

Manual Lithium Battery Electrode Sheet Winding Machine

Item Number: YZ01



Introduction

Manual lithium battery electrode sheet winding machine for supercapacitor cylindrical and pouch cell fabrication featuring adjustable guides bidirectional variable speed winding support rollers and compact foot-pedal operation for dependable laboratory electrode assembly and repeatable cell winding workflows.

[Learn More](#)

Application	Description	Key Benefit
Pouch lithium battery cell fabrication	Winds positive and negative electrode sheets with separator material into flat cell cores within the applicable flat-cell dimensional range.	Supports preparation of flat electrode assemblies for pouch-cell work.
Cylindrical lithium battery cell fabrication	Uses the cylindrical winding needle arrangement to wind electrode and separator materials for cylindrical cells up to the stated size limit.	Provides a dedicated winding configuration for cylindrical cell cores.
Supercapacitor cell winding	Forms wound cell structures from positive and negative electrode sheets and separator material for supercapacitor applications.	Extends the equipment's use to supercapacitor electrode assembly.
Electrode winding process development	Allows adjustment of the material guide position, winding speed, direction, and needle arrangement during electrode-winding work.	Provides controllable mechanical settings for evaluating winding procedures.
Flat cell core preparation	Uses the square winding needle component and adjustable square-needle width to prepare flat cell cores.	Accommodates flat-cell winding requirements through a changeable needle assembly.
Cylindrical cell core preparation	Uses opposing left and right round needles to clamp the electrode leader and form a wound cylindrical core.	Supports an ordered operating sequence for cylindrical-core winding.

Product Item Number	Parameter	Specification
YZ01	Power supply	220V/50Hz
YZ01	Power	25W~40W
YZ01	Rotational speed	0~170 revolutions/minute, adjustable
YZ01	Applicable flat cell size	Length (20100) x Width (2080) x Thickness (MAX30) mm; selected according to customer requirements
YZ01	Applicable cylindrical cell	Within Phi35 x L90 mm; changing between flat-cell and cylindrical-cell winding requires changing the winding needle
YZ01	Standard round winding needle	Phi3 mm
YZ01	Equipment dimensions	L550mm x 310mm x 280mm
YZ01	Equipment weight	25Kg

Stage	Procedure
Cell-core winding	Adjust the material-guide channel ruler plate so it matches the electrode sheet width. Place the electrode sheet into the guide channel, then position the leading end of the electrode sheet at the winding needle. Push the right needle inward so it engages with the left needle and clamps the electrode sheet. Press the foot valve to rotate the motor and complete winding. After winding, push the right needle away and remove the cell core.

Stage	Procedure
Round needle replacement	Insert the left round needle into the bearing and tighten the coupling screw. Position the electrode sheet, then engage the right round needle with the left round needle to perform winding.
Square needle replacement	Insert the square winding-needle component into the bearing and tighten the coupling screw. Loosen and remove the support-wheel bracket from the two screws at the bottom to prevent interference. To adjust square-needle width, loosen the square-needle locking screw, set the required width, and retighten the screw.