MEDICAL SOLUTIONS

Empowering Smarter Medical Equipment

Reliable, precise and continuous power for safe and continuous healthcare operations.



Your partner for safe healthcare



Engineering power, control & monitoring for medical equipment

Alpha Innovations develops and manufactures custom power solutions for medical device manufacturers and healthcare operators. Critical devices and monitoring systems need uninterrupted, high-quality power, often in space-limited setups or on board blue light vehicles, while meeting strict safety and regulatory standards. Even brief outages can endanger patients, disrupt workflows and cause costly downtime.

Our expertise combines power electronics, custom engineering, testing and repair to deliver complete solutions tailored to each application. From compact embedded converters certified to IEC/EN 60601-1 to backup power for medical facilities, we transform complexity into reliable operational solutions.

Our mission is simple

To power medical devices with reliable, precise and continuous energy, for safe and uninterrupted patient care.

Why choose Alpha Innovations?

Local agility. Global strength.

Alpha Innovations is part of the CE+T Group, an international technology group specialized in energy conversion, power electronics, BESS, monitoring, and energy management solutions. Founded in Belgium in 1934, CE+T has become a recognized global player delivering innovative energy solutions across critical industries worldwide.

Today, the group combines decades of engineering expertise with a strong innovation culture driven by research and development.

- €99 million consolidated turnover
- Approximately 400 employees worldwide
- 7 R&D centers
- 6 production sites
- More than 90 active patents
- International presence across Europe, America, Asia, the Middle East, and Australia

The strength of the group

Being part of CE+T Group gives Alpha Innovations access to a powerful ecosystem of complementary technologies.

Innovation-driven

More than 90 active patents and continuous investment in next-generation technologies.

Medical expertise

Proven experience in compact IEC/EN 60601-1 certified converters for life-sustaining equipment such as dialysis machines, with custom engineering, repair and long-term availability.

Long-term partnership

Financial strength, manufacturing capacity, and worldwide support capabilities ensure sustainable customer relationships.

