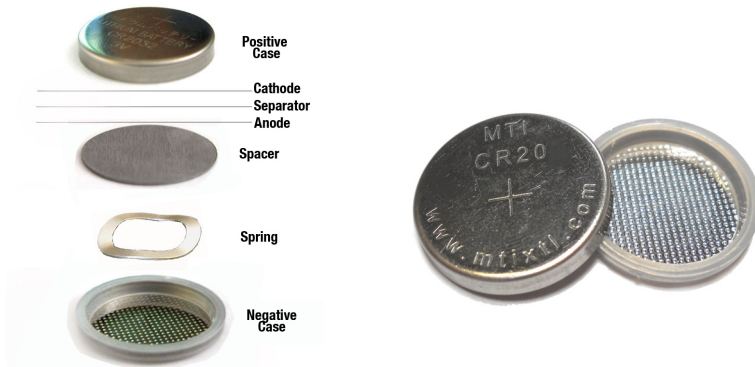
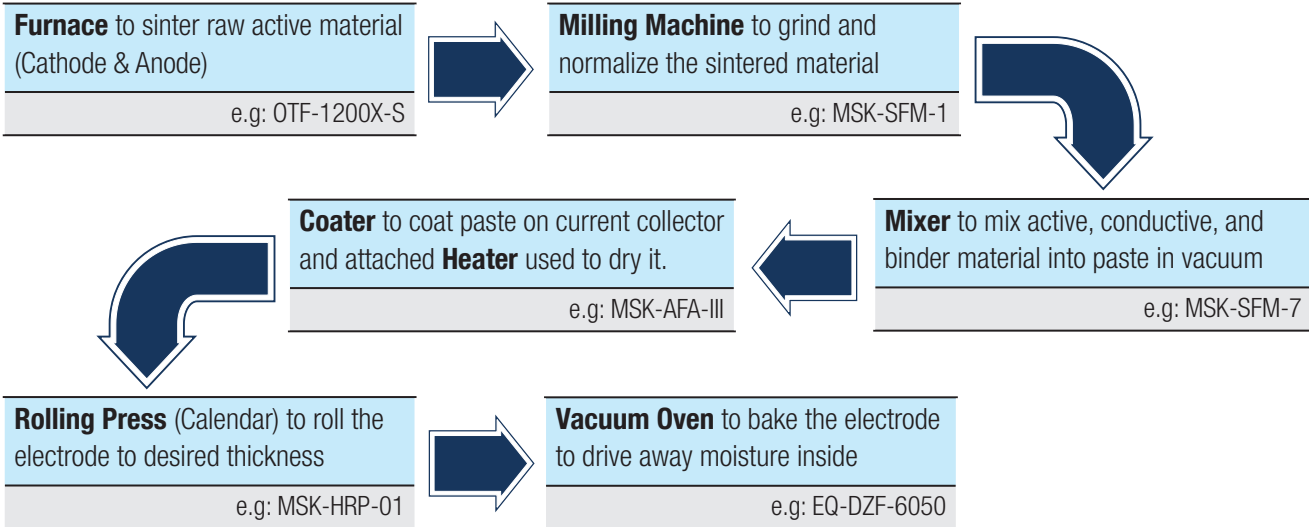


