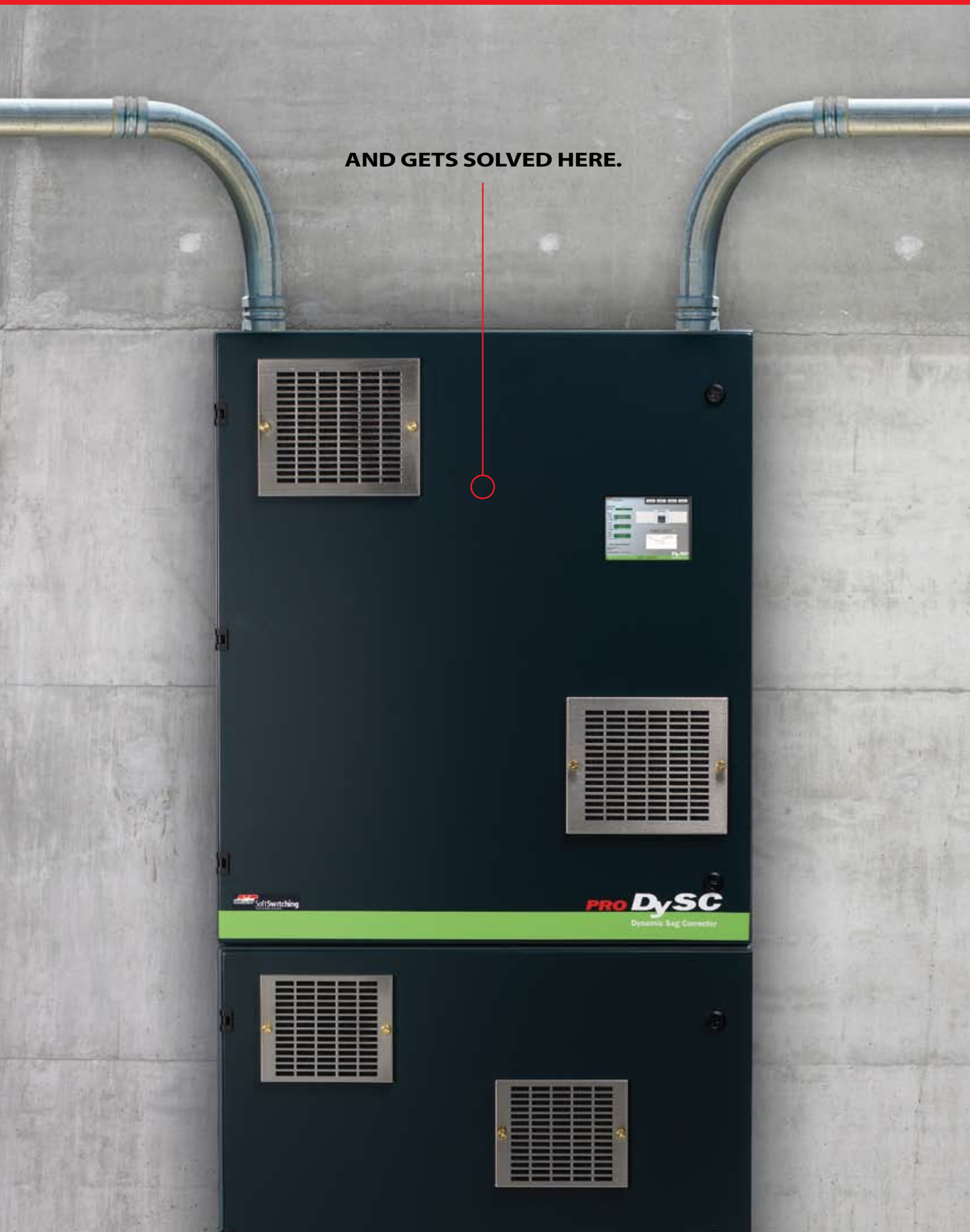