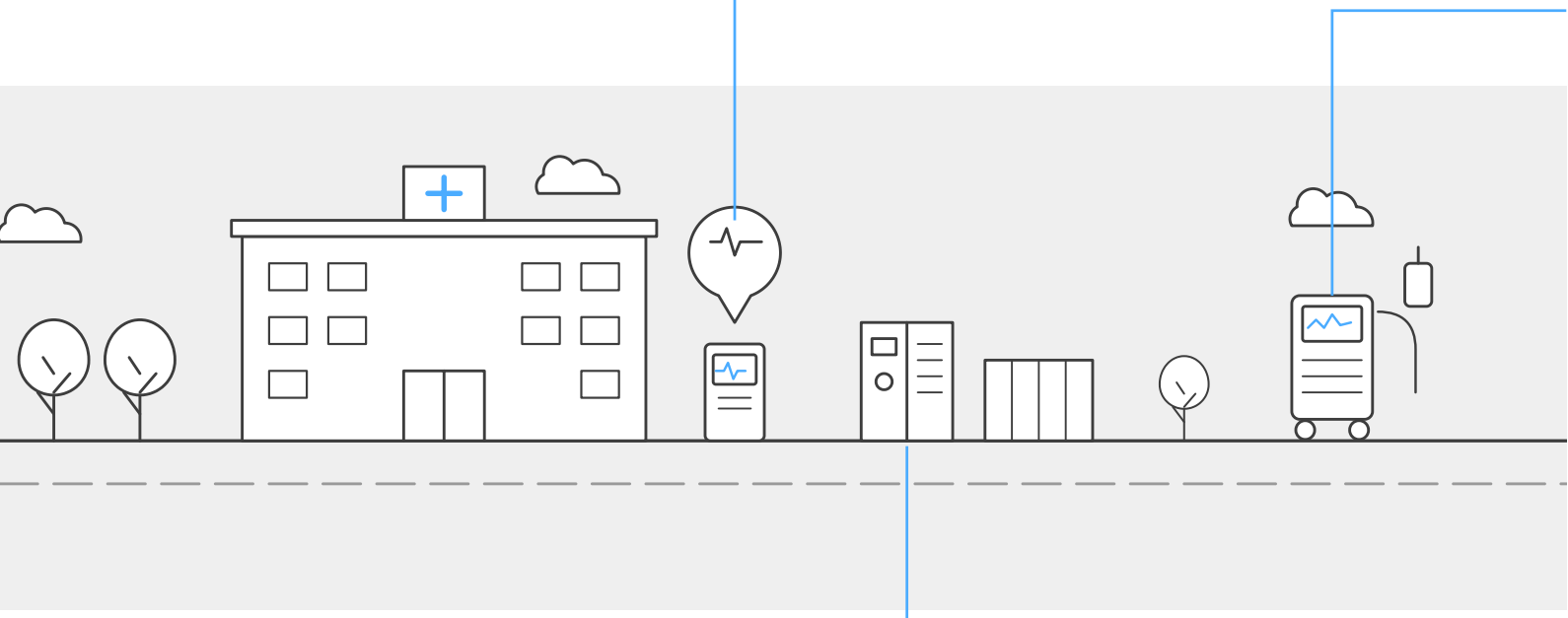
One ecosystem

The combined expertise of CE+T Power, JEMA, RIPEnergy, CE+T America, and Alpha Innovations enables the delivery of complete solutions from energy conversion to advanced monitoring and control.

Solutions for medical critical power

– Patient monitoring devices

Compact, high-reliability DC/DC and AC/DC converters delivering stable, precise power to patient monitoring devices and critical medical equipment.



Backup power for medical facilities

Custom backup systems for continuous, quiet, off-grid operation that protect patient care and equipment during grid failures or blackouts.

Tailored, compact design

Modular converters designed to fit inside the device, built for reliability and to withstand thermal stress, vibration and electromagnetic interference.



Embedded power for blue lights

Power conversion modules and embedded power supplies for blue light vehicles such as ambulances, delivering stable, reliable power on board.

From data collection to predictive maintenance

Medical facilities depend on critical power and building systems every day, from backup power and batteries to environmental conditions in technical rooms. The challenge lies in transforming that data into actionable insights. With COMPAS at the edge and Inview MESH in the cloud, Alpha Innovations gives operators complete visibility over their critical power infrastructure and improves decision-making in real time.



Our solutions enable customers to :

- Monitor backup power and batteries continuously
- Supervise temperature, humidity and environment
- Centralize alarms across sites and suppliers
- Run remote battery tests
- Plan preventive maintenance
- Reduce downtime and operating costs

Intelligent monitoring at the edge

Our edge solutions are designed to operate in technical rooms and remote sites and provide real-time access to critical operational information, even without internet connectivity.

MODULAR | SCALABLE | BIDIRECTIONAL | REAL-TIME

MCU Oled



- 1U fits in 19" rack
- CAN, Ethernet, USB host & device extension

UCC



- 1U, 19" rack form factor
- CAN - RS485/232 - USB-A/B + ADIO cards

GALEO



- DIN Rail form factor
- Based on a Raspberry Pi
- Standard connectivity

Power that never lets patients down

Major medical device manufacturers build cutting-edge equipment, such as dialysis machines, that must run 24/7 and is operated by caregivers rather than technicians. Power supplies must prevent any electrical leakage to patients and operators, comply with IEC 60601-1 and fit into very limited space, while technology keeps evolving and patient numbers keep rising.

Tailor-made converters for dialysis equipment

Alpha Innovations designs **compact converter units** dedicated to each device, that can be mass-produced at a good price. The technology should not have to adapt to the power supply: the power supply adapts to the technology.

SAFE | COMPACT | RELIABLE | SCALABLE

The converters meet IEC 60601-1 and support risk management at equipment level. Integrated into dialysis equipment, where water, electricity, chemistry and heat coexist, they meet the specific requirements this environment creates. Units are built to fit inside the device with the smallest possible footprint, with an efficiency that exceeds the requirements of the safety standard. Alpha Innovations has worked with these manufacturers for years and adapted quickly to demand, including the COVID-19 surge in dialysis equipment.



IEC/EN 60601-1

3rd edition · medical electrical safety

Patient safety

IEC 60601-1 compliance and equipment-level risk management.

Perfect fit

Compact units designed around the device, not the other way round.

24/7 reliability

High efficiency and long lifetime for continuous operation.