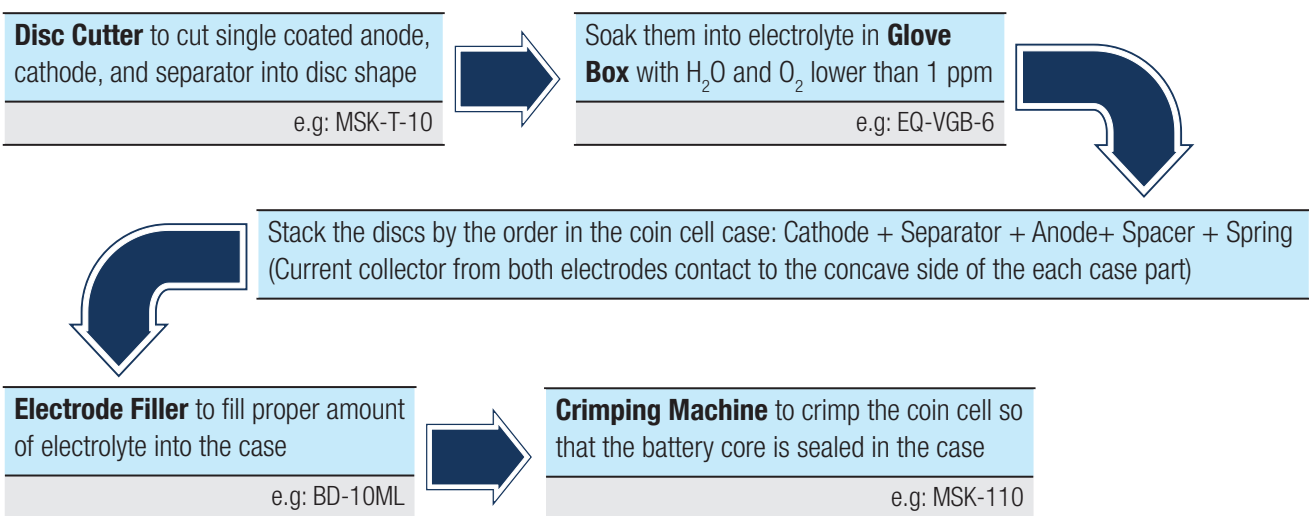
Li-ion Coin Cell Fabrication & Equipment



