

MSK-110

COMPACT HYDRAULIC CRIMPING MACHINE

For CR2016, CR2025, & CR2032 Coin Cells

OPERATION MANUAL



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IMPORTANT NOTES

Thank you for purchasing from Materials Technology International Corporation. This manual contains important operation and safety information prepared for those intending on operating and utilizing the equipment. The prospective user is responsible for carefully reading and understanding the contents of this manual prior to operating the equipment.

MTI reserves the right to update or upgrade the product without informing customers of the data change(s) in this manual. Please visit www.mtixtl.com frequently for the latest information and manual.

GENERAL WARNINGS

MTI will not be responsible for equipment damage, accidents leading to minor or fatal injuries, and etc. caused by the user's negligence or lack of knowledge. Always read the manual fully beforehand and exercise the best judgment when handling the equipment.

⚠ TO AVOID PHYSICAL INJURIES:

- Do not put this equipment near flammable or explosive environments and substances.
- Do not place the instrument too close to the wall or obstruct the air vents. Keep the instrument at least 1 meter in distance from the wall to get enough clearance for safe operations.
- Always operate the equipment in the company of others and do not operate it alone so that accidents can be addressed quickly.

WARRANTY

MTI Corporation provides one year limited warranty for equipment (consumable accessories and parts not covered) from date the product is shipped out. Any defective part(s) will be replaced free of charge during the warranty period. However, the warranty does NOT cover any equipment damage caused by misuse or negligence. After expiration of warranty, MTI will continue to provide technical support and spare parts at a reasonable cost.

