

# ELECTRIC POWER GENERATION SERVICES



A man wearing a white hard hat and a blue shirt is talking on a mobile phone. The background is a night view of a city skyline with many lit-up buildings and a river. There are some glowing lines and dots overlaid on the image, suggesting a network or technology theme.

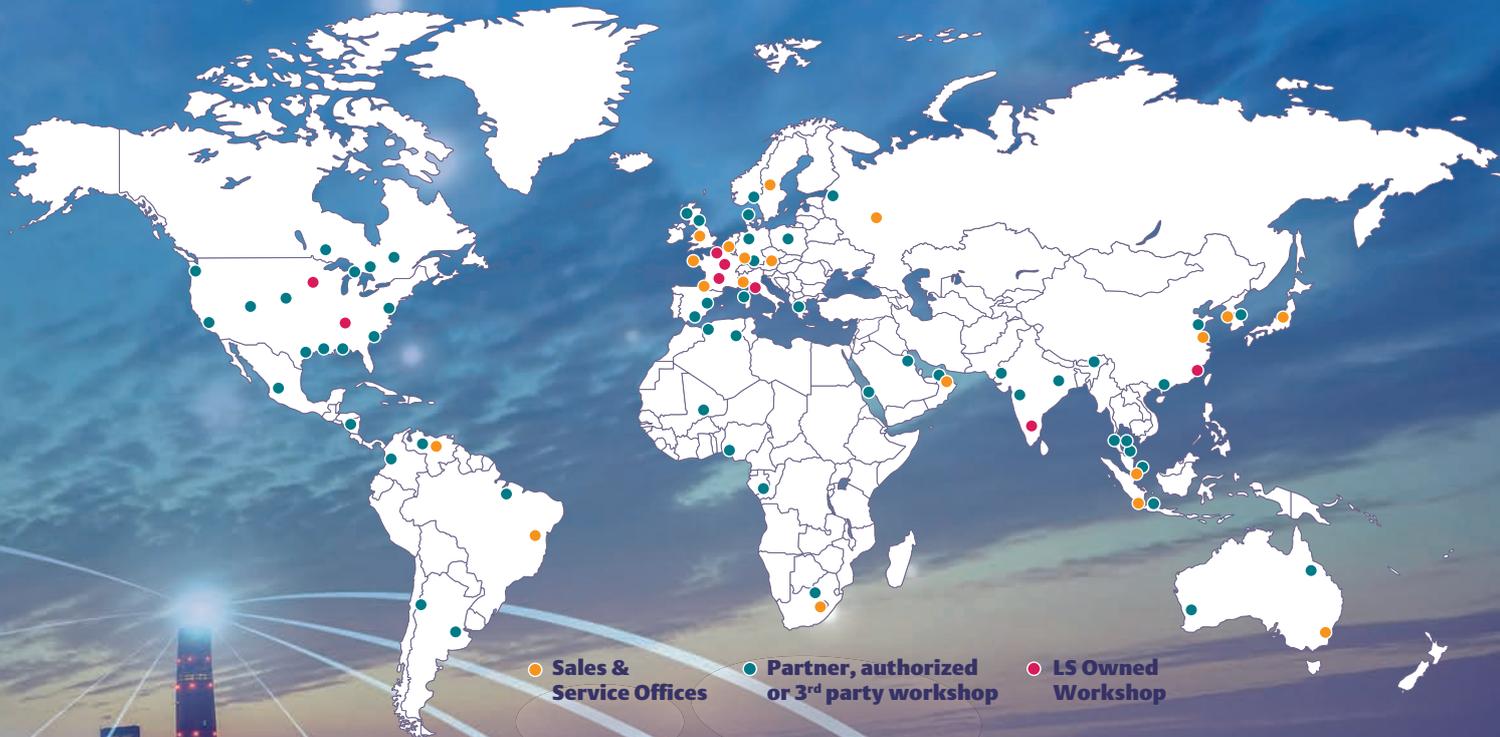
## Certified Experts, Trusted Professionals

LEROY SOMER and KATO ENGINEERING are the global leaders for industrial alternators. In the world of power generation our brands are trusted by loyal customers every day for product performance, reliability and quality.

At Leroy Somer and Kato Engineering, we pride ourselves on matching our high product quality with an equally high level of service throughout product life. For all of your alternator service needs, you can trust in the support of our team of electric power generation experts to optimize your machines' reliability and efficiency. Our staff knows power generation operations inside out and will spare no effort to provide you with the best value service to optimise your cost of ownership on all machine types, including third-party alternators.

