



Saves Your Energy

Ensto Industrial Solutions

For demanding environments



DESIGN
FROM
FINLAND



Ensto Industrial Solutions

For demanding environments

At Ensto Industrial Solutions, we offer you enclosing solutions and industrial components for the most demanding environments.

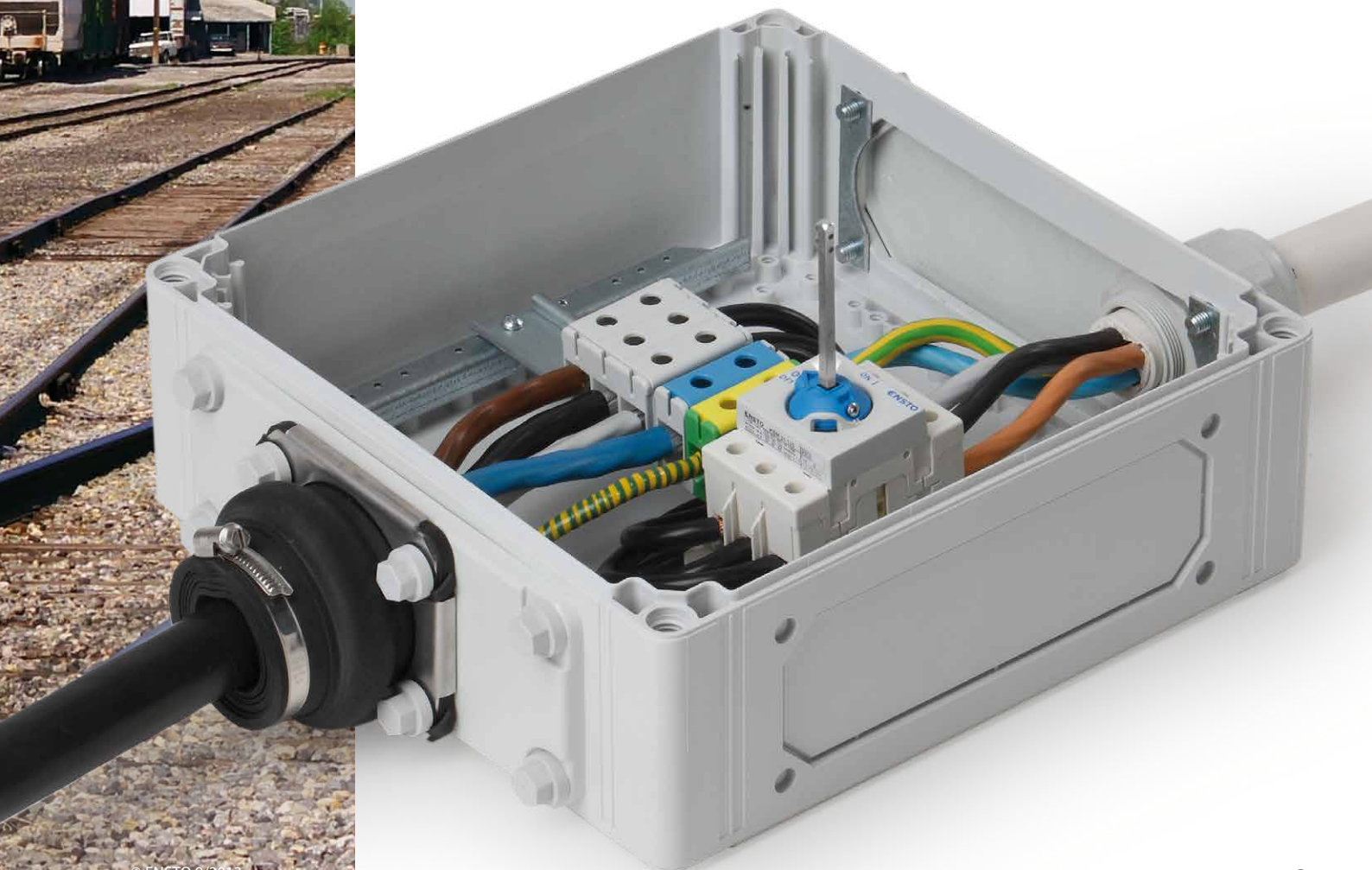
We are a reliable and flexible partner with experienced people. Our sound knowledge of many applications and various raw materials, including plastics and metals, make us a real expert in this field. You can rely on our competence, quality and financial solidity.

