



Suqian Time Energy Storage Co., Ltd.
& Jena Flow Batteries GmbH

25 kW Stack Vanadium Flow Battery



Features

- ✓ High electrolyte utilization for minimal system costs
- ✓ Optimized double-plate structure
- ✓ Annual production capacity of over 500 MW
- ✓ Tailored to your project requirements

Stacks are integral components of flow batteries that house multiple cells, facilitating the electrochemical reactions necessary for energy storage and conversion. Each cell within the stack contains electrodes, bipolar plates, and ion exchange membranes, which work together to manage the flow of electrolytes and electrons.

Our battery stack design is engineered for optimal performance and efficiency. Featuring high electrolyte utilization, an optimized plate structure, excellent electrolyte flow characteristics, and high power, they ensure efficiency and reliability in your flow battery application. We offer OEM solutions, allowing you to choose components that best fit your needs. Contact our team to learn how our innovative stacks can enhance your flow battery systems.

Performance Data

| Item | Unit | Value |
|--------------|-----------------|---------------------------|
| Size | cm | 105 (w) × 68 (h) × 82 (d) |
| Active Area | cm ² | 2,300 |
| Cells | - | 52 |
| Weight | kg | 800 |
| Separator | - | Nafion 212 |
| Test Program | - | Constant power cycle |
| Temperature | °C | 30 - 35 |

Stack Test Results

| Power | Power density | Flow rate | Pressure | Energy efficiency | Coulombic efficiency |
|-------|------------------------|-----------|----------|-------------------|----------------------|
| 18 kW | 128 mW/cm ² | 80 L/min | 100 kPa | 83% | 97% |
| 25 kW | 180 mW/cm ² | 110 L/min | 160 kPa | 80% | 97% |