the forward leg of the right punch. See Figure 3.
4. Partially close the tool until the terminal is held in place and re-position the terminal as necessary.
5. From the left side of the tool, insert the pre-stripped wire into the terminal until the conductor is centered, front to rear, in the crimp grips. See Figure 3.
6. Compress the terminal by squeezing the tool handles until the ratchet mechanism cycle has been completed. Release handles to open the jaws.

Note: The tamper proof ratchet action will not release the tool until it has been fully closed.

7. Remove the crimped terminal. Inspect for proper crimp location, and check for insulation closure.

For the Battery Power Tool:

1. Cycle the Battery Power Tool to crimp the terminal to the wire.
2. Remove the crimped terminal from the terminal locator by pressing down on the wire stop and gently pulling on the wire. The terminal locator can be in either position.
3. Visually inspect the crimped terminal for proper crimp location.

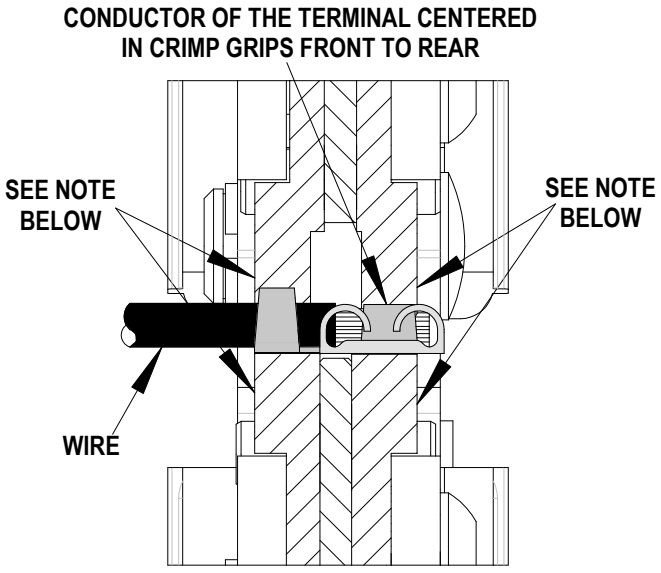


Figure 3

Note: The Terminal should be centered in crimp nests with the outer edges of the crimp grips flush with the jaws on both sides.

Maintenance

It is recommended that each operator of the tool be made aware of, and responsible for, the following maintenance steps:

1. Remove dust, moisture, and other contaminants with a clean brush, or soft, lint free cloth.
2. Do not use any abrasive materials that could damage the tool.

3. Make certain all pins; pivot points and bearing surfaces are protected with a thin coat of high quality machine oil. Do not oil excessively. The tool was engineered for durability but like any fine piece of equipment it needs cleaning and lubrication for a maximum service life of trouble free crimping. Use a 30 weight automotive (light) oil used at the oil points, every 5,000 crimps or 3 months, shown in Figure 4A or 4B will significantly enhance the tool life.

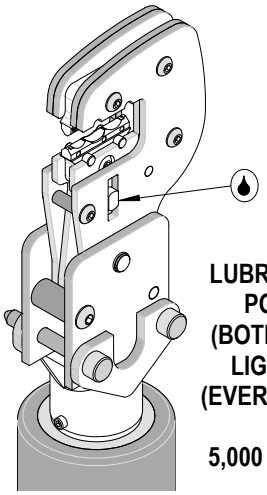
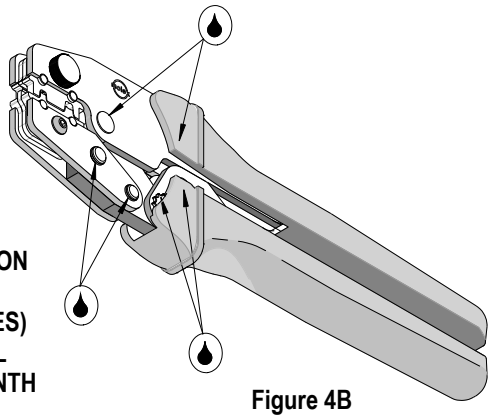


Figure 4A


Figure 4B

4. Wipe excess oil from hand tool, particularly from crimping area. Oil transferred from the crimping area onto certain terminations may affect the electrical characteristics of an application.
5. When tool is not in use, keep the handles closed to prevent objects from becoming lodged in the crimping dies, and store the tool in a clean, dry area.

Miscrimps or Jams

Should this tool ever become stuck or jammed in a partially closed position, **Do Not** force the handles open or closed. The tool will open easily by pressing the ratchet release lever. See Figure 5.