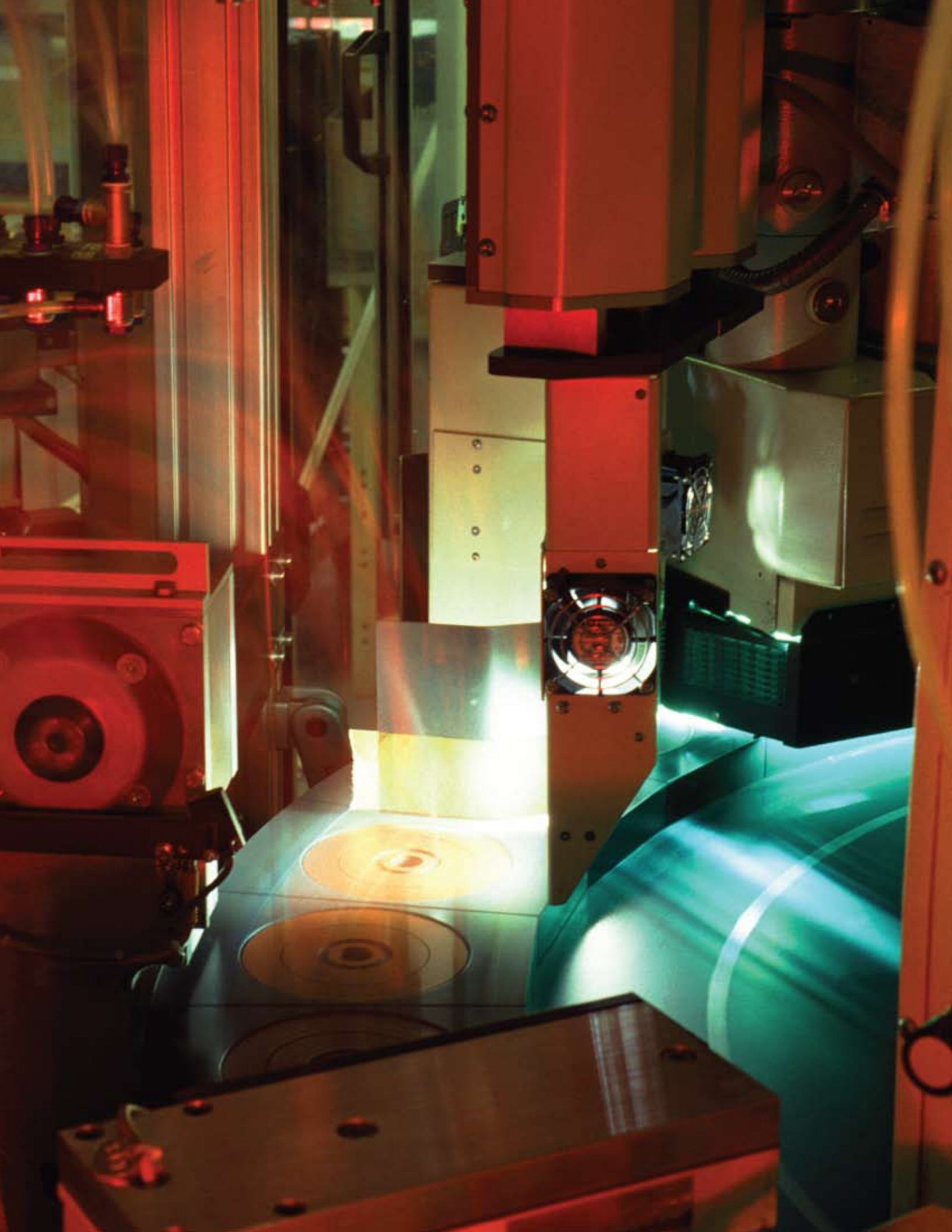