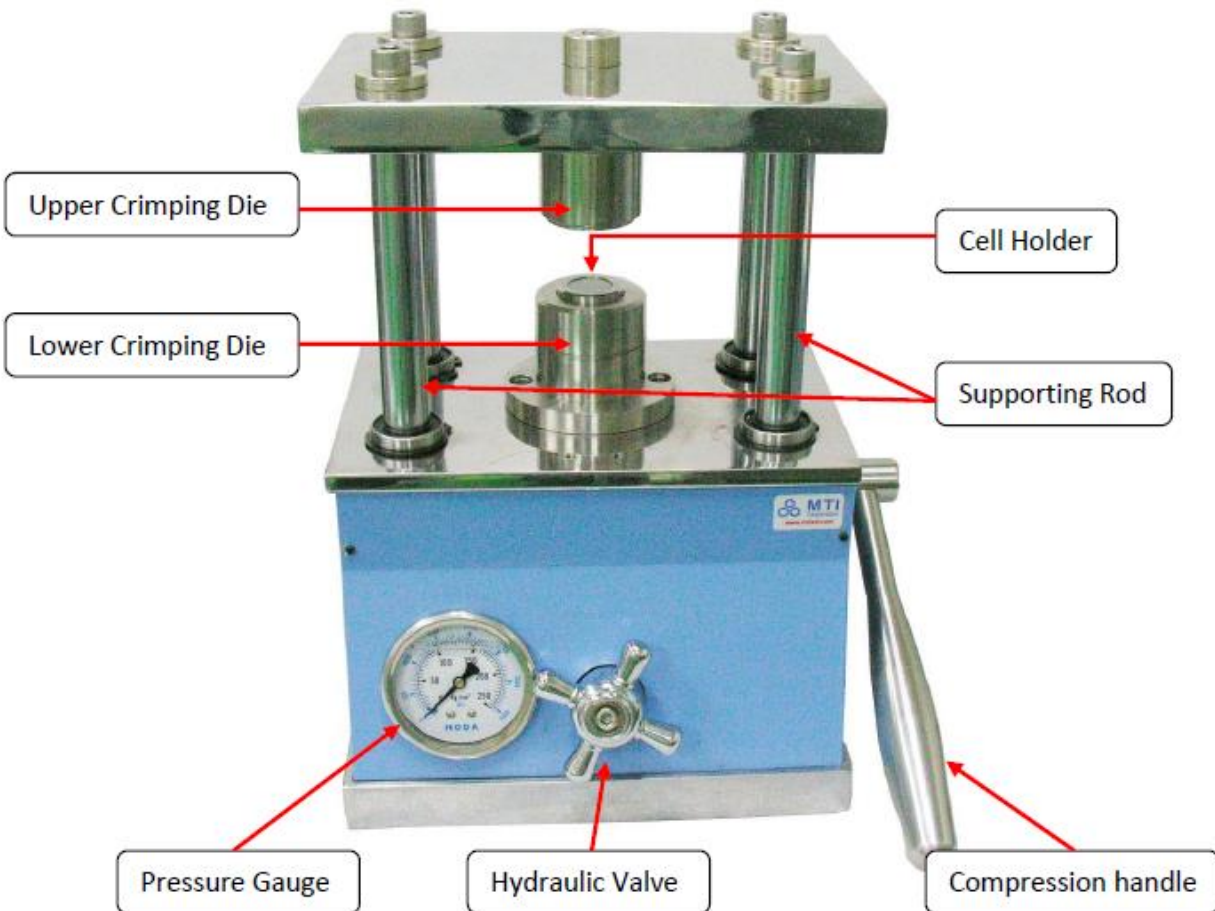
EQUIPMENT INFORMATION

INTRODUCTION

MKS-110 is a newly designed and **CE Certified** coin-cell crimper with lighter weight and a smaller footprint. The crimper is suitable for sealing various types of coin cells such as CR2032, CR2025, and CR2016 without changing the die set. It can also crimp CR2325, CR2450, AG3, AG5 and other special sized casings with optional die sets.

MSK-110 provides the benefit of coin cell assembly operations inside a glove box. In addition, customers can easily replace the original die for disassembling purposes.

STRUCTURE

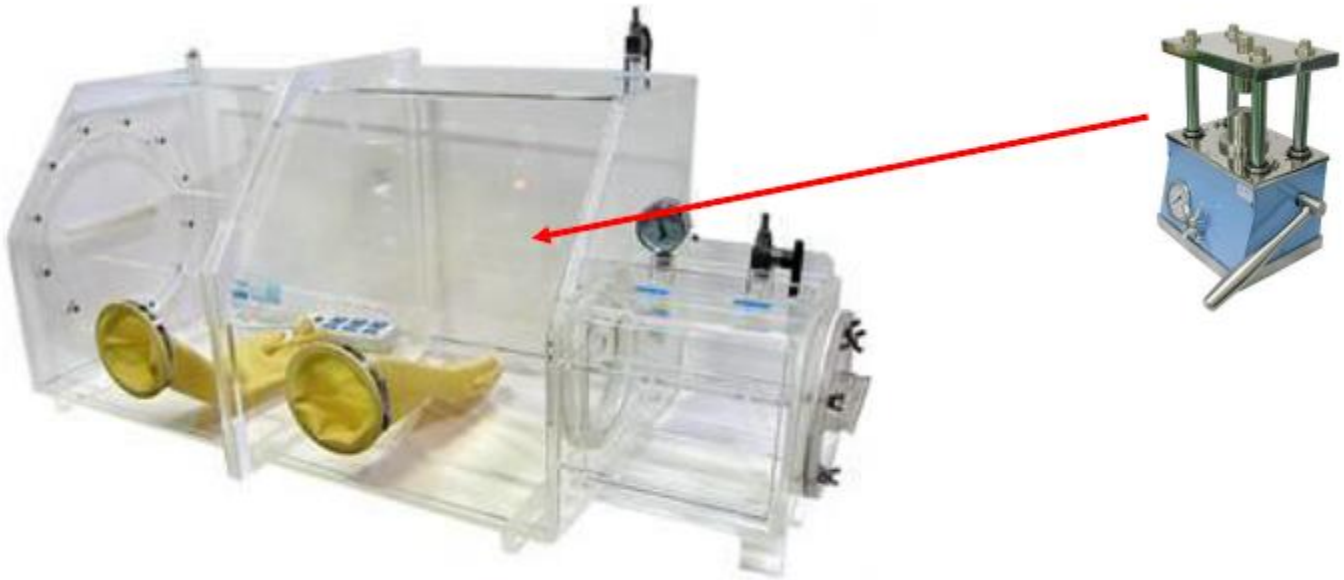


SPECIFICATIONS

- Pressure: Max. 8 metric ton hydraulic with automatic return
- Die: One set of crimping dies for all CR20XX coin cell, such as CR2032, CR2025 and CR2016.
- Structure: Heavy Duty Steel plate
- Net Weight: 25Kg
- Overall Dimensions: 228L x 176 W x 310H mm
- Shipping Weight : 35 Kg

SPECIAL FEATURES

1. Such Compact design cell crimping machine can be operated inside MTI's Glove Boxes. Please visit the following link for detail products information: <http://www.mtixtl.com/glovebox.aspx>



