

SINEXCEL ULTRA SVC

Static Var Generator



New Beginning, New Power
Quality Compensation Era

Peak efficiency>99%
Precise Reactive Power Control

Performance breakthrough brought by SiC technology



99%

Ultra high efficiency

>27kg

Tiny dimension but huge capacity

Industry application breakthrough brought by Ultra Series

-  Flexible Top-Vent Cabinet
-  Potting Protection
-  Package PQ solution
-  Easy Maintenance



The revolutionary SiC Mosfet technology has driven the design optimization of power quality products, which delivering unparalleled improvements in performance and application of Sinexcel Ultra Series. This transformation has reshaped the business model for power quality solutions, setting a new industry benchmark for excellence.

Ultra Series STATIC VAR GENERATOR

ULTRA HIGH EFFICIENCY

_Performance breakthrough brought by SiC technology

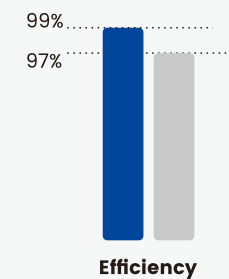
Silicon carbide (SiC) MOSFETs achieve ultra-high efficiency primarily due to their wide bandgap, which leads to lower on-state resistance ($R_{ds(on)}$), faster switching speeds, and reduced switching losses. These properties enable SiC MOSFETs to operate at higher frequencies and temperatures with improved overall performance, resulting in more efficient power conversion systems.



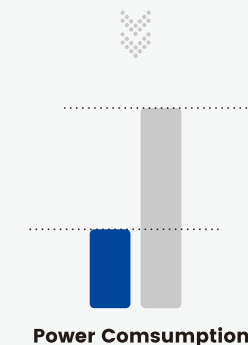
What benefit will be brought to user with 99% ultra high efficiency?

—Electricity bill saving, higher ROI

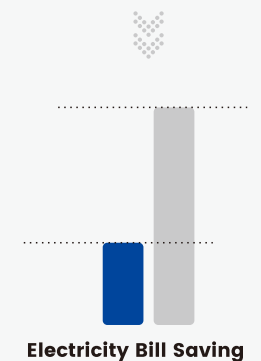
Take 480V 100kVAr SVG as an example



Efficiency Difference
>2%



Energy saving
>20,000
KWH/year



Electricity fee saving
>3,000
USD/year

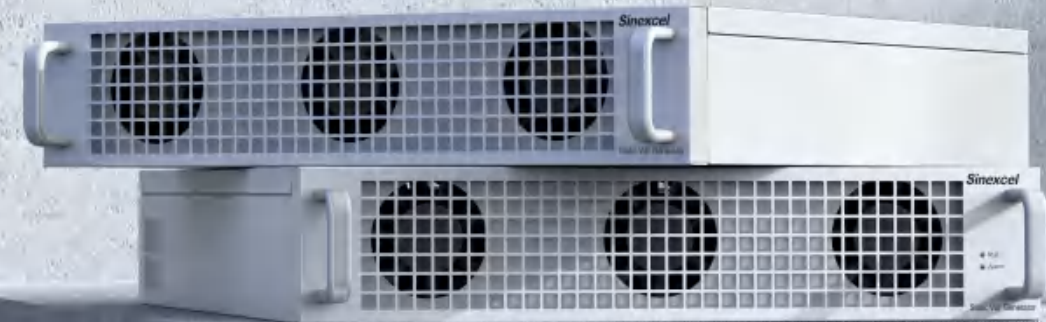
Present the Sinexcel Ultra SVG

Present the standard SVG in market

TINY DIMENSION BUT HUGE CAPACITY

Performance breakthrough brought by SiC technology

High heat resistance, high thermal conductivity, and high switching frequency, these advantages of SiC bring lower heat dissipation and less ripple current output to Ultra Series SVG. With the physical upgrade of this key component and the 3-year deep research of the R&D team, Sinexcel realizes the ultra-high integration design in Ultra Series SVG



Each cabinet maximum supports 8*Ultra modules inside, maximum capacity up high to

800kVAr (8*100 kVAr)

Standard IP grade is NEMA 1

(IP grade customized)



480V Ultra SVG 30/50 kVAr

19.7"W*20.9"D*3.5"H

480V Ultra SVG 100 kVAr

19.7"W*20.9"D*3.5"H

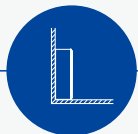
480V Ultra SVG 200 kVAr

19.7"W*24.4"D*3.9"H

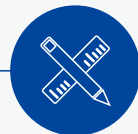
Sinexcel Ultra Series available now

FLEXIBLE TOP-VENT CABINET

_Industry application breakthrough brought by Ultra Series



High power density cabinet that can be installed against the wall, space saving for distribution room



