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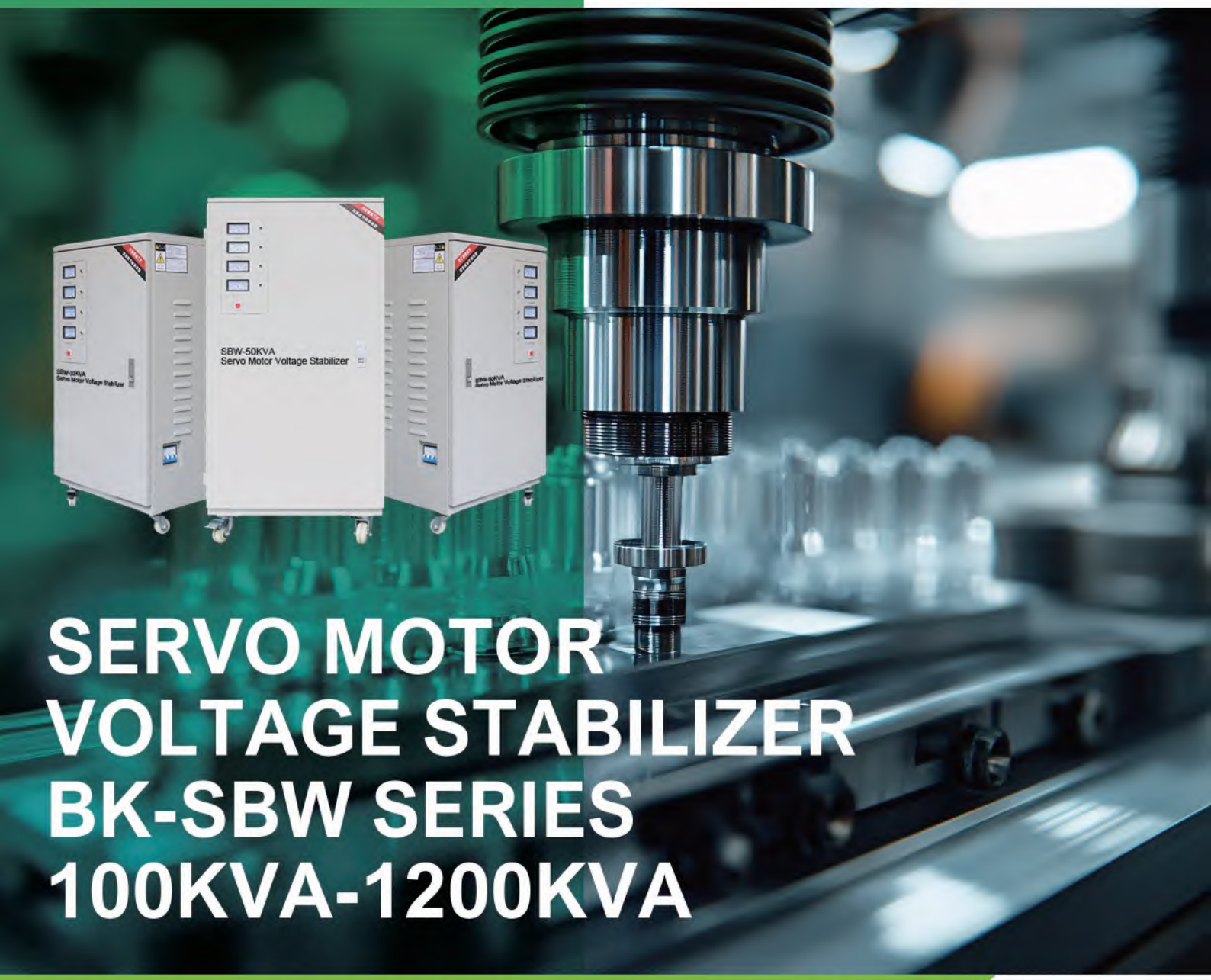
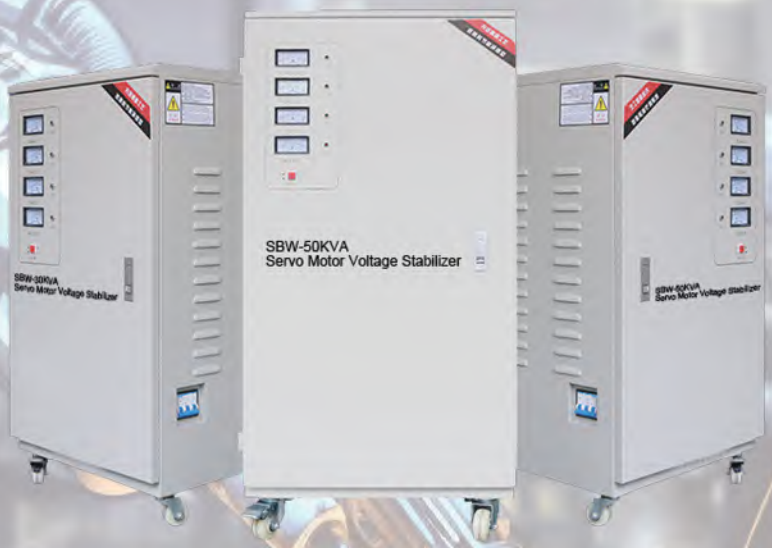