2. Hydraulic construction & labor efficient
3. Built in pressure gauge allows you to easily monitor and control the sealing pressure



psi: pound per square inch

Kg/cm²: kilogram per square

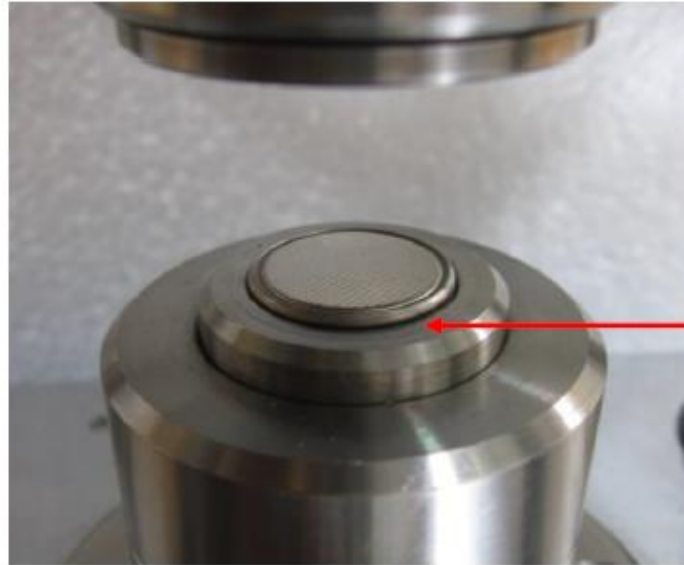
Pressure Gauge

4. Anti-Rust Design.

ASSEMBLY & OPERATION INSTRUCTIONS

OPERATION PROCEDURES

Place the button cell in the die carefully. Make sure the negative side of cell faces up and positive side faces down.



Negative side (-)
face up

1. Tight the hydraulic valve by turning clockwise. (Do not over tighten. It may damage the inner body.)
2. Rock the compression rod up and down manually to compress two parts of crimping die close gradually. When pressure reaches the **500 – 600 PSI (<math>< 50\text{Kg}/\text{cm}^2</math>)** pressure gauge, button cell has been sealed completely.



WARNING:

Overpressure and high pressure retention could cause the hydraulic mechanisms to become damaged and are forbidden. Please find the best pressure by trials and errors according to your button cell casings' properties.

3. Loosen the hydraulic valve by turning it anticlockwise. The machine will automatically release the pressure and the die. (Built in unloading mechanism makes the button cell easily be taken out when release the pressure.)

 **Attention:**

- There is an overpressure protection valve built in the hydraulic press. Default Max. pressure is 50 Kg/cm² which is more than enough for crimping the coin cell.
- When pressure is beyond 50 Kg/cm², pressure will drop and cannot be held (see picture below)



DISMOUNTING THE CRIMPING DIE - FOR CLEANING

You need to clean the bottom die frequently to insure a well crimping. Please clean the die by following the procedures:

1. Screw off the **fasten nut** anticlockwise.



2. Screw off the **Crimping die** (+). Take the die off then clean it by WD-40 oil or oil based lubricant. (MTI suggests customer clean the die every time after finish the work to keep die from corrosion)



EQUIPMENT MAINTENANCE & TROUBLESHOOTING

MAINTENANCE AND EQUIPMENT CARE

- In order to prevent the electrolyte from being spill out off the cell case and corroding the crimping die, please do not overfill the cell cases with electrolyte. Please wash off any electrolyte that gets on the die sets after operation.
- The built-in hydraulic pump is not designed for holding high pressure for long durations. Please do not hold the pressure after assembling a coin cell case, otherwise the components inside the crimping machine could possibly be damaged.
- Do NOT press the crimping die with no cell casing loaded.
- 500~600 PSI (<math><50\text{kg}/\text{cm}^2</math>) pressure will be enough for sealing the coin cell, please do not over press when the pressure reaches this level.
- In order to extend the life span of sealing O-ring inside, please gently push/lift the compression handle.
- Periodically inspect the fastening screws around the crimping die and make sure they are well tightened
- Do not lay the machine down or upside down to prevent oil leaks.
- Please tighten the valve fully after releasing the pressure if transporting the machine in long distances is needed.
- Please lubricant support rods regularly.

TROUBLESHOOTING RESOURCES

- Visit MTI web site link: WWW.MTIXTL.COM for additional information about the instrument
- Contact us by Tel: [510-525-3070](tel:510-525-3070) or email: info@mtixtl.com