# A Worldwide Network

Because all of our customers and their needs are different, we have built a global network of service facilities to provide timely service. This local presence is our guarantee for reliable and efficient response.



# Help Desk, Engineering Support & Customization

## Next to you anytime

Our engineering and customer support teams are your key contacts at Leroy Somer and Kato Engineering. Relying on almost a hundred years' expertise in rotating equipment, they support you throughout your power generation project to provide standard or customized solutions that meet your exact needs.



Later on, should an issue arise; our technical support teams remain available for you:

- Localized help desks in each region
- In case of emergency, reach our technicians through a **dedicated 24/7 hotline**

# Training

Leroy Somer and Kato Engineering offer a wide range of training and seminars, adapted to your equipment and your organization. Our goal is to empower your teams for optimal use of your generator during its lifetime.

To assist you during projects, we also offer expert training to help you select and specify alternators including building business cases for new projects and specification optimization.



All our training can be held at your site or at one of our training centers equipped with demonstration equipment for hands-on learning.

# Installation & Commissioning

## Set-up to last

Generator and AVR commissioning are key in the product lifetime. Our technical experts can plan with you and supervise the equipment installation and commissioning to ensure your generators run in optimal conditions.

Our installation and commissioning services\* include:

- Transport of new generator to site
- Removal of old equipment
- Installation, coupling and set-up of new generator
- Comprehensive tests as a standard: static checks, mechanical performance checks, electrical tests and AVR adjustment, load test, synchronization test (where applicable)
- Additional optional tests: over speed, no-load/short-circuit curves, protection checks...

All our work is followed by a **tailored comprehensive report**, including generator electrical performances, AVR final settings, environment conditions (vibration, temperatures), and recommendations for maintenance.

\* Subject to local offering / capabilities



Project



Start-up

## Spare Parts

We propose spare parts kits, specially designed to reduce down time by covering the most common maintenance and repair needs. Even for your oldest equipment, we will find alternative parts to keep your generators running. All of our spare parts are certified to conform to the original, with the same level of performance.

We recommend the use of genuine spare parts for all maintenance work on Leroy Somer and Kato generators in order to maximize generator performance and minimize breakdowns.



## Service Contracts

With millions of alternators in the field, Leroy Somer and Kato Engineering can propose adapted solutions for the long-term maintenance of generators, regardless of their brand, for both new equipment and equipment already in the field (post condition assessment).

We provide three levels of contracts, guaranteeing different degrees of support during the contract period. Throughout the contract, we scale the level of regular preventative maintenance depending on the usage and design of the generator.



## Predictive Maintenance & Connected Solutions

Even a well maintained generator set can be subject to unexpected events, leading to premature equipment failure. Building on our experience in generator and AVR maintenance, Leroy Somer and Kato Engineering have developed a full range of permanent monitoring to offer you a global vision of the health condition and performance of your installation, remotely and permanently.

We provide our solutions with 4 objectives in mind:

- Detect failure before extensive damage occurs to protect your equipment
- Anticipate defects to allow planned maintenance according to your plant schedule and minimise operational disruption
- Minimise the risk and consequences of unexpected failure, which may help lower your insurance costs
- Intervene only when needed and on what is needed and allow remote management of your equipment will allow you to reduce your maintenance costs and improve the safety of your team

For both retrofit and new power systems, our Solutions are fully flexible and adapted to the type of system and its usage:

- Monitored parameters: vibration, partial discharge, temperatures, flows, electrical parameters, internal angle...
- Integration with generator or control room, and into existing IT systems
- Connections available with facility and remote network
- Direct access to data and system diagnostics through customisable interface (web portal)



Operation

## On-site Intervention

We pride ourselves with extending the lifetime of your installation, by combining the skills of our technicians with our manufacturing experience.

From our manufacturing factories, workshops and service hubs, we provide comprehensive field services and address all your needs throughout the generator life. Our extensive service network is your assurance of fast response.

Our mechanical & electrical technicians, along with our specialists on controllers & AVR's, vibrations experts and winding professionals offer a broad range of skills and have full certification to operate in difficult environments:

- Working height permit, incl. wind turbine nacelles
- Electrical risk safety certificate
- Oil & Gas certificates such as BOSIET/HUET/OPITO ...
- Petrochemical & Nuclear industry training (incl. authorization for asbestos work)
- Army/Defense approvals



## Repair

### *Do not get stuck on issues*

No matter the brand of your generator, we offer repair services both on site and within our facilities. Our global service network means there is always a Leroy Somer or Kato Engineering facility nearby to take care of your issue, quickly and efficiently.

