



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

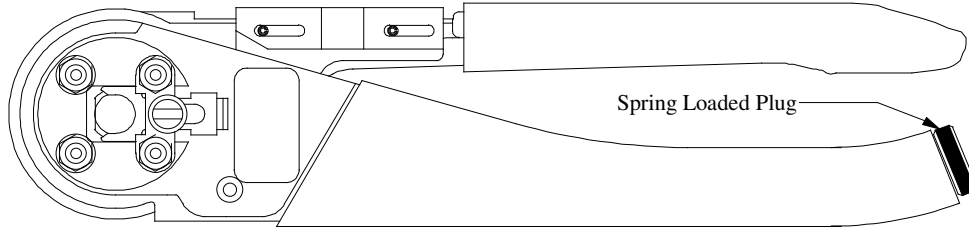
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





# ASTRO TOOL CORP.

## CONNECTOR ASSEMBLY TOOLING



### 11210 (MS3191-A) HAND CRIMPING TOOL AND RELATED TYPES

#### GENERAL

The Astro Tool 11210 MS style Crimp Tool is a cycle controlled, precision Crimp Tool capable of crimping wire barrel sizes 12 to 20.

There are no adjustments for the operator to perform. The Tool's precision cycle-control mechanism eliminates over or under crimping. Color coded positioners locate contacts in proper position and automatically sets the proper crimp depth and proper ratchet release. Store positioners in the Sheet Metal Handle under the Spring Loaded Plug.

The 11210 Crimp Tool is not shipped with positioners. Consult the factory for your specific application.

**A positioner must be installed to operate the Tool.**

#### BASIC TOOL OPERATION

1. The Tool must be in the fully open position. Exert full pressure on the handles to trip ratchet, then release. The handles will spring to the full open position.
2. Loosen the Slide Locking Screw. Pull the Slide to the open position. See figure # 1
3. Pull Trigger Assembly back against spring pressure.

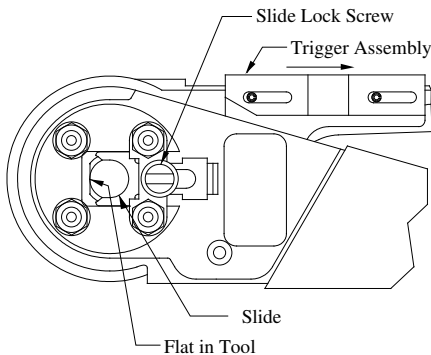


Figure # 1

4. Select the proper Positioner for contact to be crimped and insert into Tool as shown, see figure #2. Ensure that the flat on the Positioner Flange mates with the flat in the Tool. The Flange on the Positioner must be flush with the Handle before the Slide can be fully closed.

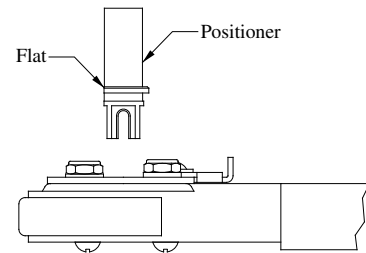


Figure #2

5. After the Positioner is in place, release the Trigger. Move the Slide back into position and tighten the Locking Screw.
6. Insert the prepared contact and wire through the Indenter Body and into the Positioner. Squeeze the Handles until the Tool comes to a positive stop. Release the Handles and the Tool will return to the full open position.
7. Remove the crimped assembly.

#### CAUTION:

Do not press down on wire during the crimp cycle.

## GAGING INSTRUCTIONS

Gaging the Tool requires Astro part # ATK 6000 Gage Kit Assembly.

1. Install Astro Gage Positioner part # 4697 (MS3196-1)
2. Close the Handles to the fully closed position.
3. Holding the Tool closed, insert the GO Pin into the Indenter opening as shown, see figure # 3. The Gage must pass freely between the Indenter tips.
4. Holding the Tool closed, insert the NO GO Pin into the Indenter opening. The Gage Pin must NOT go between the Indenter tips.

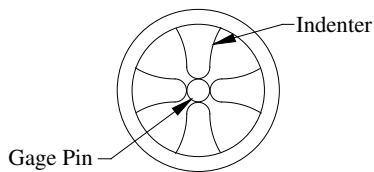


Figure # 3

**CAUTION:**  
**DO NOT CRIMP GAGE.**  
**TOOL DAMAGE WILL RESULT.**

To verify ratchet hold and release, insert NO-GO Gage Pin into the Tool and close the Tool carefully, until the Indenters lightly grip the Gage Pin. **DO NOT CRIMP GAGE.** When the Handles are released the Tool shall not return to the full open position.

## Gaging Data

Positioner Installed in Tool Frame	In-Service Gaging	
	GO	NO-GO
11210 MS3191-A	±.0001	±.0001
MS3191-20A	.0310	.0410
MS3191-16A	.0420	.0520
MS3191-12A	.0630	.0730
MS3191-20B	.0420	.0520
MS3191-16B	.0580	.0680
MS3191-20C	.0310	.0410
MS3191-22D	.0310	.0410
MS3191-16D	.0460	.0560
MS3196-1 GAGE	.0330	.0410

## TOOL SERVICE

Astro Tool's 11210 Crimp Tool is designed for long, reliable service. If the Tool becomes inoperative or does not gage properly, it is suggested that you contact our Customer Service Department for a Return Goods Authorization number and return the Tool to our factory.

Upon receipt of the Tool, Astro will inspect and overhaul each Tool to put the Tool back into acceptable and efficient operating condition. Worn parts will be replaced or repaired. Please note that Astro's Quality Control system is traceable to The National Institute of Standards and Technology (N.I.S.T.).

Service charges for tools not under warranty will be advised upon request.

Parts that Astro deems to have been damaged due to neglect, misuse or accident; and parts that have been altered or repaired by persons other than Astro Tool Corp. employees will be replaced subject to additional charge for such parts.

**TOOL HAS BEEN PERMANENTLY LUBRICATED  
 AT THE FACTORY  
 DO NOT OIL**

**ASTRO TOOL CORP. MANUFACTURERS OF INSERTION, REMOVAL,  
 CRIMP TOOLS AND CONNECTOR SERVICE KITS**

ASTRO TOOL CORPORATION • 21615 S.W. T-V HWY. • BEAVERTON OREGON 97003  
 503-642-9853 • FAX 503-591-7766