THE GREMLIN IN YOUR
MACHINE LIVES HERE.
SoftSwitching
TECHNOLOGIES


AND GETS SOLVED HERE.
SoftSwitching
PRO DySC
Dynamic Sag Corrector

UNSCHEDULED DOWNTIME

should never be unexplained downtime. Sometimes the cause is easy to identify. But what about the events maintenance can't explain and can't fix—events just as harmful to equipment, productivity and profit? The answer may not be obvious, but it's accurate: power quality. An almost undetectable disruption in voltage. These Dirty Power events—commonly called sags—can happen even when the power supply is reliable and running smoothly. The fact is that a single split-second event is capable of throwing your entire operation offline. We can help. We're SoftSwitching Technologies®. Our specialty: anticipating, identifying and preventing Dirty Power events. And making sure that unexplained downtime—like unscheduled downtime—

STOPS HERE.



SoftSwitching TECHNOLOGIES

/// DIRTY POWER REVEALED.

When unscheduled downtime occurs, Dirty Power is often the culprit. The term applies to any sag or disruption in voltage that interrupts production. It can penetrate your facility at any time and for many reasons, from weather events to a curious animal's ill-fated exploration of a utility substation.

The result? Dirty Power accounts for up to 70% of all unscheduled downtime.

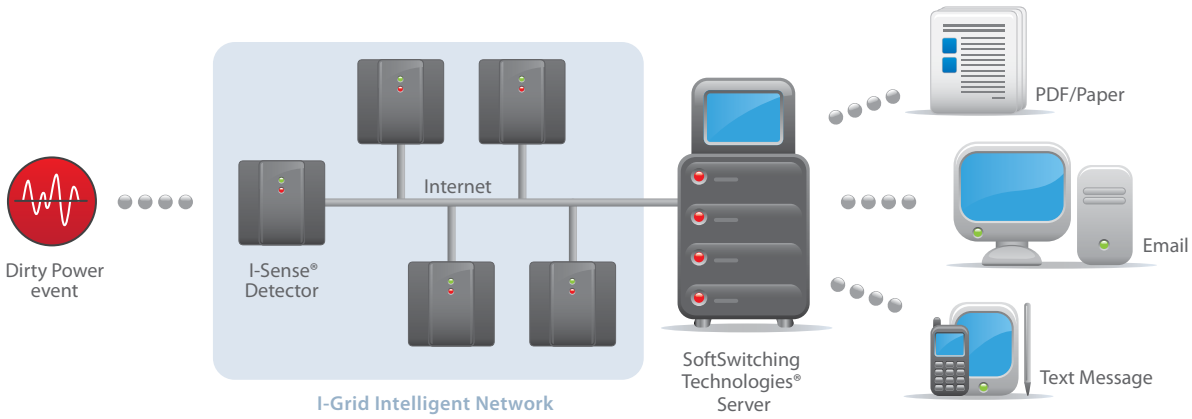
During a sag event, it's the *quality* of power—not the quantity—that is affected. 98% of all Dirty Power events are caused by voltage sags lasting less than two seconds. 60% of them last less than 0.1 second and are often imperceptible to the human eye. But when that power is driving sensitive equipment, the consequences are all too easy to see. Machines go off-line. Precision instruments fail. Your operation grinds to a halt.

This triggers a frantic search for the cause, but the voltage sag has already moved on. Inspection of the machines reveals no issues; a cause is theorized and entered into the production log; operations are restarted. But the damage—in lost time, efficiency, labor and materials—is irreversible and in some cases, unrecoverable.

And another voltage sag could happen at any time.

/// SOLVING DIRTY POWER BEGINS WITH SEEING IT: GRID ALERT™

The first step to formulating a solution for downtime is finding the cause—process failure or Dirty Power event? The answer begins with our I-Grid® intelligent network, a power quality detection and alert system that actively collects, analyzes and correlates constant streams of data from thousands of facilities, tracking power quality, pinpointing voltage sags and delivering that information directly to you.



Installing an I-Sense® voltage sag detector in your facility connects you to this extensive network. Power quality data is sent through the I-Grid to our server—and then on to you as a Grid Alert within minutes of an event. Grid Alerts are accessible from any Internet connection or Web browser, even via a message sent to your pager, cell phone or home PC. And only Grid Alert provides corroboration of the data with other I-Sense detectors to confirm you've experienced an event and its origin—inside or outside of your facility.

The I-Grid system provides a clear picture of your operations and the remote power events that impact them. You'll know if Dirty Power caused your unscheduled downtime—within minutes of the actual event.

Now that Dirty Power events can be accurately identified, diagnosed and pinpointed, all that's left is preventing them.

GRID ALERT NOTIFICATIONS

IMMEDIATE NOTIFICATION

CORROBORATION REPORT

SUMMARY REPORT

/// DYSC® THE SOLUTION TO THE SAG.