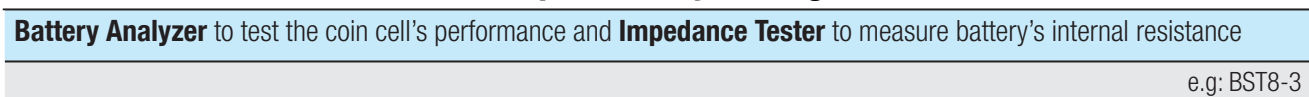
Step 1: Electrode Sheet Preparation



Step 2: Cell Assembly

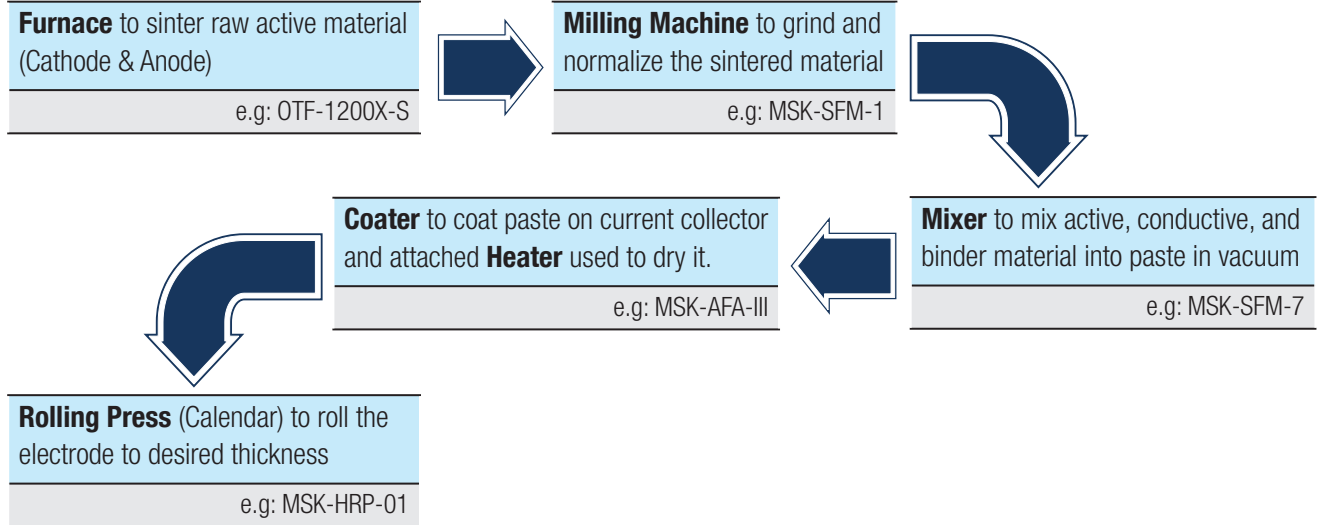


Step 3: Battery Testing

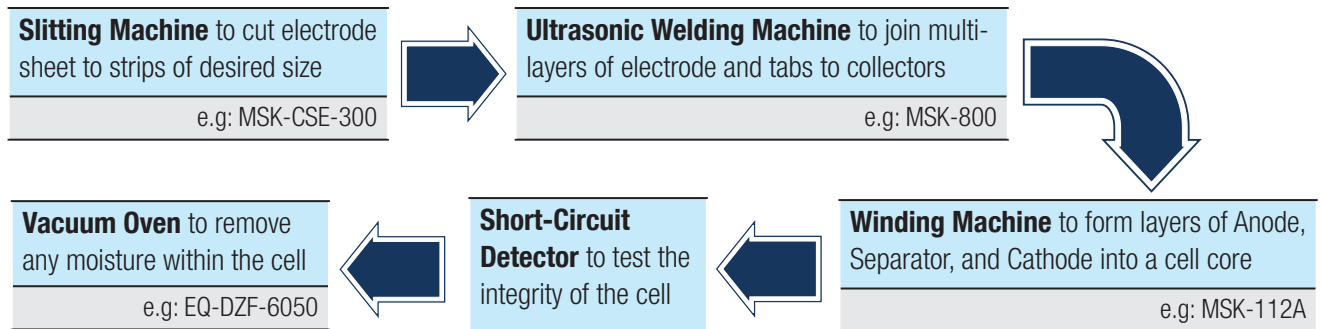


Li-ion Cylindrical Battery Fabrication & Equipment

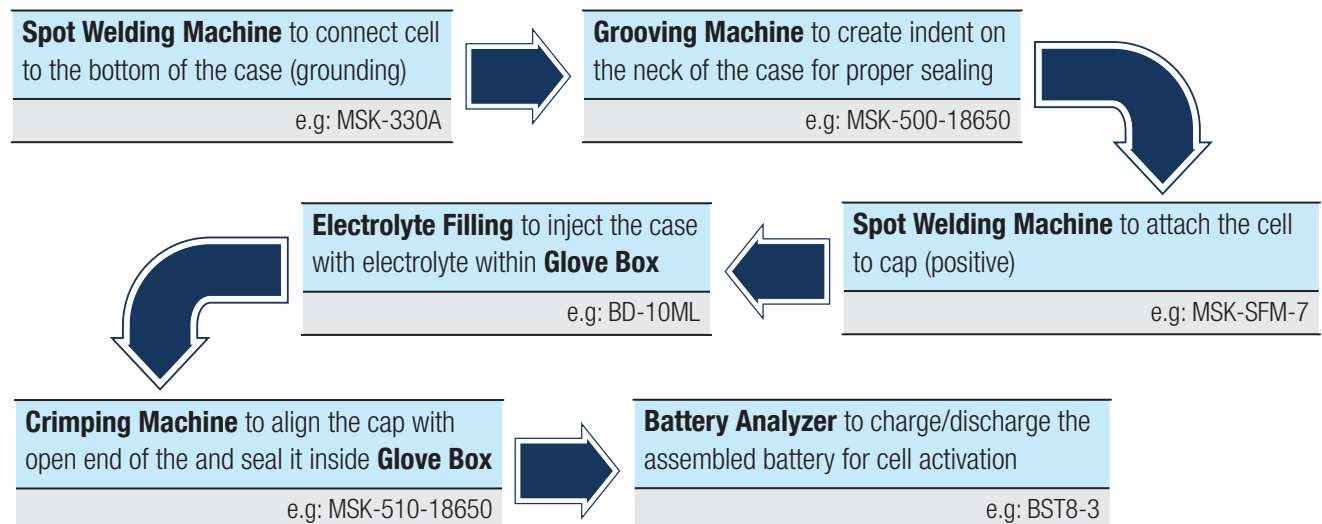
Step 1: Electrode Sheet Preparation



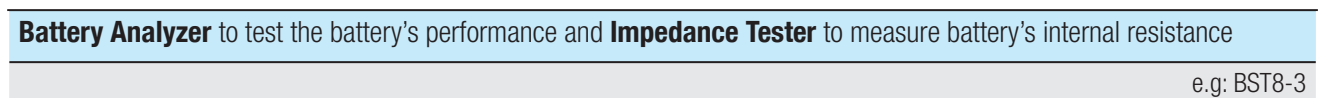
Step 2: Cell Assembly (Winding Method)



