



S E R V I C E



Tailored solutions for your needs

Power destined to last until tomorrow

PROVIDING SUPPORT FOR A LIFETIME

We help you take care of your rectifier system over the time, with perseverance and efficiency.

Our support will follow the entire life of the rectifier system, and it is completely customisable.

Choose the service that matches with your needs.

01

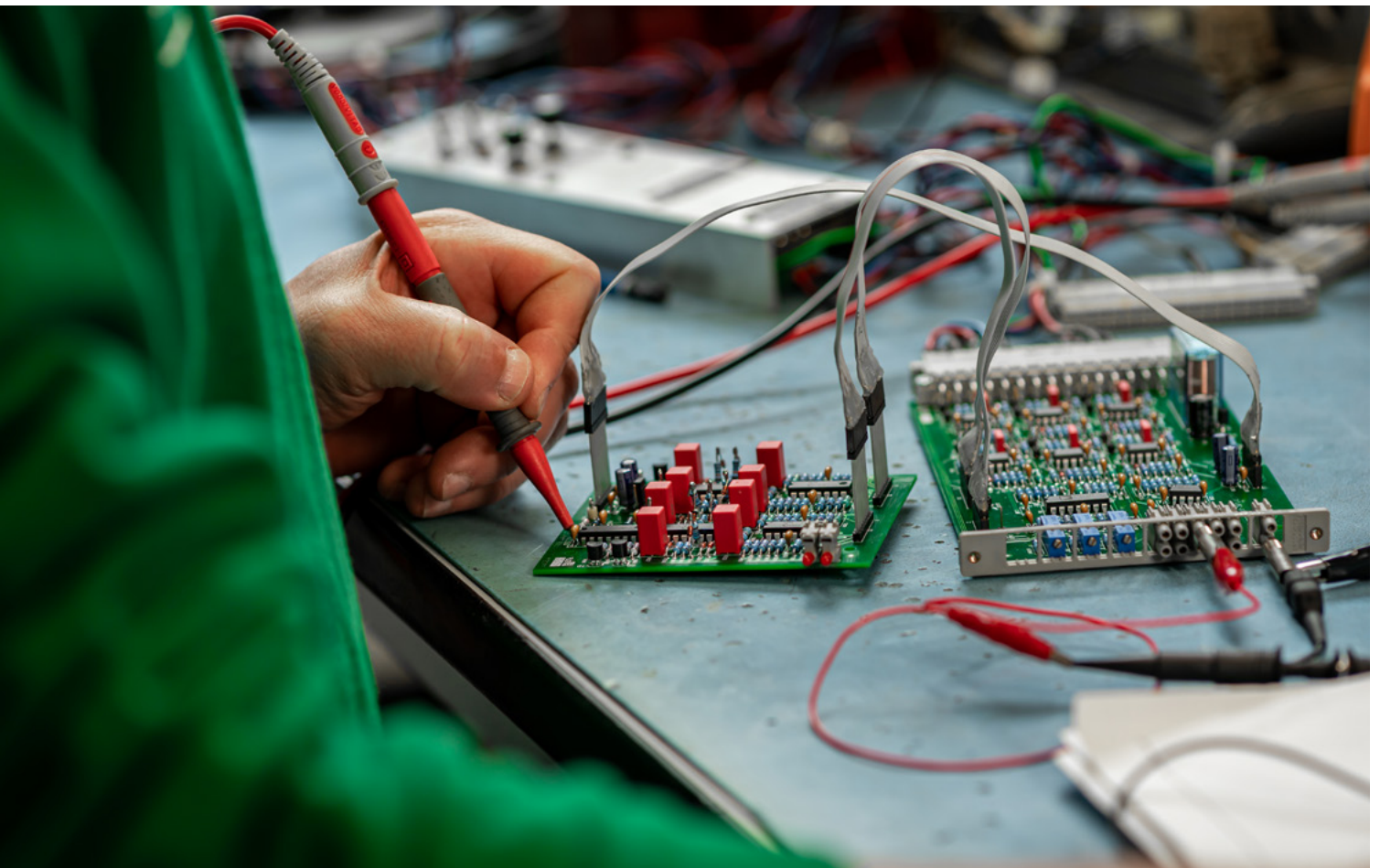
ONSITE TECHNICAL SUPPORT | Wherever you are, we are

02

REMOTE ASSISTANCE | A direct link to the FRIEM headquarters

03

UPGRADE AND TRAINING | Sharing experience and knowledges



Onsite technical support

WHEREVER YOU ARE, WE ARE

Along with you, we at FRIEM plan the most appropriate onsite support you need after the equipment's delivery and, in case of an emergency, we can reach you immediately thanks to our extensive network of local service partners.

