

# ROLL PRESS (CALENDERING MACHINE)

Precision Densification for High Performance Battery Electrodes

Roll Press is designed for calendaring of battery electrodes to achieve uniform thickness, high density, and excellent surface finish, improving the electrochemical performance and cycle life of batteries.



Uniform Thickness



High Pressure



High Precision



Safe & Reliable

## KEY FEATURES



**High Precision Calendaring**  
Precision ground rolls ensure uniform thickness and excellent surface finish.



**Adjustable Gap Control**  
Micrometer adjustment enables accurate and repeatable gap setting.



**Variable Speed Control**  
Adjustable rolling speed for optimized process performance.



**Robust & Reliable Design**  
Heavy-duty construction for stable operation and long service life.



**Motorized Operation**  
Forward and reverse operation for easy and efficient processing.

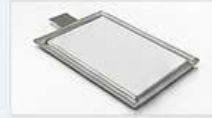
## TECHNICAL SPECIFICATIONS

Parameter	Specification
Application	Calendaring of lithium-ion, sodium-ion, and solid-state battery electrodes
Roll Material	Hardened alloy steel
Roll Diameter	96 – 150 mm (model dependent)
Roll Width	100 – 300 mm
Gap Adjustment	0 – 6 mm, precision micrometer adjustment
Rolling Speed	0 – 30 rpm (variable speed)
Pressure	Adjustable hydraulic or mechanical loading
Thickness Accuracy	± 1 – 2 μm
Drive System	Motorized forward / reverse operation
Control	Digital speed controller with emergency stop
Power Supply	220 – 240 V AC, 50 Hz
Motor Power	0.75 – 1.5 kW (model dependent)
Dimensions (W×D×H)	Approx. 700 × 450 × 450 mm
Net Weight	Approx. 80 – 120 kg (model dependent)
Safety Features	Emergency stop, overload protection, safety cover
Operating Environment	Temperature: 5 – 40 °C, Humidity: ≤ 80% RH
Optional Accessories	Digital thickness gauge, hydraulic pressure system, extended roll width

## TYPICAL APPLICATIONS



Lithium-ion Battery  
Electrode Calendaring



Sodium-ion Battery  
Electrode Calendaring



Solid-state Battery  
Electrode Densification



Coating Thickness Reduction  
& Surface Finishing

## BENEFITS

- Increases electrode density and energy density
- Improves adhesion between active material and current collector
- Ensures uniform thickness for consistent cell performance
- Enhances battery cycle life and overall performance
- Suitable for R&D and pilot-scale production



High Precision  
Rolling



Adjustable  
Gap & Pressure



Variable  
Speed



Uniform  
Thickness



Safe & Reliable  
Operation