Step 3: Case Sealing

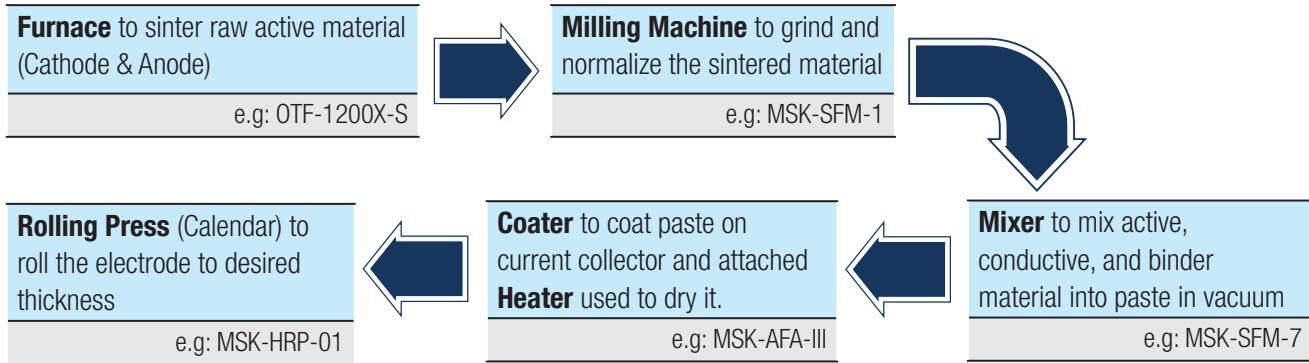


Step 4: Battery Testing

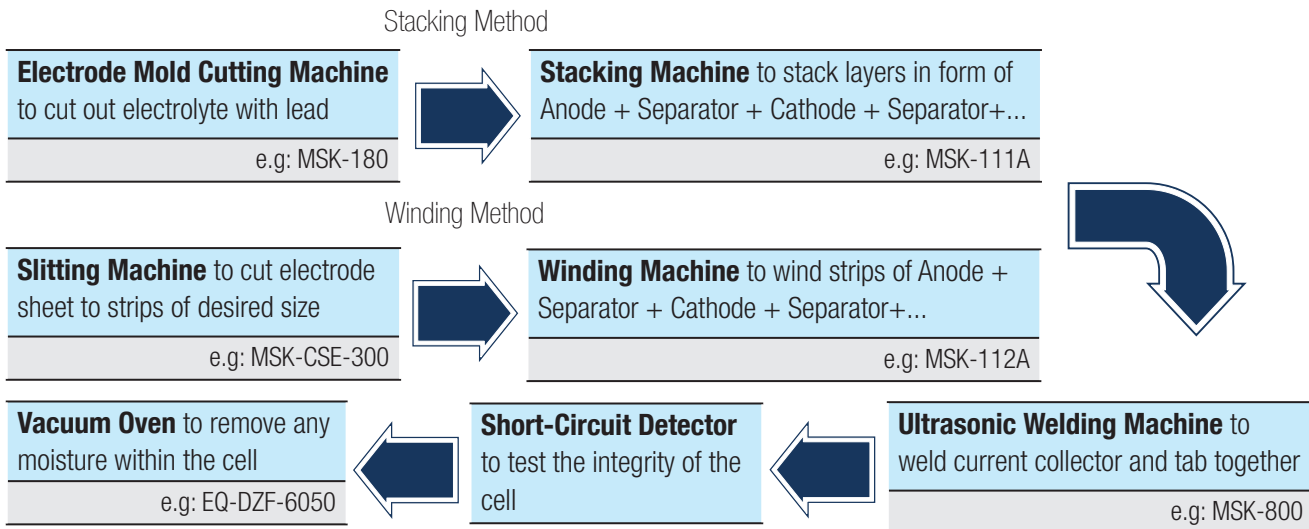


Li-ion Pouch Battery Fabrication & Equipment

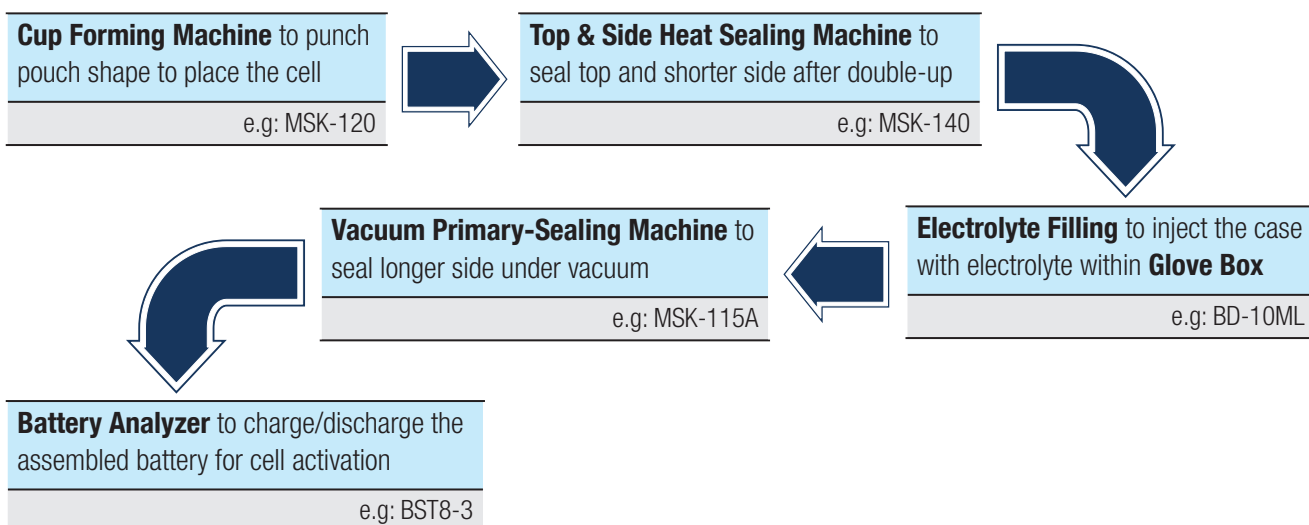
Step 1: Electrode Sheet Preparation



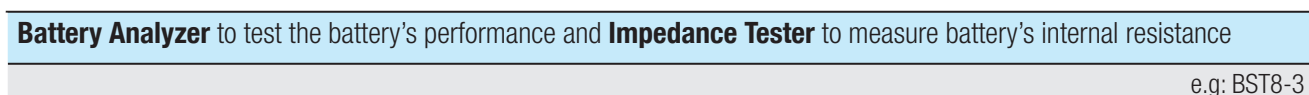
Step 2: Cell Assembly








Step 3: Case Formation & Sealing



Step 4: Battery Testing



SCHEDULE 1

<p>MSK-AFA-III</p> 	<p>MSK-140</p> 	<p>MSK-T-10</p> 	
<p>Compact Tape Casting Film Coater with Dryer, Vacuum Chuck & Film Applicator</p> <ul style="list-style-type: none"> • 10 - 550 m stroke length adjustable by using adjustable position switch • 100 mm adjustable doctor blade included • 120 l/m oilless vacuum pump included for immediate usage • 0 - 100 mm/sec variable traverse speed • Max heating temperature is up to 200°C 	<p>Compact Heating Sealer for Sealing Laminated Aluminum Case of Pouch Cells</p> <ul style="list-style-type: none"> • Max sealing length up to 190 mm • Sealing width up to 3.2 mm • Sealing thickness up to 0.19 - 0.3 mm • 25 mm die opening • 0 - 0.7 MPa adjustable sealing pressure • 50 - 300°C adjustable sealing temperature • 0 - 99 Seconds adjustable heating timer • Soft sealing blade (with tab in between) 	<p>Compact Precision Disc Cutter with Standard 16, 19, 20 Dia. mm Cutting Die</p> <ul style="list-style-type: none"> • Cr plated steel as major structural material • 16, 19, and 29 mm precision dies are included • Compact size which can be put into glove box through air lock chamber • Can be customized up to 2mm diameter dies 	
<p>MSK-120</p> 	<p>MSK-180</p> 	<p>MSK-111A</p> 	
<p>Pouch Cell Case Forming Machine for Aluminum Laminated Films</p> <ul style="list-style-type: none"> • < 6.0 mm max pouch depth to punch • 5 metric tons max punching pressure • < 8 seconds per trial for stroke frequency • 0.11 - 0.20 mm Aluminum laminated film thickness • Max die size is up to 150 mm L x 120 mm W x 6 mm H 	<p>Semi-Automatic Die Cutter for Pouch Cell Electrode Sheet</p> <ul style="list-style-type: