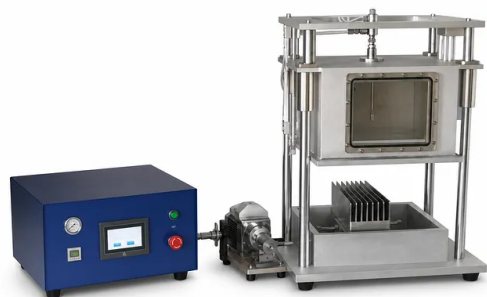


# Vacuum Electrolyte Filling Resting Hot Press Pre Sealing Integrated Machine

Item Number: RB31



## Introduction

Integrated vacuum electrolyte filling resting and hot press pre sealing equipment delivers accurate dosing adjustable process control reliable pouch cell edge sealing and consistent battery capacitor manufacturing results for laboratory production workflows.

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| Application                     | Description                                                                                                                             | Key Benefit                                                                            |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Lithium-ion pouch cell assembly | Fills electrolyte into pouch-format cells under vacuum, provides a defined standing stage, then completes hot-press pre-sealing.        | Brings three sequential assembly operations into one controlled workflow.              |
| Battery capacitor processing    | Supports electrolyte filling and pre-seal preparation for battery capacitor products within the specified cell size range.              | High dosing accuracy and adjustable standing conditions support consistent processing. |
| Cell R&D parameter studies      | Enables teams to vary vacuum conditions, standing time, fill volume, dispensing speed, sealing temperature, pressure, and sealing time. | Flexible settings support structured evaluation of process parameters.                 |
| Glove box battery assembly      | Can be operated in a glove box where moisture-sensitive cells require a protected working environment.                                  | Supports integration into controlled assembly environments.                            |
| Dry-room pilot production       | Provides vacuum filling, standing, and pre-sealing capability for pilot-scale dry-room cell processing.                                 | Reduces equipment handoffs and supports repeatable programmed operation.               |
| Pouch edge pre-sealing          | Applies adjustable hot-press pressure and temperature to produce a specified edge seal before subsequent cell operations.               | Guided seal-head motion supports post-sealing parallelism requirements.                |
| Electrolyte dosing verification | Uses adjustable delivery from 0.2 g upward according to the selected filling pump and a specified +/-1% filling accuracy.               | Provides a controllable platform for assessing electrolyte delivery settings.          |

| Parameter                   | Specification                                                             |
|-----------------------------|---------------------------------------------------------------------------|
| Product item number         | RB31                                                                      |
| Integrated functions        | Electrolyte filling, standing, and pre-sealing                            |
| Process sequence            | Vacuum first, electrolyte filling, standing, then hot-press pre-sealing   |
| Standing vacuum settings    | Low and high vacuum adjustable                                            |
| Standing time setting       | Each time setting adjustable up to 9999 min                               |
| Key component materials     | 304 and 316 corrosion-resistant stainless steel                           |
| Vacuum chamber construction | Aluminum welded construction; corrosion-resistant and structurally stable |
| Inlet and outlet connection | Chemically resistant flexible hose                                        |
| Inlet and outlet tubing     | Phi 6 tube                                                                |
| Applicable battery length   | 20-200 mm, including tabs                                                 |
| Applicable battery width    | 20-200 mm, including airbag position                                      |

| Parameter                       | Specification                                                           |
|---------------------------------|-------------------------------------------------------------------------|
| Applicable battery thickness    | 0-15 mm                                                                 |
| Capacity range                  | 0.2 ml to unlimited, adjusted according to the electrolyte filling pump |
| Cell electrolyte filling amount | 0.2 g to unlimited, adjusted according to the electrolyte filling pump  |
| Electrolyte filling accuracy    | +/-1%                                                                   |
| Discharge speed                 | Adjustable, 6 ml/s                                                      |
| Seal-head material              | Copper                                                                  |
| Seal-head temperature           | Room temperature to 250 degrees C, adjustable                           |
| Temperature control accuracy    | +/-2 degrees C                                                          |
| Heat-sealing pressure           | 0-5 Kg/cm <sup>2</sup> , adjustable                                     |
| Heat-sealing time               | 0-99 s, adjustable                                                      |
| Seal-edge width                 | 5 +/-0.4 mm; available according to customer requirements               |
| Maximum seal-edge size          | 200 mm                                                                  |
| Sealing thickness accuracy      | Difference in packaged thickness at any two points less than 15 um      |
| Seal-head drive                 | Pneumatic cylinders                                                     |
| Seal-head guidance              | Two linear guide sleeves for upper and lower seal heads                 |
| Chamber-cover drive             | Pneumatic cylinder                                                      |
| Chamber-cover guidance          | Rotary guide sleeve                                                     |
| Chamber observation             | Transparent viewing window                                              |
| Control system                  | PLC and touchscreen operation                                           |
| Heating element                 | 300 W heating tube                                                      |
| Heating power consumption       | Approximately 0.6 KW during heating                                     |
| Power supply                    | AC220V/50Hz/1KW                                                         |
| Overall dimensions              | L510 mm x W400 mm x H650 mm                                             |
| Weight                          | 90 kg                                                                   |
| Operating environment           | Glove box or dry room                                                   |