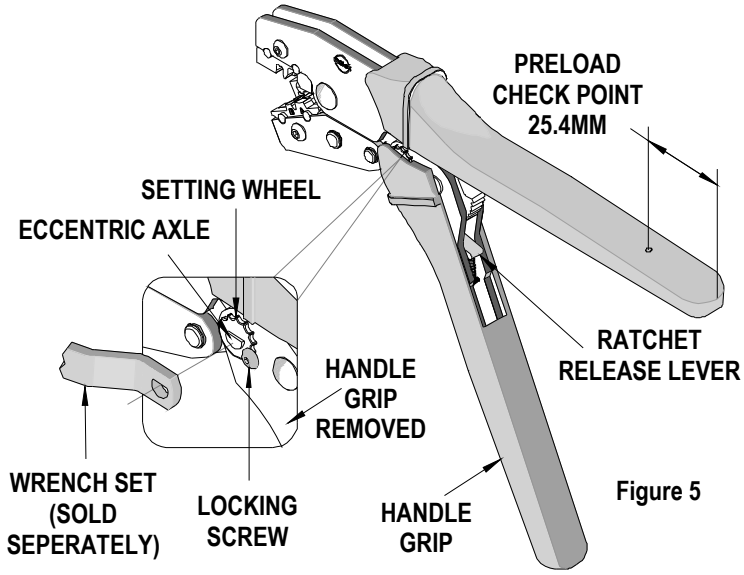


Figure 5

How to Adjust Tool Preload (See Figure 5)

This hand tool is factory preset to 25-45 LBS. preload. It may be necessary over the life of the tool to adjust tool handle preload force. Listed below are the steps required to adjust the crimping force of the hand tool to obtain proper crimp conditions:

1. Remove or fold back the handle grip from the handle to expose the eccentric axle and setting wheel.
2. Remove the locking screw with a 2mm hex wrench. The wrench set (63810-0101), is not supplied. It is sold separately from the hand tool.
3. Turn the eccentric axle and setting wheel with the wrench or pliers Counter-clockwise (CCW) to increase handle force.
4. Replace the locking screw, aligning the nearest notch in the setting wheel to locking screw.
5. Replace the handle grip.
6. Check the crimp specifications or conduct a pull test after tool handle preload force is adjusted.

Warranty

This tool is for electrical terminal crimping purposes only. This tool is made of the best quality materials. All vital components are long life tested. All tools are warranted to be free of manufacturing defects for a period of 30

days. Should such a defect occur, we will repair or exchange the tool free of charge. This repair or exchange will not be applicable to altered, misused, or damaged tools. This tool is designed for hand use only. Any clamping, fixturing, or use of handle extensions voids this warranty.

CAUTION: Molex crimp specifications are valid only when used with Molex terminals and tooling.

CAUTIONS

1. Manually powered hand tools are intended for low volume or field repair. This tool is NOT intended for production use. Repetitive use of this tool should be avoided.
2. Insulated rubber handles are not protection against electrical shock.
3. Wear eye protection at all times.
4. Use only the Molex terminals specified for crimping with this tool.

Certification

Molex does not certify or re-certify commercial grade hand tools but rather supplies the following guidelines for customers to re-certify hand tools.

- This tool is qualified to pull force only. To re-certify, crimp a terminal to a wire, which has been stripped 12.7mm (1/2") long, so there is no crimping of the insulation. Pull the terminal and wire at a rate no faster than 25mm (1.00") per minute. See the Molex web site for the Quality Crimp Handbook for more information on pull testing.
- If the tool does not meet minimum pull force values, handle preload should be increased and the pull test rerun, (See How To Adjust Preload).
- When the hand tool is no longer capable of achieving minimum pull force, it should be taken out of service and replaced.

The chart below shows all applications for this Tool Kit.

Tool Kit Order No.	Tool Order no.	Tool Description	Power Head Order No.	Adapter Description	Figure No.
63819-3270	63810-0100	Hand Crimp Frame (Short)	N/A	N/A	6
	63810-0400	Hand Crimp Frame (Long)	N/A	N/A	6
	63816-0200	Battery Power Tool (110 V)	63816-0300	Power Crimp Head	7
	63816-0250	Battery Power Tool (220 V)	63816-0300	Power Crimp Head	7