none"> • 300 mm L x 250 mm W working table area • 81 mm L x 49 mm W with current collect die set is included • Built in IR sensor (safety curtain) • +/- 0.1 mm cutting accuracy • 800 - 2000 pieces of electrodes per hour production yield 	<p>Semi-Automatic Stacking Machine for Pouch Cell</p> <ul style="list-style-type: none"> • 200 mm max stacking layer length • 400 mm fixed travel distance • 1 - 9999 travel cycles • 40 - 80 psi suggested air pressure • Stacking platform consists of 550 mm L x 390 mm W x 660 mm H 	
<p>EQ-VGB-6</p> 	<p>Large Glove Box with Gas Purification System & Digital Control</p> <ul style="list-style-type: none"> • Automatic pressure control by PLC system (+/- 12 mbar) • 1220 mm L x 760 mm W x 900 mm H chamber dimension • < 1 ppm water concentration • < 1 ppm oxygen concentration • < 0.05 Vol%/hour leak rate • > 0.3 µm inlet & outlet filter 	<p>BD-10ML</p> 	<p>Bottletop Electrolyte Digital Dispenser with 1 L SS Bottle</p> <ul style="list-style-type: none"> • Uses a floating piston design with no seals to wear or replace, minimizing service downtime • 4 PP bottle adapters, 45/40mm, 45/33mm, 33mm/28, 33mm/24 and filling tube • One 1000 mL stainless steel bottle

<p>MSK-115A</p> 	<p>MSK-170</p> 	<p>MSK-112A</p> 
<p>Compact Vacuum Sealer for Preparing Pouch Cell</p> <ul style="list-style-type: none"> • Sealing pressure up to 7 kg/cm² adjustable • 200 mm L x 150 mm W max sealing dimensions • 5 mm edge sealing width • 50 - 250°C adjustable sealing temperature • 50 - 250°C adjustable sealing temperature • 0 - 99 Seconds adjustable heating timer • Hard sealing blade (no tab in between) 	<p>Electrolyte Diffusion Chamber for Professional Li-ion Battery Research</p> <ul style="list-style-type: none"> • 0 - 1 MPa adjustable air pressure • 326 mm L x 206 mm W x 148 mm H inner chamber size • 0 - 99.99 sec air inflation time • 0 - 99.99 sec vacuum condition hold time • -20 to 40°C operation temperature • Easy program setting for specific vacuum condition 	<p>Semi-Automatic Winding Machine for Electrodes</p> <ul style="list-style-type: none"> • Winding speed up to 250 rpm adjustable • Winding blade available for pouch cell and cylindrical cell • Switchable between clockwise and counterclockwise
