

# Vertical Cylindrical Battery Grooving Machine

Item Number: YZ12



## Introduction

Vertical cylindrical battery grooving machine with adjustable 1.2–2.0 mm depth,  $\pm 0.1$  mm precision, PLC touchscreen control, and 400 EA/H semi-automatic capacity for stable cell production and compact 220 V operation across battery research and capacitor shell processing applications.

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| Application                       | Description                                                                                                                                     | Key Benefit                                                                                  |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Cylindrical Battery Cell Assembly | Grooves cylindrical steel shells after the cell and internal components have been placed inside the housing.                                    | Supports uniform shell preparation while helping retain internal spacers during processing.  |
| 32700 Battery Development         | Processes large cylindrical battery shells in research, pilot-line, and small-batch development workflows when configured for the 32700 format. | Provides an adaptable route for larger-format cylindrical cell production.                   |
| 4680 Cell Process Development     | Can be customized for grooving large cylindrical shells used in 4680 battery research and manufacturing development.                            | Extends equipment utility to emerging large-format cell programs.                            |
| Aluminum Capacitor Shell Grooving | Performs grooving on aluminum capacitor shells with diameters up to $\Phi 30$ mm.                                                               | Enables one compact system to support both battery and capacitor shell processing.           |
| Battery R&D Laboratories          | Supports repeated shell preparation during electrode, cell assembly, and process parameter development activities.                              | Combines adjustable dimensions, touchscreen control, and compact installation requirements.  |
| Pilot Production                  | Provides semi-automatic operation at up to 400 EA/H for controlled small-batch manufacturing and process verification.                          | Delivers practical throughput without the footprint of a larger automated production system. |
| Quality and Process Validation    | Produces repeatable groove dimensions for evaluating shell geometry, assembly compatibility, and downstream manufacturing consistency.          | $\pm 0.1$ mm machining precision improves measurement and process comparison.                |

| Parameter                | Specification                                    |
|--------------------------|--------------------------------------------------|
| Product Item Number      | YZ12                                             |
| Product Type             | Vertical cylindrical battery grooving machine    |
| Product Placement Method | Vertical                                         |
| Groove Depth             | 1.2–2.0mm (adjustable)                           |
| Groove Width             | 1.1–1.5mm (according to grooving tool thickness) |
| Machining Precision      | $\pm 0.1$ mm                                     |
| Grooving Tool Life       | ≥ 100h                                           |
| Capacity                 | Semi-automatic 400 EA/H                          |
| Power Supply             | 220v/50Hz                                        |
| Power                    | 200W                                             |
| Compressed Air           | 0.5MPa–0.7MPa                                    |
| Product Dimensions       | L420xW370xH550mm                                 |
| Net Weight               | 50kg                                             |

| Parameter                           | Specification                                                                   |
|-------------------------------------|---------------------------------------------------------------------------------|
| Compatible Workpieces               | Cylindrical steel battery shells containing cells and aluminum capacitor shells |
| Aluminum Capacitor Shell Capability | Suitable for grooving aluminum capacitor shells with diameter up to $\Phi 30$   |
| Customization Capability            | Can be customized for 32700 and 4680 large cylindrical grooving                 |