Choose and combine the service that matches your needs:

Erection supervision

Our installation supervisor can coordinate with the installation company to minimise time losses and suggest the most effective course of action.

With our supervisor you can:

- have professional site project management
- the benefit of efficient site erection team coordination
- avoid construction errors



Commissioning and start-up services

FRIEM's skilled technicians provide commissioning and start-up services for each equipment all over the world.

Our team at FRIEM is highly specialised and equipped with first-class tools. This wide range of expertise allows FRIEM to support you on electrical tasks, PLC programming and the SCADA interface.



Maintenance contract

The best way to ensure the most rapid response and to extend the lifetime of your equipment is to subscribe to a service maintenance contract.

With our yearly maintenance contract, you can:

- benefit from a fixed daily fee
- schedule maintenance activities according to programmed shutdowns
- prevent failure; with our annual check-ups, our experts can suggest how you can extend your equipment's lifetime
- monitor your stock of spare parts
- benefit from providing dedicated training to your personnel

OPTIONAL SERVICES

1. FRIEM Gold Maintenance

As an option you can add the FRIEM Gold Maintenance. By using a current sharing and analysis monitoring system, you can get the benefit of:

- a high-technology instrument to analyse the real current sharing in the rectifier
- accurately scheduling preventative maintenance by monitoring and trending the balance of individual currents among parallel rectifying devices

2. Conversion system efficiency assessment

If your priority is to evaluate how to improve your rectifier's efficiency, you can choose our conversion system efficiency assessment.

Our specialised technicians can take care of:

- evaluating your current conversion system's efficiency with proper high-accuracy metering devices
- suggesting to you how you can improve its performances.



Remote assistance

A DIRECT LINK TO THE FRIEM HEADQUARTERS

We provide remote support that guarantees swift responses in all situations. Out of the three levels of service available, you can choose the remote assistance solution that best fits your specific needs.



Standard remote service (FIRS)

The FIRS is a direct link between the FRIEM headquarters and the control panel of the rectifier.

Our experienced service engineers can connect to the control panel of the transformer rectifier unit, and immediately analyse the parameters to provide live and swift professional support.

By signing a yearly FIRS contract, you can get benefit of:

- a trilingual specialist engineer (Italian - English - Spanish)
- a priority channel with FRIEM's experienced engineers to solve faults and problems immediately
- periodical checks to increase both the reliability of the equipment and the relevant lifetime
- online digital regulator setting and firmware updates, in case of replacement is required
- basic PLC software modifications such as additions of DI/DO or AI/AO
- cost saving through annual cost predictability



On call service

We provide top-class service assistance with a dedicated phone line with 24/7 phone availability and minimised reaction time. This top-priority intervention guarantees a fast and flexible response:

Requirements to subscribe to the on-call service:

- languages spoken: Spanish and English
- set of spare parts available onsite
- laptop with the FRIEM software (free version) installed
- stable internet connection

24h for Europe and countries covered under local service assistance (Europe, Asia, USA, Brazil, Peru, Chile), and in 48h for all other countries.



Augmented reality remote assistance

The virtual augmented reality (VAR) system allows our specialist to be at your side live and guide you as you operate immediately on your equipment.

Thanks to its weight of only 90 grams, it is extremely comfortable and can be worn throughout the day.

Our VAR system offers the one and only augmented reality safety glasses with EN166, EN170, EN172 and ANSI Z87.1+ certifications. It can also be used intended as personal protective equipment (PPE).



Technologies and features



ERGONOMICS

Wraparound polycarbonate lens with integrated side shields.



COMFORT

A terminal designed for the maximum comfort and the total stability.



FITTING

Panoramic can be perfectly worn over prescription glasses.

CAPACITIVE TOUCH

CAMERA SLOT



A.R. OPTICAL MODULE

INERTIAL MEASUREMENT UNIT

HAPTIC FEEDBACK & RGB LED

Upgrade and training

SHARING EXPERIENCE AND KNOWLEDGES

Revamping and upgrade

If you need to minimise the risk of shutdown due to the obsolescence of your equipment, our experts can suggest you the best technical solution to improve your system with new technologies. FRIEM's revamping services include:

- power section analysis and replacement of thyristors, fuses, snubber and overvoltage protection
- cooling system analysis and replacement of pumps, plate heat exchangers, hoses and sensors with analog output signals
- control and regulation analysis and the installation of new digital regulation system and PLC

FRIEM's revamping process ends with installation commissioning and starting up and testing the equipment.