Our solutions are continually developed for long lifespans and to withstand the toughest conditions

on earth. Durable products mean uninterrupted operations, lower maintenance costs and, above all, satisfied customers.

Further information

We are happy to provide you with further information on our solutions and offering. Our contact information can be found on our web page at www.ensto.com.



Enclosing solutions

For your specific needs

At Ensto Industrial Solutions, we offer you high quality standard and customer-specific enclosing solutions made of plastics and metals. Our solutions are developed for demanding industrial environments requiring a high degree of protection and extreme durability.

Our broad product range covers thermoplastic, polyester, sheet steel and aluminium enclosures and related accessories suitable for extremely challenging environments.

Our customer-specific service offering includes the customising of standard enclosures, as well as the creation of special design enclosures. We also offer integration services including the sourcing of third party components.



Our technical support

At your service

Our innovative specialists are happy to support your engineering department in finding cost-effective solutions to your specific needs, saving your resources and making your processes leaner.

What are your needs?

Cost-efficient solutions

Our experts support you in acquiring and designing more cost-efficient and safe enclosing solutions tailored especially to your needs.

Customer-specific solutions

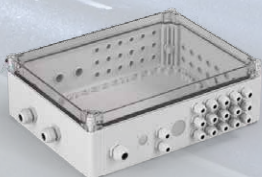
With our experienced design team, we support your product design in making special design enclosures, including smooth technical documentation, 3D modelling and quick prototyping.

High reliability

With our knowledge and choice of materials, we are able to provide high levels of reliability to end customers. Material selections are always made together with our customers to optimize and secure manufacturability and technical performance.

Design files

We support your end-solution design process further by offering the design files related to both our standard and customer-specific solutions.



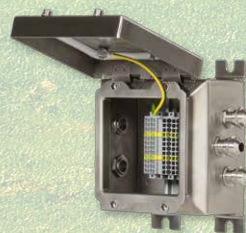
Explosion protection solutions

For hazardous areas

We ensure your safe working environment and smooth operations, even in the most demanding conditions. We provide certified explosion protection solutions that are suitable even in the high-risk Ex environments.

Our continuously growing product range now comprises enclosing solutions and related various industrial components, all certified to meet the demanding Ex environment requirements.

Our explosion protection solutions are comprehensive and widely configurable. Reliable in use and convenient to install, their overall quality provides cost-efficiency – and most of all, increased safety every day.



Extreme safety for extreme conditions



Industrial components

Critical to the safety of your operations

We support your operations with high-quality terminals and load-break switches that are designed and tested to meet a wide range of applications.

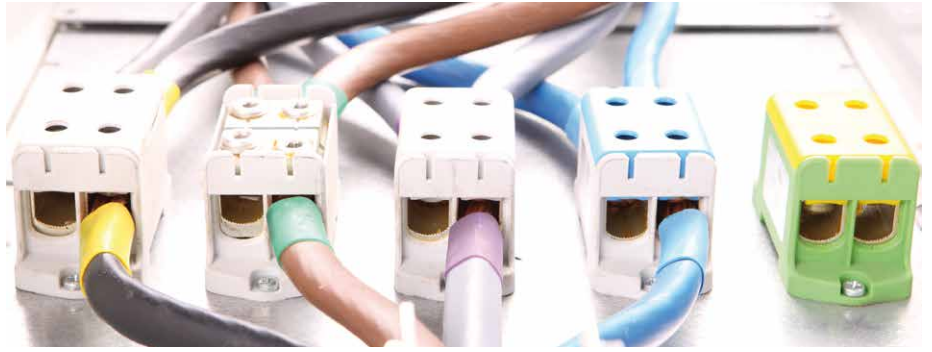
You can rely on our components as they are certified against the most demanding industry standards to ensure high performance and quality of your operations.

In addition to standard components, we offer customer-specific solutions, such as terminals customised with prints and labellings, and solutions designed to serve even more specific needs. An example of these is the Ensto Clampo Pro three-pole terminal block, which is specifically designed for one of our customers in the drives industry.



