

# Static VAR Generator (SVG)

Voltage  
Support

Power Factor  
Correction

Flicker  
Control

Harmonic  
Filtering

Renewable Grid  
Support

## Features

- For power systems from 6 kV up to 66 kV
- Size ranges from 1 MVar to 150 MVar, depending on how much support is needed
- Indoor and outdoor solutions
- Air or water-cooled systems
- For use in heavy industries (like steel plants) or renewable energy (like solar or wind farms)
- Controller that links multiple SVG units together to operate as a coordinated system

## Benefits

- Improved power factor close to unity (1.0)
- Fast dynamic response, within milliseconds
- Smooth continuous power compensation
- Low maintenance
- Compact design
- Voltage stability
- Improved power quality
- Supports renewable energy
- Reduced electrical losses
- Extends equipment lifespan

## Capabilities

- Site survey to calculate the optimal size of equipment required
- Regulatory compliance
- System design and integration
- Digital platform setup and integration
- Equipment supply, installation, testing, commissioning and certification Ongoing operation and maintenance

Some machines use electricity in sharp bursts, such as arc furnaces, rolling mills, mine hoists or electric trains. This can cause voltage dips and flickering lights which can lead to penalties. Wind and solar farms face the opposite issue because their grid connections are often weak and struggle to maintain steady voltage.

SVGs fix this by monitoring voltage and correcting it instantly; cutting flicker by more than 80%.

Terra Sol provides SVG systems from 1 to 150 MVar for factories, mines, railways, and renewable sites, supported by XJ's proven installations at major substations worldwide.



**Steady Voltage**  
No Dips When Big  
Loads Start



**No More Flicker**  
Stops Visible Light  
Flicker



**Continuous  
Correction**  
Adjusts as Loads  
Change



**Avoids  
Penalties**  
Corrects Poor Power  
Factor



**Grid Code  
Ready**  
For Wind and Solar  
Connections



**Digital Platform**  
Smart Monitoring &  
Management

**Stable**

**Responsive**

**Compliant**