Long-term partnership

Full service and long-term availability of components.

Embedded power solutions

Integrating complexity. Delivering reliability.

Our engineering teams design and manufacture compact, high-reliability DC/DC and AC/DC converters tailored to the electrical and mechanical constraints of each medical device.
Engineered for patient monitoring devices, life-sustaining machines and blue light vehicles, our solutions deliver stable, precise power in small form factors while meeting strict safety and regulatory standards.

Proven medical integration expertise

From need analysis and feasibility to co-design, prototyping and validation (efficiency, thermal behavior and EMC), our teams turn your constraints into dedicated power solutions that can be mass-produced at a competitive cost. Every system undergoes 100% functional testing, and our repair service, with traceability and a customer portal, covers units in and out of warranty.
Each solution is designed, assembled and tested in Belgium, with full service and long-term availability of system components.

- Compact DC/DC and AC/DC converters
- IEC/EN 60601-1 (3rd edition) and IEC/EN 60950 certifications
- Resistance to thermal stress, vibration and EMI
- Backup power for medical facilities
- Custom engineering, from prototype to series production
- Repair, full service and long-term availability

Medical integration project

Compact converter units – dialysis equipment

For major medical device manufacturers, we develop dedicated converter units integrated into dialysis machines that run 24/7. Our solution ensures:

- Protection of patients and operators against electrical leakage
- Reliable, long-lasting operation by caregivers, without technicians

Custom designs delivered as smoothly as standard components.

From need to production

Our custom engineering process turns your constraints into a certified, mass-producible power solution.

1. Need analysis

Constraints turned into a written technical brief.

2. Feasibility & co-design

Regulatory requirements and architecture, decided with you.

3. Prototype & validation

Efficiency, thermal behavior and EMC compliance tested.

4. Production & testing

In-house manufacturing, 100% functional testing.

IEC 60601-1 compliance

Product safety standard for medical electrical equipment

Risk management

Support at equipment level, where water, electricity and heat coexist

Smallest footprint

Mechanical design built to fit inside the device

High efficiency

Above the requirements of the safety standard

24/7 reliability

Long lifetime for continuous operation by caregivers

Mass-producible

Dedicated designs produced at a good price, scalable with demand

Full service

Repair and long-term availability of system components

Medical power expertise

Why medical device makers choose us

Medical operators and device makers rely on Alpha Innovations for decades of experience in power conversion and electronics, field-proven reliability, custom engineering and repair.
Our converters are certified to IEC/EN 60601-1 (3rd edition) and IEC/EN 60950, and every system is tested before leaving production. As technology evolves and patient numbers grow, we deliver custom solutions as smoothly as standard components.

✓IEC 60601-1
3rd edition certified converters

✓24/7
operation of life-sustaining dialysis equipment

✓100%
functional testing of every system

Patient & operator safety

Compact, device-specific design

Continuous, precise power

Repair & long-term availability

Three pillars of medical-grade power

- **Safety first**

Certified converters and equipment-level risk management to protect patients and operators.

- **Built around your device**

Electrical and mechanical designs tailored to the smallest footprint, resistant to thermal stress, vibration and EMI.

- **A partner for the long run**

Responsiveness when demand surges, full service, repair and long-term availability of components.

Other use cases & news

USE CASE



Customer : Major medical device manufacturers
Application : Dialysis equipment running 24/7
Country : Worldwide
Expertise : Compact IEC 60601-1 converter units

POWER MODULES

SERVICE



Custom engineering

From need analysis, feasibility and co-design to prototypes tested for efficiency, thermal behavior and EMC, in-house manufacturing and 100% functional testing.

CUSTOM ENGINEERING

SERVICE



Repair service

In-warranty and out-of-warranty repairs with full traceability and a customer portal to track service status, as part of our circular economy approach.

REPAIR

NEWS · MARCH 2026



ISO 9001 certification renewed

Alpha Innovations renewed its ISO 9001 Quality Management certification, covering its power conversion systems and monitoring solutions. Every solution undergoes functional, thermal, safety and EMC testing before leaving production.

COMPANY NEWS

NEWS · 2024



Factory of the Future label

Alpha Innovations was one of ten Belgian companies awarded the Factory of the Future label, recognizing its commitment to sustainable processes, advanced digital technologies and employee empowerment.