<p>MSK-800</p> 	<p>MSK-500-18650</p> 	<p>MSK-510-18650</p> 
<p>Desktop Ultrasonic Metal Welder</p> <ul style="list-style-type: none"> • 300 W max power consumption • 4 mm L x 4 mm W welding area • Two welding heads and three welding bases are included for welding both Al & Cu current collectors up to 25 layers • Two types of patterns for various usage • 30 - 40 kHz adjustable frequency • 85 psi pneumatic control 	<p>Desktop Semi-Auto Grooving Machine for Various Cylinder Cell</p> <ul style="list-style-type: none"> • 400 grooving per hour productivity • > 0.5 MPa air pressure is required • CR123 / 18650 / 26650 / 32650 / AA selectable • 1.2 - 2.0 mm depth grooving dimensions • 1.1 - 1.5 mm width grooving dimensions • +/- 0.1 mm grooving accuracy • > 1 million times grooving blade durability 	<p>Desktop Hydraulic Sealing Machine for 26650, 18650, 32650, CR123, AA, AAA</p> <ul style="list-style-type: none"> • Driving force using manual hydraulic pressing up to 5T • Six standard die selectable • It is necessary to groove the opening end of the cylindrical case by using the MSK-500 grooving machine before sealing the cap • Free 100 pcs sample of selected die
<p>MSK-330A</p> 	<p>Precise Pneumatic Point Welding Machine</p> <ul style="list-style-type: none"> • 10 kW max power • 0.1 - 0.8 MPa air pressure range • 0 - 99 A welding current • 0.03 - 0.25 mm welding thickness • Controlled by microcontroller to achieve monopulse, dipulse, & multiple-pulse welding 	<p>MSK-CSE-300</p>  <p>Semi-Automatic Slitting Machine for Electrodes of Cylinder and Pouch Cell</p> <ul style="list-style-type: none"> • 4 sets of slitting blades (two blades with slitting width of 58mm, and another two with slitting width of 56 mm) • 100 - 300 microns cutting thickness • 0 - 4 m/min adjustable speed • Tungsten alloys blade material