Applications for the Tool Kit

Hand Crimp Tool

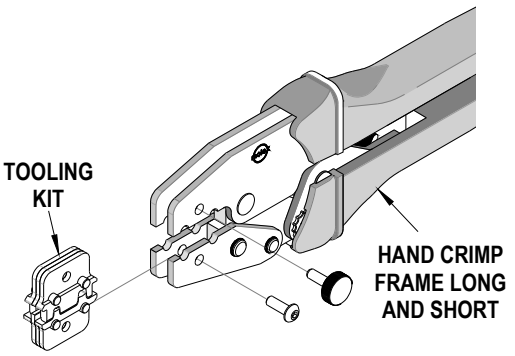


Figure 6

Battery Powered Tool

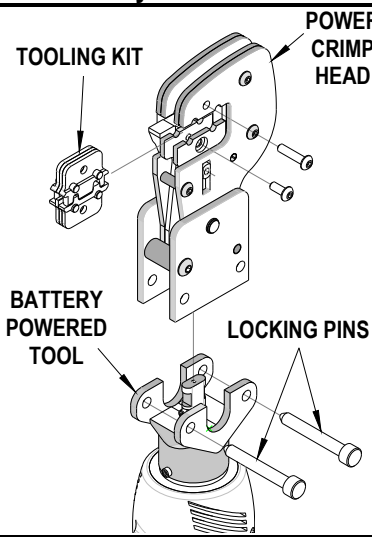


Figure 7

WARNING: *NEVER* operate service, install tool kits, or adjust the Power Crimp Head without proper instruction and without first reading and understanding the instructions in the proper Manual or Specification Sheet. See Chart above for the correct Manual or Specification Sheet.

WARNING: *NEVER* install tooling or service this tool while it is into any power source. Make sure the power is turned off.

CAUTION: Keep fingers away from the crimping area when operating this tool. It may cause severe injury.

CAUTION: Wear safety glasses when operating or serving this tool.

HAND TOOL PARTS LIST

Item Number	Order Number	Description	Quantity
1	63810-0100	Hand Crimp Frame (Short)	1
2	63810-0101	Wrench Set (Not included)	0
3	63810-0103	Repair Kit (Not included)	0
4	63819-3270	Tool Kit	1