How do you stop Dirty Power events from interfering with your operations? By stopping voltage sags in their tracks.

Our Dynamic Sag Correctors (DySC) deliver a unique and exclusive industrial power quality solution. The DySC identifies the voltage sag and uses patented double conversion inverter technology to compensate for it, protecting against these events and momentary outages by maintaining an uninterrupted flow of optimal power quality.

Unlike UPSs, CVTs and flywheels, DySC efficiently accomplishes the task with no batteries, no moving parts, no lag time responding to an event and virtually no maintenance—ideal for critical manufacturing processes and sensitive electronics that require sag ride-through protection without the downsides of other systems. And with 99% overall efficiency, DySC stands alone when compared to these other band-aid solutions.

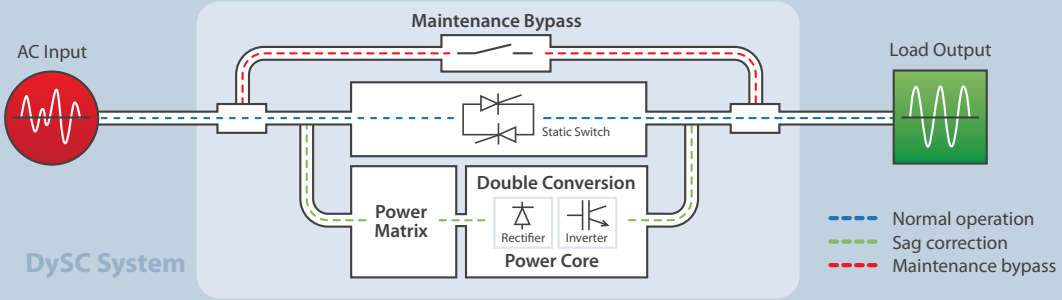
No matter the size, scope or focus of your industry, we can configure a DySC to fit any application. Your lines receive an unbroken flow of clean power, keeping operations running smoothly, maximizing MTBF (mean time between failure), reducing MTTR (mean time to repair) and maintaining your efficiency and bottom line.

THE DYSC DIFFERENCE

- **100% SAG PROTECTION**
- **SEMI F47 COMPLIANT**
- **EXTREMELY SCALABLE FROM 0.25 KVA TO 2000 KVA**
- **RELATIVELY COMPACT SIZE**
- **HIGHEST OVERALL EFFICIENCY (>99%)**
- **NO BATTERIES TO REPLACE**
- **NO FLYWHEEL BEARINGS TO WEAR OUT**
- **NO COMPRESSORS OR PUMPS**
- **NO NEED FOR AIR CONDITIONING OR SPECIAL VENTILATION**

THEORY OF OPERATION

The Power DSP is a high-speed digital processor and master controller for all DySC operations. When a voltage sag is detected, the Power Matrix uses incoming current as an energy source, redistributing it across three phases. The Double Conversion Power Core (dCPC) rectifies and inverts the DC power back to AC to recreate a true sinusoidal power wave output resilient enough to protect even the most sensitive loads. The auto bypass enables maintenance without dropping the load and protects the load in the event of a fault.



/ / / **MiniDySC®**

COMPONENT-LEVEL PROTECTION

Because no two facilities are the same, we offer DySC options that can be applied to any facility and any task, large or small.

MiniDySC is specifically calibrated to protect the sensitive electronic components that are vital to your operations—and particularly vulnerable to short-duration voltage sags. With MiniDySC, unexpected sags won't produce losses from power-quality-related failure of controls key to your productivity. And with an industry-exclusive five-year warranty, you can depend on MiniDySC for maximum protection for many years to come.