Training

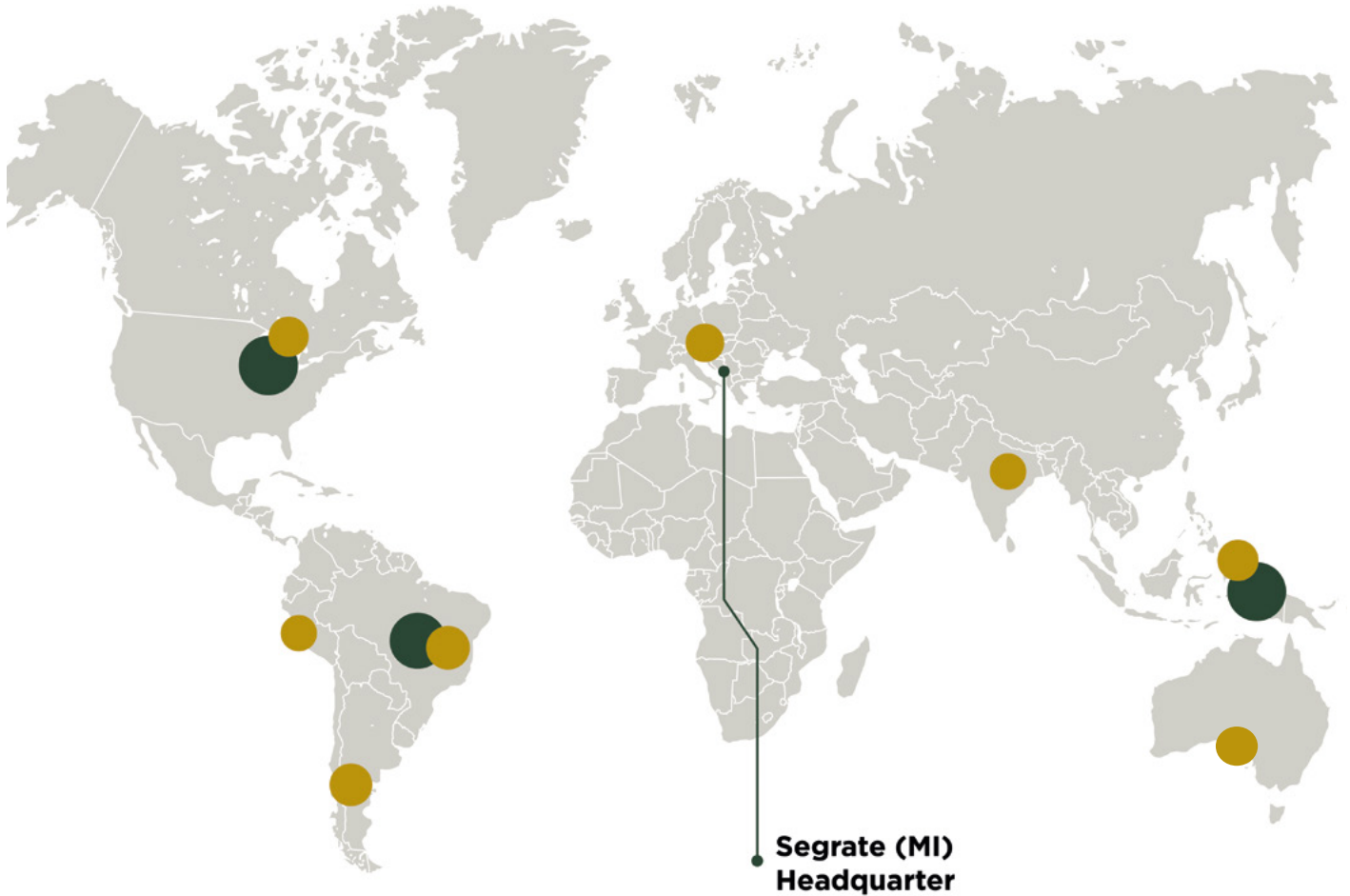
Our experienced service department provides accurate training to your company's personnel, to ensure a rapid and efficient response in any situation. Each programme is studied to meet your specific demands and can includes courses on:

- the working principles of the rectifier system
- using and maintaining a complete conversion system
- PLC and digital regulator functioning
- preventive maintenance
- detention, identification and solution of common failures

The training can be provided directly onsite or at FRIEM's facilities.



Worldwide Presence of FRIEM



#3 SUBSIDIARIES

FRIEM America, Chicago, US
FRIEM Latam, San Paulo, Brazil
FRIEM Asia, Jakarta, Indonesia

#8 SERVICE CENTERS

FRIEM (Milan, Italy)
FRIEM America (Chicago, US)
FRIEM LATAM (San Paulo, Brazil)
FRIEM Asia (Jakarta, Indonesia)
FRIEM India (New Dehli, India)
FRIEM Peru (Lima, Perú)
FRIEM Chile (Santiago, Chile)
FRIEM Australia (Adelaide, Australia)



CONVERTING TECHNOLOGY

Via Edison, 1 | 20054 Segrate | Milano (MI), Italia

T: +39 02 87235350 | E: friem@friem.com



friem.com