SCHEDULE 1

OTF-1200X-S



Compact Split Tube Furnace with Vacuum Flanges & Optional 1"-2" O.D Quartz Tube

- Power: 1.2 kW
- Max temperature: 1200°C (<1 hour)
- Max Heating Rate: < 20°C/min
- Temperature Accuracy: +/- 1°C
- Heating element: Fe-Cr-Al Alloy doped by Mo
- Heating Zone Length: 8" (200 mm) single zone
- Vacuum flanges, thermal blocks, and quartz tube included for quick usage

BST8-3



8 Channel Battery Analyzer for All Rechargeable Cells

- To analyze small coin cells and cylindrical batteries from 6.0 mA to 3000 mA, up to 5V
- Eight independent programmable channels
- The software (TC5.3) with calibration function is included to set various working modes for measuring capacity and life cycle for all types of rechargeable batteries
- Accuracy: $\pm(0.05\%$ of reading + 0.1% of range)
- Time interval: 1 - 900s
- Max measurement cycles: 9999 cycles

MSK-HRP-01



4" Hot Rolling Press

- Max heating temperature: 125°C
- 100 mm Dia. x 100mm width Rollers made from hardened tool steel HRC60-62
- Calendering thickness in the range 0 - 1.2 mm adjustable
- Rolling speed 0 - 40mm /sec adjustable

EQ-DZF-6050



53L 250°C Vacuum Oven (16x13x14")

- Observation window consists of inner tempered glass and outer transparent polycarbonate shield
- Inner Chamber size: 415 L mm x 345 H mm x 370 W mm
- Capacity: 53 liter
- A good vacuum seal is achieved by silicone door gasket and positive latch door
- 1500 W power consumption

MSK-SFM-1



Bench-Top Planetary Automatic Ball Mill with 4 Alumina Jars (4 x 500mL)

- Max power consumption: 500 W
- Main plate rotation: 30 - 350 rpm
- Mixing tank self rotation: 60 - 700 rpm
- Timer controls major platen's running time from 1 to 999 minutes
- Timer control tank rotation time from clockwise to anticlockwise direction: 1-99 minutes
- Four 500 ml Alumina Jars are included

MSK-110



Compact Hydraulic Crimping Machine: One for All Button Cells

- One set of crimping die for CR2032, CR2025, and CR2016 included
- PTFE core to prevent coin cells from being short circuited
- Heavy Duty Steel Platform
- Max. 8 metric Tons hydraulic pump with automatic pressure relief

MSK-SFM-7



Desk-Top Bubble Remover (150/500ml) with Vibration Plate & Two Containers

- Rotary speed: 320 rpm
- One 150 ml stainless steel and one 500 ml container are included
- Built in vacuum pump with vacuum level -0.08~0.09 MPa
- Vibrating at 1000 Hz
- Power up to 150 W