

Automatic Supercapacitor Electrolyte Filling Machine

Item Number: CX05



Introduction

Automatic supercapacitor electrolyte filling machine uses vacuum filling and pressurization for accurate adjustable 0 to 250 ml dosing, reliable electrolyte absorption, corrosion-resistant construction, and independent multi-station operation.

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Application	Description	Key Benefit
60-Series Supercapacitor Manufacturing	Fills electrolyte into compatible 60-series supercapacitor products using the specified vacuum, filling, and pressurization sequence.	Supports a process designed for consistent, reliable, and complete electrolyte absorption.
Supercapacitor Pilot-Line Development	Provides adjustable vacuum, standing, and pressurization settings for teams establishing filling conditions before broader production deployment.	Enables process parameters to be configured around the required cycle stages.
Electrolyte Filling Process Validation	Supports controlled evaluation of filling volume, vacuum condition, standing time, and pressure-based post-fill treatment.	Helps teams set repeatable operating conditions using defined adjustable parameters.
Multi-Station Cell Processing	Uses selectable workstations that can operate independently when separate products or process activities must be handled at different stations.	Reduces station-to-station interference during operation.
Dry-Air Energy-Storage Production Areas	Operates with dry air, a -98 KPa-or-better vacuum source, and nitrogen compatible with the glove-box working gas.	Aligns the equipment with the stated utility and environmental requirements.
Laboratory and Production Transfer	Applies the same vacuum-filling and pressurization principle for process work ranging from controlled laboratory activity to production-oriented operation.	Combines adjustable process settings with a nominal capacity of 1 PCS per minute.

Parameter	Specification
Site-facing item number	CX05
Intended application	Electrolyte filling process for supercapacitors
Compatible product	60-series supercapacitor products
Process method	Vacuum first, then electrolyte filling, then pressurization
Filling accuracy	Plus or minus 1 percent
Adjustable filling volume	0 to 250 ml adjustable
Vacuum during filling	Maintained at -98 KPa or above; vacuum pump supplied separately
Required vacuum source	Vacuum pump, 20 L/s, -98 KPa or above; or pipeline vacuum, -98 KPa or above
Nitrogen requirement	Consistent with glove-box working gas; greater than or equal to 0.4 MPa
Supply voltage	AC220V
Site power supply	220V, 50HZ
Permitted voltage fluctuation	+10% to -10%
Power	1.5KW
Environmental temperature	Determined by the purchaser's factory environment

Parameter	Specification
Relative humidity / atmosphere	Dry air
Airflow requirement	Site air circulation must be maintained
Adjustable vacuuming time	Settable and adjustable
Adjustable low-vacuum level	Settable and adjustable
Adjustable filling standing time	Settable and adjustable
Adjustable pressurization pressure	Settable and adjustable
Adjustable pressurization time	Settable and adjustable
Workstations	Up to 12 workstations selectable; each station can operate without interfering with the others
Dual-station overall dimensions	Length 900 x width 800 x height 880 mm
Filling-tank fittings	Stainless steel
Flexible tubing	Corrosion-resistant PE tubing
Machine body material	6-series aluminum alloy
Corrosion resistance	Complete unit is corrosion resistant
Nominal production capacity	1 PCS per minute; actual capacity depends on the purchaser's conditions