SERVO MOTOR VOLTAGE STABILIZER BK-SBW SERIES 100KVA-1200KVA

TO BE GLOBAL LEADER IN POWER SOLUTIONS

SHENZHEN BKPOWER CO., LTD



BK-SBW Series 3 phase Voltage Stabilizer

Product Overview

The BK-SBW series three-phase servo voltage stabilizer integrates high-speed servo motors, intelligent control circuits, and low-loss toroidal autotransformers into a single unit, achieving stable output through precise adjustment of the coil turn ratio.

This series of voltage stabilizers features an ultra-wide input range with voltage regulation accuracy of ±3%, and integrates multiple protections such as overvoltage, undervoltage, overload, and short circuit protection.

It supports three-phase balanced regulation and utility power direct supply switching. It is widely used in three-phase power applications such as industrial production lines, large machine tools, and medical equipment, particularly in environments with significant grid fluctuations and continuous high-load operation, providing reliable power supply protection for equipment.

Applications

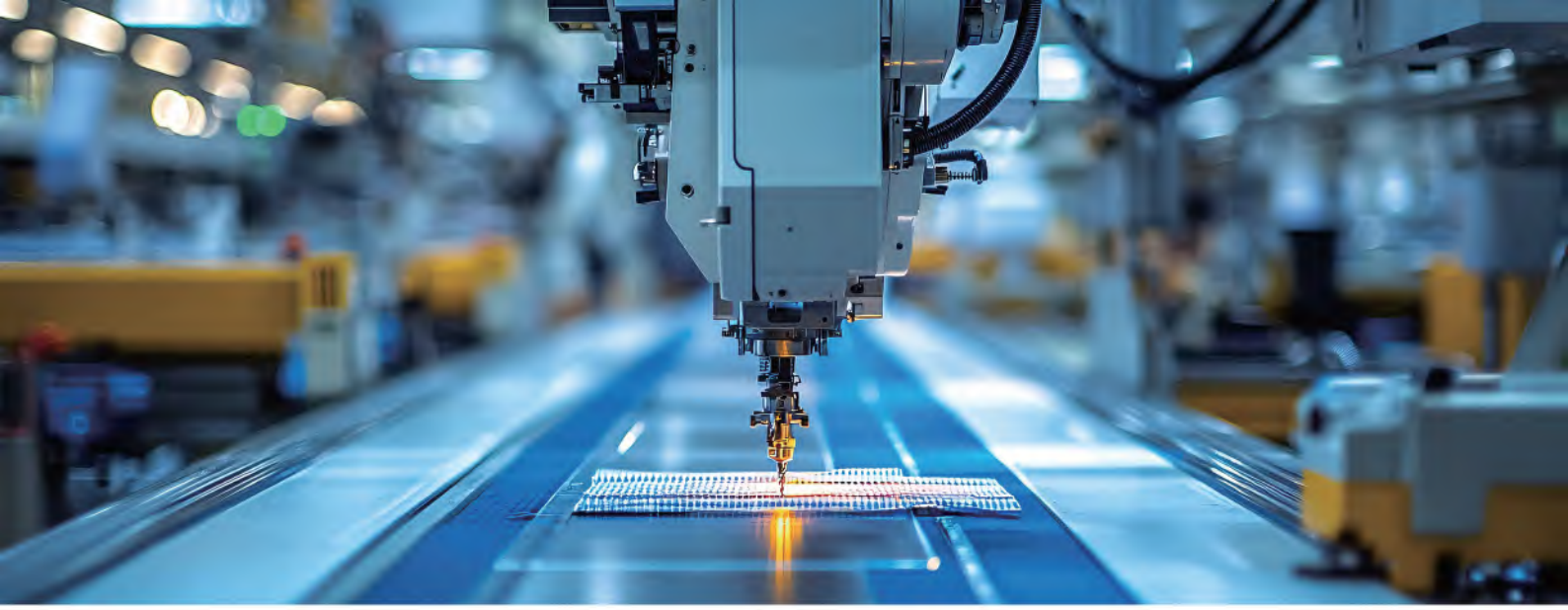
- **Industrial Manufacturing**
  Provides rock-solid three-phase voltage to high-power motors, CNC machining centers, injection-molding lines and overhead cranes, eliminating stoppages and scrap caused by voltage swings.
- **Medical & Scientific Research**
  Delivers ultra-stable 380 V power to MRI, CT and PET imaging suites, as well as to sensitive laboratory analyzers, ensuring diagnostic accuracy and repeatable test results.
- **Commercial & Public Infrastructure**
  Maintains steady three-phase supply for central HVAC plants, high-rise elevators, metro traction substations and airport terminals, guaranteeing uninterrupted passenger service and safety.