Ensto Clampo Pro

Ensto Clampo Pro is a comprehensive universal terminal series for aluminium and copper conductors from 2.5 to 240 mm². The series is a versatile solution for all installation needs, ranging from low-voltage switchgear to control gears for industry, construction and building automation. As it can be used with both aluminium and copper conductors, it makes life easier for designers in both the OEM industry and mechanical engineering.



A reliable supplier

Support for your superior performance



Sustainability
report

We have outstanding experience in making enclosing solutions for many industrial segments. Our impressive list of long-term customer relationships with globally recognized industrial companies tells the story of our reliability and superior customer care.

We are a financially solid company that has been profitable every year since our foundation in 1958.

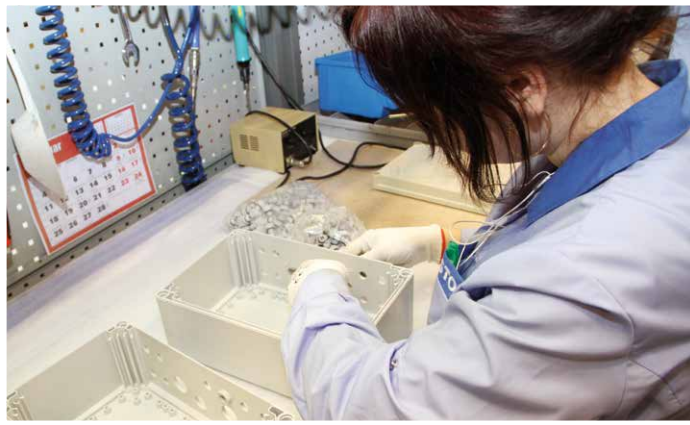
We are proud of our solutions, which we develop and test to suit a wide range of applications that must endure the most extreme conditions. Our proven performance and certified quality come from our fully equipped in-house laboratories and well-known external laboratories, which we use for certification testing. We work closely with standardizing and testing bodies, certifying products according to customer needs.

We have modern production facilities. Our factories have received the following certificates and we undergo regular internal and external audits related to those:

- ISO 9001:2008 Quality System Certificate
- ISO 14001:2004 Environmental Management System Certificate

While we participate in EN standardization, we always test our products even beyond the standard requirements.





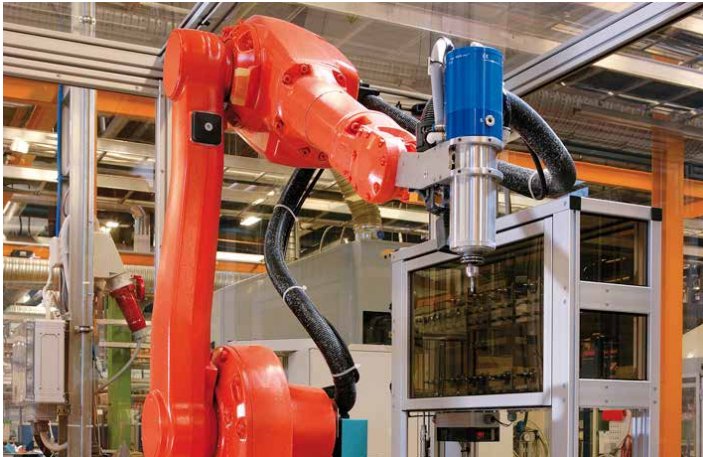
Quality assured manufacturing

Guaranteeing your smooth operations

We manufacture our metal and plastics enclosing solutions and industrial components in our own modern production facilities with state-of-the-art robot technology in Estonia and Finland.

We strive to live up to our promise of sustainability by organizing our production and logistics processes to minimize energy consumption and waste, while implementing industry best practice to assure highest quality and a healthy working environment. We are also actively involved in auditing and continuously improving our work processes, and adopting new models to make the human activities in our production chain more efficient. To our customers, this translates to shorter lead times and enhanced manufacturing flexibility.