General specifications:

Phase	**SINGLE PHASE**
Voltage	**100–240 VOLTS**
Current	**1–50 AMPS**
Power	**0.25–14 KVA**
Mounting	**DIN RAIL/PANEL MOUNT**

MiniDySC. The ideal solution for:

- PLCS
- CONTACTORS
- RELAYS
- POWER SUPPLIES
- SENSORS
- AC I/O
- COMPRESSORS
- VISION
- RFID
- TEMPERATURE CONTROLLERS
- OPERATION INTERFACES
- TIMERS
- COUNTERS
- SAFETY COMPONENTS

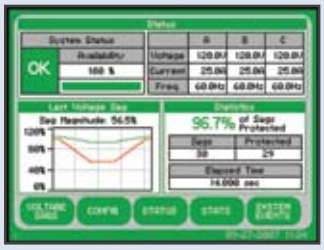
/// ProDySC®
MACHINE-LEVEL PROTECTION

While no power quality maintenance job is too big or too small for DySC technology, the jobs that fall exactly in between are well-suited for ProDySC. This mid-range DySC product is designed to provide the highest level protection from voltage sags for your machines and equipment.

ProDySC features a Touchscreen Operator Station with a graphic reporting display. Through this user-friendly portal you can receive a wealth of power quality information, from event logging to online diagnostics. With the voltage assured, your operation stays online and running strong.

General specifications:

Phase **THREE PHASE**
Voltage **200–480 VOLTS**
Current **25–200 AMPS**
Power **10–165 KVA**
Mounting **PANEL/FLOOR MOUNT**



ProDySC. The ideal solution for:

- MULTIPLE COMPONENTS
- CONTROL PANELS
- ROBOTS
- OVENS
- CNC
- EXTRUDERS
- PUMPS
- PACKAGING MACHINES
- FILLERS
- DRYERS
- MATERIAL HANDLING
- SERVOS
- VFDS
- TRANSFER LINES
- PALLETIZERS

/// MegaDySC®
PROCESS-LEVEL PROTECTION

When a voltage sag strikes your facility, every part of your operation is at risk. The domino effect rolls through your plant, with one failure inevitably affecting the rest of the process—when no part of your operations are expendable. When total protection is the goal, the MegaDySC is the system.

Like ProDySC, MegaDySC features a Touchscreen Operator Station with a 15" graphic reporting display that conveys valuable power quality information. But unlike its mid-sized sibling, MegaDySC is designed to span the whole plant and protect your entire process or production line from voltage sags. Which in turn protects your power quality, equipment, output and profit.

General specifications:

Phase **THREE PHASE**
Voltage **200–480 VOLTS**
Current **400–3200 AMPS**
Power **333–2000 KVA**

MegaDySC. The ideal solution for:

- MACHINING CELLS
- PROCESS TOOLS
- ASEPTIC PACKAGING
- HIGH-SPEED BOTTLING
- PAPER MACHINES
- CONVERTING
- TRANSFER LINES
- BATCH APPLICATIONS
- PAINT LINES
- PHARMACEUTICAL
- DRY EXTRUSION
- WELD LINES
- FLEXIBLE MACHINING CENTERS
- MACHINING
- WEB APPLICATIONS

SoftSwitching TECHNOLOGIES

/// COMPANY OVERVIEW

SoftSwitching Technologies® (SST) is the world leader in power quality detection, protection and optimization systems. The company was founded by Dr. Deepak Divan, a professor at the University of Wisconsin, whose research in power electronics revealed the innovations and real-world applications that would serve as the cornerstone for SST.

When a study from EPRI (Electric Power Research Institute) revealed that 96% of all power problems were short-duration voltage sags, SST applied its patented technology to create a solution. That solution—the Dynamic Sag Corrector (DySC®)—was introduced in 1999.

Today, SST offers the most affordable, effective and scalable power quality and detection solutions available on the market. A full array of scalable DySC products. I-Sense® intelligent sensors that pinpoint time and duration of voltage sags. And Grid Alert™ event notifications—the only global power reporting and notification network in the world.

With headquarters and an over 80,000-square-foot manufacturing facility in Middleton, Wisconsin (adjacent to Madison), and a satellite Asian office in Singapore, SST serves major manufacturing customers and utility companies on a global scale, from middle market firms to blue chip companies such as General Motors, Chrysler, Ford, BMW, Honda, Intel, Applied Materials, Texas Instruments, Motorola, Hynix, Kraft, General Mills, Campbell's, ConAgra and Anheuser-Busch.


Voltage Sags
System Events
System Status
Configuration
SoftSwitching
TECHNOLOGIES
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DySC
Dynamic Sag Corrector