COMPANY NEWS

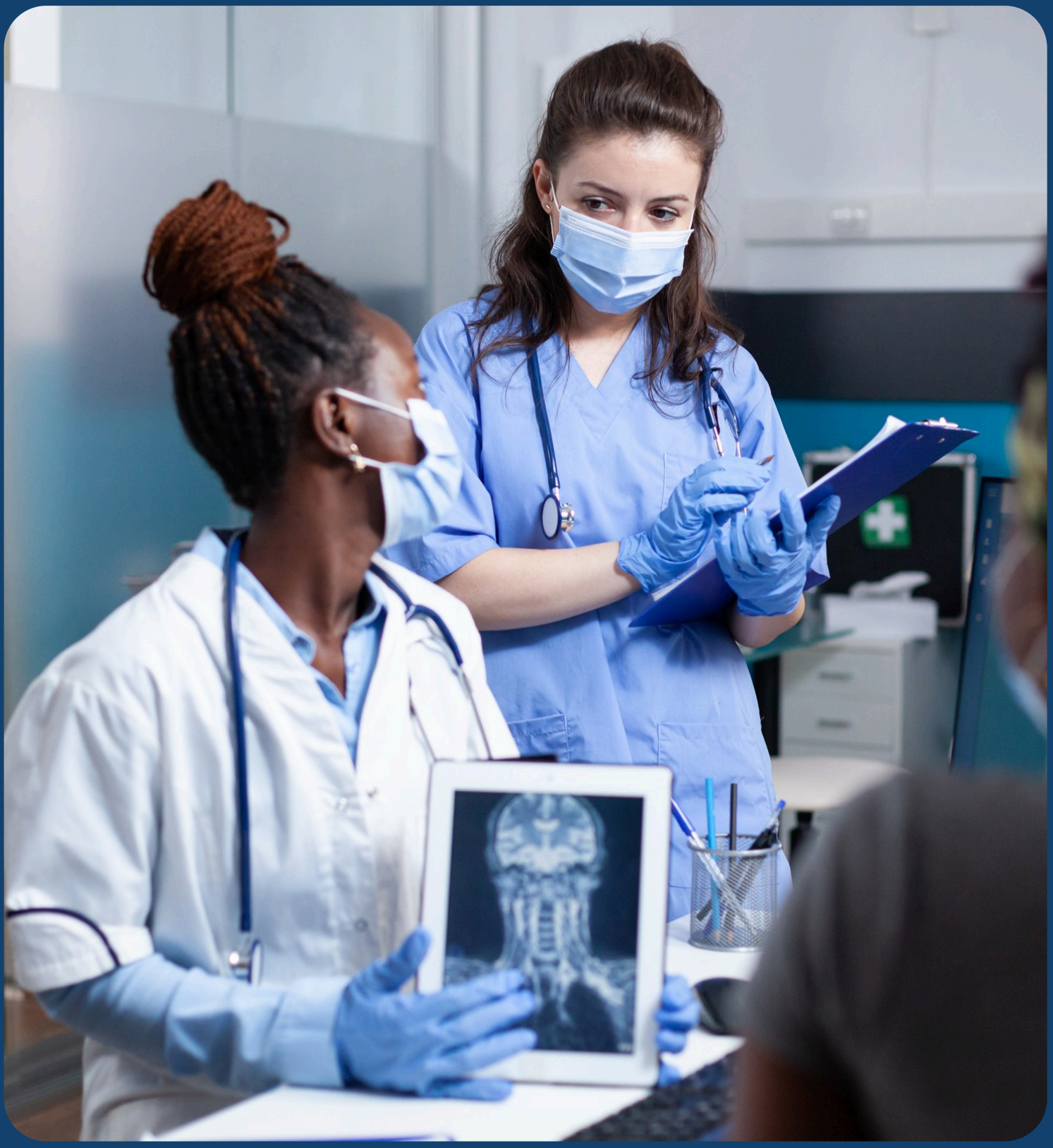
NEWS · JULY 2023



Proudly made in Belgium

Our products are designed and assembled in Belgium, with full control over our supply chain and a strong focus on repairability to extend product lifespans and reduce waste.

COMPANY NEWS



ALPHA INNOVATIONS

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