Technical Advantages

- **Precision Copper Column Regulation**
  The carbon brush assembly is driven by a servo motor and works with a copper column voltage regulator to regulate voltage. Mechanical transmission ensures linear adjustment of output voltage with a voltage regulation accuracy of up to ±3%. The copper column structure enhances electrical conductivity stability and regulation accuracy.
- **Instantaneous Response to Fluctuations**
  Equipped with a high-sensitivity voltage sampling and servo drive system, when input voltage fluctuations occur, the servo motor can quickly drive the carbon brush assembly to adjust its position, instantly correcting voltage deviations to ensure stable output.
- **Superior Load Adaptability**
  Using high-conductivity copper column material and optimized circuit design, it possesses strong power-handling capability, capable of stable operation under various load types such as resistive, inductive, and capacitive, adapting to complex power environments.
- **Robust and reliable structure**
  Core components such as the servo motor, copper column voltage regulator, and transmission mechanism utilize mature and reliable technologies. The mechanical structure is robust and durable, with excellent heat dissipation efficiency from the copper columns. The system has a low failure rate, is easy to maintain, and has a significantly extended service life.

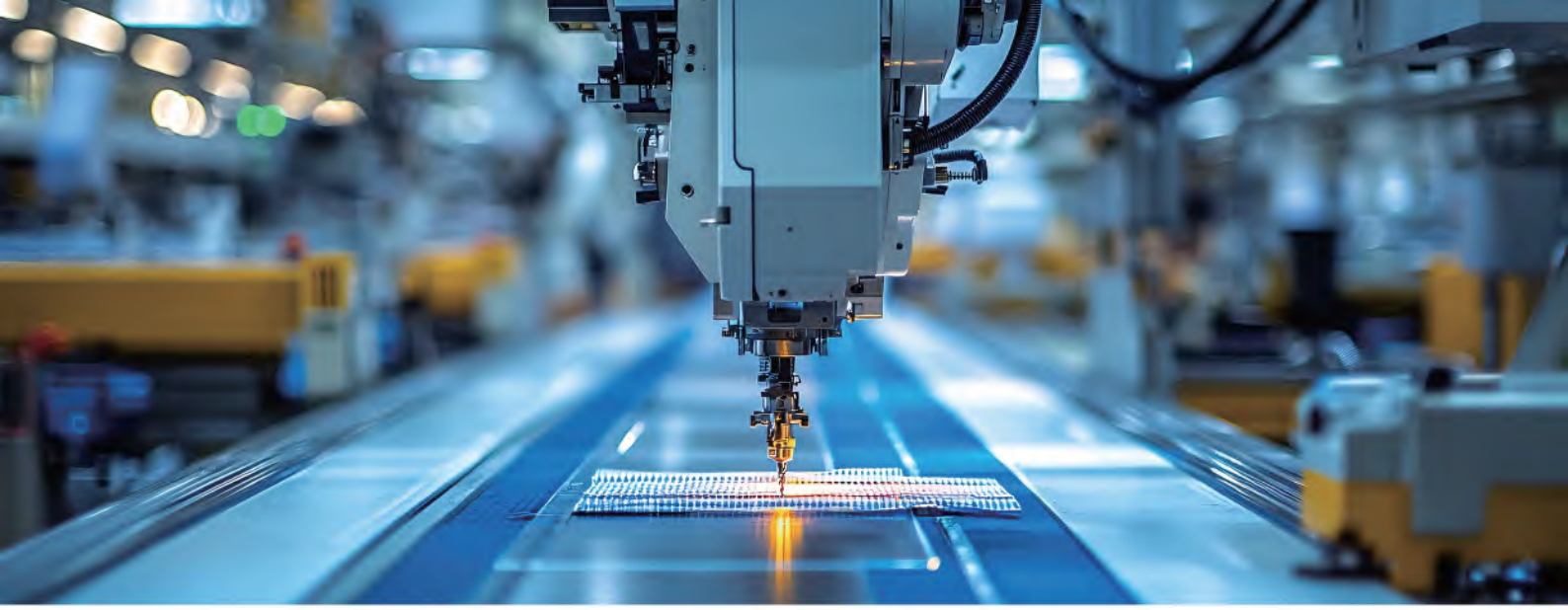
Product Features

- **Copper Column Voltage Regulation**
  Entirely machined from electrolytic copper, the high-current copper column replaces traditional aluminum/steel slides.
  High conductivity and fast heat dissipation, with low contact resistance and no erosion when the carbon brushes slide.
- **Servo Motor + Carbon Brushes**
  Servo system provides stepless drive for continuous linear voltage regulation.
  No relay switching, eliminating instantaneous power interruptions and waveform gaps.
- **Three-Phase Integrated Compensation**
  Each phase has an independent copper column + carbon brush, sharing a compensation transformer.