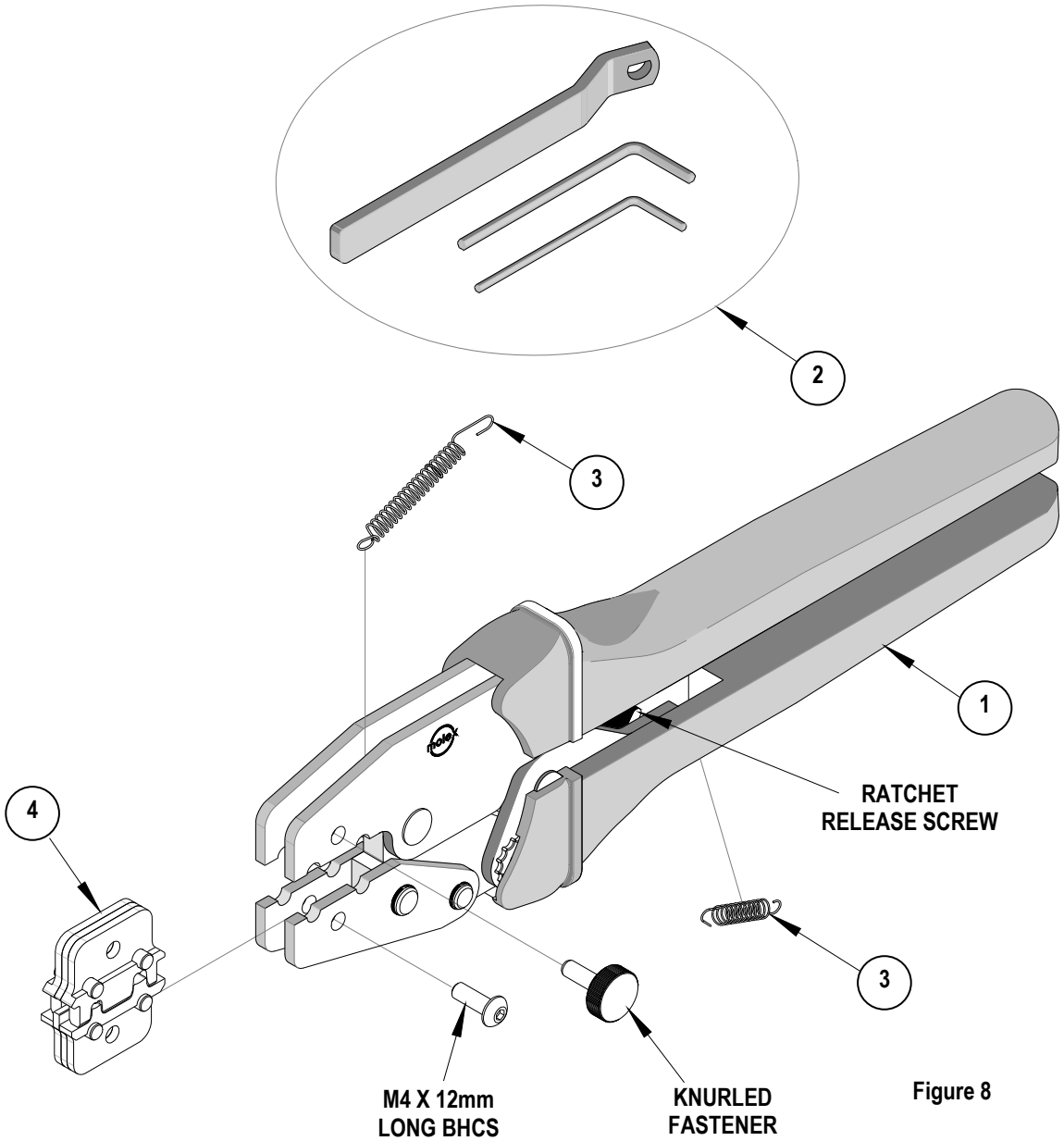


Figure 8

POWER HEAD PARTS LIST

Item	Order No	Engineering No.	Description	Quantity
1	63816-0300	63816-0300	Power Crimp Head	1
2	63819-3270	63819-3270	Tool Kit	1

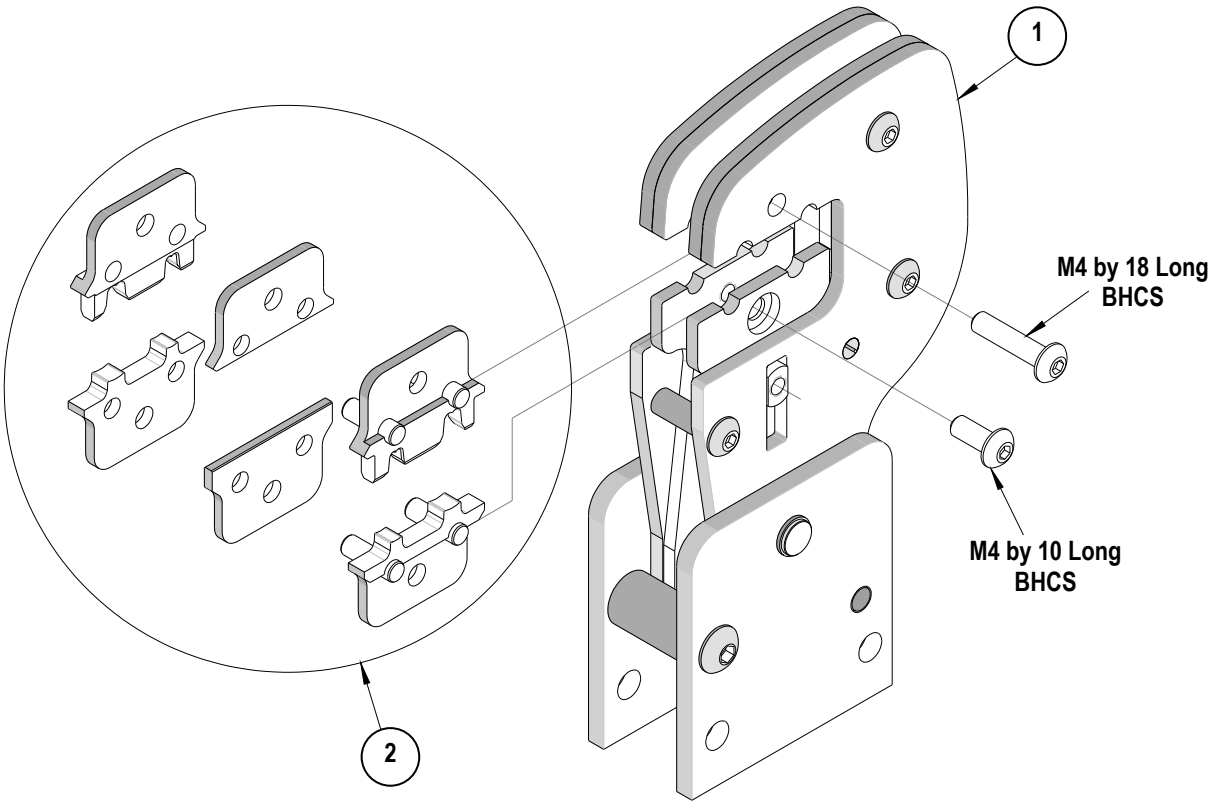


Figure 9

http://www.molex.com