With your peace of mind as our goal, we only allow for the highest quality of repair. Our workshops are all equipped with VPI and rotor rewinding equipment to provide complete repair capabilities.

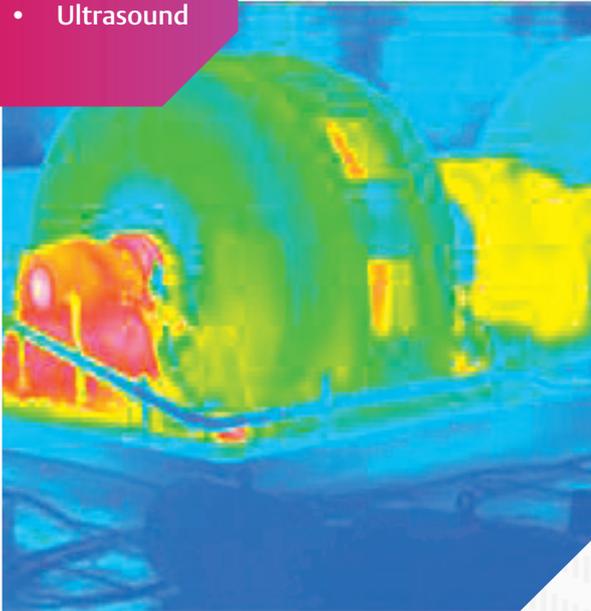
Our repaired generators, motors and AVR's are all fully tested before and after repair. Attached to your work completion report is a one year guarantee on any work we handle.



Operation

Our areas of expertise:

- Vibration
- Electrical
- Thermal
- Acoustics
- Ultrasound



## Life Extension

### *Upgrades, Refurbishing & Reman*

**Reman:** As maintenance and capital investment budgets are scrutinized, many companies recognize the value of refurbishing existing assets nearing the end of life. We offer cost-effective remanufacturing services, including complete high-quality VPI impregnation, to help you extend the useful life cycle of your generator.

**Re-winding:** In some cases, a simple rewinding operation can lengthen the life of your generator for many years while regaining its original level of performance. We will validate the opportunity with you and offer a turnkey solution from initial evaluation to re-commissioning of your generator.

**Upgrade:** Technology evolves. Enjoy improved performance, lifetime and reliability of your power generation through an update of your generator components. Our experts travel on-site to carry out equipment upgrades, such as the installation of the most adapted digital AVR for performance optimization or the addition of monitoring systems.

## System Expertise & Audit

Knowing when a component may fail, understanding where the weak link lies in a system, optimizing electric power generation... Who can do so better than world leaders in power generation? Through specialized tools and expert methods, our technicians will analyse your equipment in the most comprehensive manner.

Prior to any work on your equipment, a full audit will be performed to analyse the efficiency of your installation, and find the most suitable and cost-effective solution to meet your goals.



Optimization



Life Extension

# Contact us

## AMERICAS

Kato Engineering Inc.  
2075 Howard Dr. West  
North Mankato, MN  
56003 - USA

 Phone: **+1 (507) 625 4011**

## EUROPE & AFRICA

Leroy-Somer  
Boulevard Marcellin Leroy,  
CS 10015 - 16915 Angoulême  
cedex 9 - France

 Phone: **+33 238 609 908**

## MIDDLE EAST

Leroy-Somer  
R/A8 Building FD1 Jebel Ali  
PO Box 17034, Dubai  
United Arab Emirates

 Phone: **+971 552 096 913**

## INDIA

Leroy-Somer  
#45, Nagarur, Huskur Road,  
Off Tumkur Road,  
Bangalore - 562 162

 Phone: **+91 806 726 4867**

## ASIA PACIFIC

N 36 Lok Yang Way,  
Jurong

Singapore 628641

Phone: **+65 6250 8488**

## CHINA

Leroy-Somer  
1 Emerson Road, Gaishan  
town, Cangshan District,  
350026 Fuzhou - China

 Phone: **+86 591 88373036**

Find your closest LS or Kato Engineering contact  
on our Internet site:

[www.leroy-somer.com/epg/service](http://www.leroy-somer.com/epg/service)  
[service.epg@leroy-somer.com](mailto:service.epg@leroy-somer.com)

Your local contact



[www.lrsom.co/support](http://www.lrsom.co/support)

**Nidec**  
All for dreams

**LEROY-SOMER**<sup>TM</sup>  
**KATO ENGINEERING**<sup>TM</sup>