Size optional, cabinet capacity optional and IP class optional

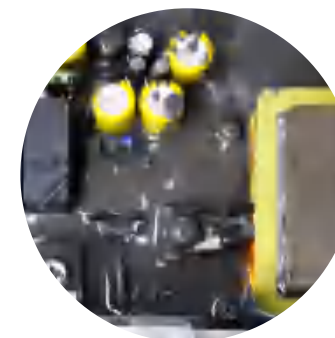
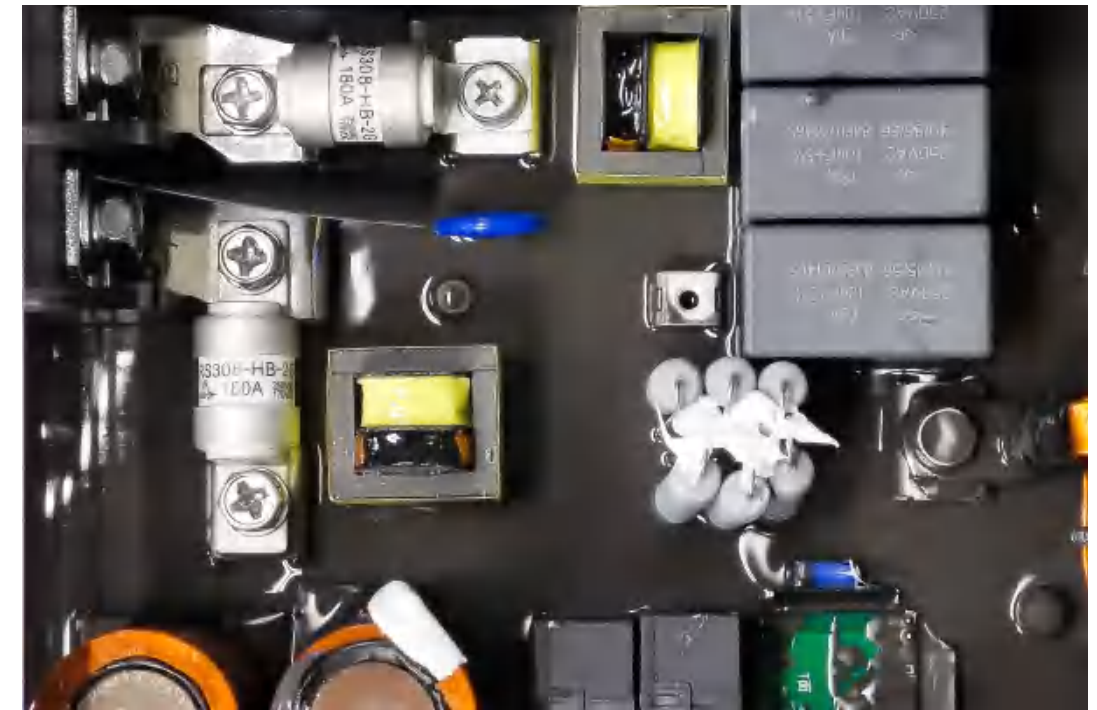


Collapsible design, small packing size, cost-effective for transportation

POTTING PROTECTION

_Industry application breakthrough brought by Ultra Series

Special glue is used inside the Ultra Series SVG, and brings better anti-corrosion and anti-conductive dust performance. This makes the Ultra Series SVG able to survive in harsh environments and increase its lifespan.



FLEXBILE TOP-VENT CABINET

_Industry application breakthrough brought by Ultra Series

—More optional for user; More suitable for reconstruction projects



Module hybrid application

A more economical power quality solution, AHF compensates harmonic, and SVG compensates reactive power at same time