  Compact structure, fully symmetrical three-phase design, smaller volume, and lighter weight.



Specifications

Capacity		100KVA	120KVA	150KVA	200KVA	250KVA	300KVA
Input	Rated Voltage	280Vac~450Vac（Customizable）					
	Frequency	50Hz~70Hz					
	Phase	3L+N+PE（Customizable）					
	THDi	＜3%@100% linear load					
Output	Rated Voltage	380Vac（Customizable）					
	Voltage Stabilization Accuracy	±3%（Customizable）					
	Frequency	50Hz/60Hz					
	Response Time	≤0.2s					
	Adjust Time	≤1s (Against 10% input voltage deviation)					
	Phase	3L+N+PE（Customizable）					
	THDu	THD <1% (linear load)					
	Efficiency	≥98%					
Protection		Undervoltage, overvoltage, overcurrent, automatically cut off output					
Control Method		DSP-Based intelligent control technology with measurement and calculation chip					
Voltage Adjustment Method		Three-Phase Individual Regulation					
Physical	Main Transformer	High-temperature pure copper voltage regulating coil					
	Auxiliary Transformer	High-temperature all-aluminum compensation coil					
	Adjustable Carbon Brushes	Imported 1017 carbon brushes					
	Insulated Strength	2000V/Min					
	Motor	Servo motor					
	Insulation	>5MΩ					
	Environment Temperature	-20°C to 45°C					
	Temperature Rise	<60°C					
	Display	Mechanical instrument panel					
	Cooling Method	Natural cooling / Fan system cooling					



Specifications

Capacity		400KVA	500KVA	600KVA	800KVA	1000KVA	1200KVA
Input	Rated Voltage	280Vac~450Vac（Customizable）					
	Frequency	50Hz~70Hz					
	Phase	3L+N+PE（Customizable）					
	THDi	＜3%@100% linear load					
Output	Rated Voltage	380Vac（Customizable）					
	Voltage Stabilization Accuracy	±3%（Customizable）					
	Frequency	50Hz/60Hz					
	Response Time	≤0.2s					
	Adjust Time	≤1s (Against 10% input voltage deviation)					
	Phase	3L+N+PE（Customizable）					
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PRODUCT CATALOG

UPS System
Voltage Stabilizer
Transformer

VFD Inverter
Soft Starter
Solar Inverter

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