



The UST SagFighter™ protects against costly production stops and manufacturing errors due to voltage sags in all industrial applications.





## About SagFighter™

SagFighter™ actively corrects common electrical events, allowing manufacturers to ride through sags with no impact on equipment and no errors in production.

The UST SagFighter™ protects against costly production stops due to voltage sags in all industrial applications. It offers must-have protection for all continuous production processes and other power-critical applications, and can be custom-configured to meet specific engineering designs.

Operating without batteries or energy storage of any kind, the near-zero maintenance SagFighter monitors and actively corrects incoming voltage within 2 milliseconds.

Unlike computer-grade products or uninterruptible power supplies (UPS), SagFighter is designed for typical production environment loads where high inrush conditions can occur. There is no need to oversize SagFighter given its robust design scheme and superior overload protection characteristics (1,000% for 1 second).

SagFighter is available in a full range of sizes, from 50kVA to 2,500kVA, to meet any application demand.



# Specs

## Application

Standard Input/Output 3-Phase Voltages	60Hz: 208, 480, 600 50Hz: 220, 380, 400, 415
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## Regulation / Operating Characteristics

Sag Correction - Single Phase voltage event (sag)	80% sag (20% remaining voltage) corrected to 95% of nominal voltage. 90% sag (10% remaining voltage) corrected to 90% of nominal voltage.
Sag Correction - 3- Phase voltage event (sag)	40% sag (60% remaining voltage) corrected to 95% of nominal voltage. 42.5% sag (57.5% remaining voltage) corrected to 90% of nominal voltage.
Output Regulation	Regulation tolerance is +/-5% (typical) (Note: SagFighter normally operates in monitoring mode until voltage reaches 90% of nominal voltage, at which time sag correction is initiated.)
Response Time	Full sag correction within 2ms regardless of load or load power factor.
Correction Duration	Sags corrected for a minimum of 100 seconds regardless of load or load power factor.
Regulation Variation	None - Regulation constant for 0 to 100% load and any load power factor.
Phase Shift Correction	Phase shifts are corrected automatically during sag correction.
Harmonic Distortion	None added in monitoring mode.
Overload / Inrush Capability	1,000% - 1 second, 500% - 5 seconds, 200% - 1 minute (while in bypass mode).
Load / Power Factor	1 cycle typical regardless of load or load power factor.
Efficiency	99% typical
Operating Environment	Performance data specifications are based on the input (source) voltage meeting IEEE 519 standards.
Operating Frequency	± 3% of nominal frequency (50Hz or 60Hz).

## Construction

Technology	Microprocessor-controlled, inverter based series voltage injection.
Transformer	Copper wound, dry-type series transformer (3W+G input and output).
Inverter Operation	Non-continuous operation - activation only during sag correction.
Cooling	Natural convection, w/ heatsink fans which operate only during sag correction [contaminant free, dry, clean air].
Enclosure	Floor mounted NEMA-1 indoor enclosure is standard. ANSI 61 gray. [Custom enclosures (indoor or outdoor) also available - contact UST.]
Cabling / Connections	See enclosure drawing for cable entry/exit options and input circuit breaker lug sizes.
Audible Sound Level	Less than 65dB @ 1 meter.
Display	Touchscreen w/ event history recorder, operational data, and utilities.
Controls	Automatic operation - no controls, programming, or user adjustments required.
Monitoring	Dry-contacts for remote indication of unit status are included as standard. Optional power metering with various communication protocols available - contact UST.

## Environmental Requirements

Temperature - Humidity	Ambient operating conditions: 32°F to 104°F (0 to 40°C) - Relative humidity 0-95% non-condensing
Operating Altitude	0 to 3,300 ft. (1,000 M). Typical derating of 0.3% for every 100M over 1,000M

# Power. Made Perfect.<sup>SM</sup>

## UST SAGFIGHTER™ FEATURES

SEMI F47 compliant

Battery free and near-zero maintenance – no service/maintenance contracts needed

Full sag correction within 2 milliseconds

Sag correction duration independent of load or power factor

Sag correction for 100 seconds minimum

Robust industrial design – offering continuous protection for industrial loads (motors, production machinery, etc.), with no need for bypass operation even during adverse inrush (high current) conditions

Continuous protection without needing to recharge or reset

Input circuit breaker provided as standard, optional maintenance bypass arrangements also available (input, bypass, output)

Custom enclosure designs available to meet indoor or outdoor site conditions

Non-continuous inverter operation that increases reliability and provides 99% efficiency during normal operation

Optional power meters available with communication features for connection to remote hardware or building management systems



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Utility Systems Technologies, Inc. (UST) is a world-leading designer and manufacturer of electronic voltage control and power-conditioning products. UST's products are in use worldwide at hospitals, factories, refineries, embassies, data centers and other critical facilities, mitigating the risk of damaging electrical surges, sags and swells, bridging brownouts, and providing a safe connection to the local grid.