SINEXCEL ULTRA SVG SPECIFICATION

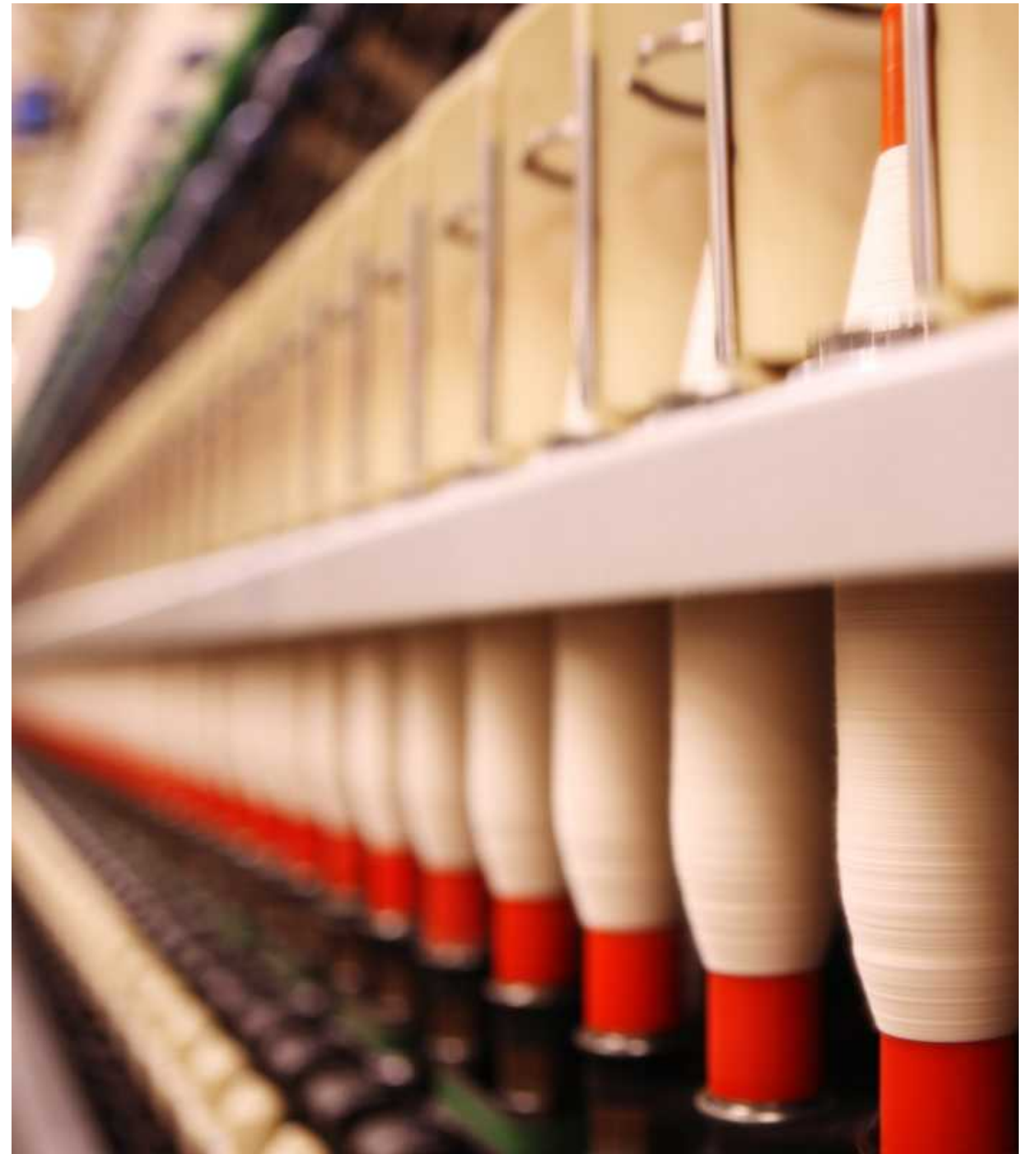
Items	Sinexcel Ultra Series SVG	
Rating	30/40/50K	66/80/100/120K
Function	reactive power compensation and three-phase unbalance compensation	
System Parameters		
Nominal Voltage	380~480V (−10%~10%)	
L-N Voltage	220~278V (−10%~10%)	
Supply Frequency	50/60Hz, auto sensing(Range : 45Hz~62.5Hz)	
Parallel Units	Unlimited	
Efficiency	99%	
Electrical System	3Ph 3wire	
CT Location	Load / Supply side	
Performance Indicators		
Control Algorithm	FFT, intelligent FFT, and instantaneous reactive power	
Reaction Time	<50us	
Overall Response Time	<15ms	
Target Power Factor	Adjustable −1 to +1	
Switching Frequency	Average 40kHz,up to 95kHz	
Communication Ports	RS485,Ethernet (Rj45)	
Communication Protocol	Modbus RTU, TCP/IP	
Module Display Interface	4.3-inch HMI(module), 7-inch HMI(central monitor) and LED	
Protection Functions	Over-voltage,under-voltage,short circuit inverterbridge, over compensation and so on	
Mounting Type	Wall-mounted, Rack-mounted and Cabinet	
Dimensions	19.7"W*20.9"D*3.5"H	19.7"W*24.4"D*3.9"H
Net Weight	27kg	35kg
Storage Temperature	-40°C to +70°C	
Operating Temperature	-10°C to +40°C(may derate capacity if operating temperature exceeds 40)	
Relative Humidity	5% to 95% Non Condensing	
Operating Altitude	<1500m, 1500 to 4000m, capacity is derating 1% for every 100m altitude increased	
Protection Class	NEMA1	

SINEXCEL SVG 50000KVAR+

_Safeguarding Operations at Texhong Textile Factory in Vietnam



In a textile factory located in Vietnam, Texhong faced a significant challenge when their existing capacitor cabinet, operating in a poor power grid environment that caused exploded. This event not only disrupted operations but also posed a serious safety hazard to the factory workers. Seeking a reliable and efficient solution, Texhong turned to Sinexcel and their cutting-edge SVG technology.



Sinexcel SVG stepped in as the perfect replacement for the traditional capacitor cabinet. With its robust design and advanced features, Sinexcel SVG was well-equipped to handle the demanding power grid environment at Texhong. Unlike the capacitor cabinet, Sinexcel SVG could function normally and ensure power factor (PF) compensation even under adverse conditions.



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Sinexcel SVG

**Technology Boosts Canadian Urbanmine's
Non-Ferrous Metal Recycling Plant Efficiency**



Sinexcel, a leading provider of power quality solutions, has successfully implemented its Static Var Generator (SVG) technology at the Canadian Urbanmine's non-ferrous metal recycling plant. This innovative solution has significantly improved the plant's Power Factor (PF) to 0.99, helping the company avoid fines

CANADIAN