Production in Tallinn, Estonia

- Floor space 9,000 m²
- 24 injection moulding machines; ranging from 50 to 1,000 t
- Robotic cells and CNC machines for customising
- Integration services and contract manufacturing of industrial housings

Production plant in Mikkeli, Finland

- Floor space 11,000 m²
- Integration services and thin-sheet contract manufacturing of industrial housings
- Industry's most advanced manufacturing technology worldwide
 - Servo-operated blank cutting laser and punching
 - Robotic bending
 - Robotic welding
- Surface pre-treatment and powder coating lines

Some of our customer references

Rooftop solar installations in the desert, India

Ladakh is a far-flung cold desert on the northern most territories of India with many areas still without electricity. Solar power has emerged as a hope for them. In the latest rooftop photovoltaic installation done for **Jammu & Kashmir Bank** in Ladakh, our polycarbonate enclosures were chosen for junction boxes. The challenge for the customer was to go for an enclosure which could withstand such low temperatures. Our enclosures were well qualified for the test as they are designed for the extreme Nordic climate.



Customer-specific terminal solutions, Finland

The converters of the global AC drives manufacturer **Vacon** contain our Clampo Pro three-pole terminal blocks specially designed to meet the needs of the drives industry.

The co-operation with **Vacon** started in 2004. For both companies, energy-efficiency and sustainable development are an integral part of corporate strategies. The companies speak the same language, both in thought and in practice. Both companies operate in several common locations, all over the world, naturally facilitating co-operation processes, cutting down delivery times, and enabling smooth communication.



Surveillance equipment in Ergo Arena, Poland

We have provided polycarbonate enclosures for the surveillance systems of the multipurpose Ergo Arena facility located in Poland. All connections between the surveillance system's signal and electrical cables have been made within our enclosures. The selection of our junction boxes was based on their reliability and weather-resistance. Our enclosures are certified for places where the greatest value is placed on safety and protection of human life.



Advanced metering systems, Finland

We collaborate with **Landis+Gyr**, the world leader in electricity metering, by supplying enclosing solutions for automatic meter reading (AMR) systems installed in central Finland. We bring customer-specific enclosures to the project and furnish the enclosures with the electronics needed. One of our strengths is the ability to supply all the necessary technology – and more. The co-operation with Landis+Gyr began back in the 1990s.



Wind turbine projects, China

Our small thermoplastic enclosures have been used as lighting junction boxes and hydrant systems in wind turbines for both **Vestas** and **Suzlon** in their projects in China. Vestas, the world leader in wind energy, is the first wind turbine supplier to enter the Chinese market since 1986. Suzlon Energy is a global wind power company based in India. Suzlon has a manufacturing site in Tianjing, China, and has signed a contract for a project with the Chinese government for a total of 825 825 MW using almost 600 wind turbines.



Railway traffic control systems, Finland

Railway traffic relies on automation that is safe and flawless. Our customer-specific metal enclosing solutions can be found in railway traffic control systems made by the Finnish system integrator **Mipro**, specialising in systems for railway safety, water and heating service control, and industrial safety systems. The co-operation with Mipro has been developing for a decade. Our solutions were selected for this particular systems due to such factors as reliability, strict testing, documented quality, good locations, and affinity with the partners' work processes.



Fire safety solutions in the maritime industry, Norway

We provide customized steel enclosures for fire safety systems to the Norwegian **Autronica Fire and Security AS (AFS)**, which develops, manufactures and supplies fire safety equipment and marine safety monitoring and surveillance equipment. In this project the enclosure dimensions, holes, clamps, and even painting have been customized to AFS' needs. Important criterias in purchasing the solutions from us included our flexibility and cost-efficiency, even in small series.



Explosion protection solutions for fire dampers, Finland

We have provided **Halton** with enclosing solutions for almost ten years. Collaboration has been smooth and our solutions have been reliable. As a result, Halton now also uses our customized stainless steel (AISI 304 and AISI 316) explosion protection solutions for their fire dampers, which are used in heating, ventilation and air conditioning systems in the maritime and off-shore industries. The Halton Group operates in over 25 countries and specializes in indoor climate products and solutions and indoor environment management.



Legal notice

The information in this brochure is to the best of Ensto's knowledge and belief correct and reliable. We reserve the right to make changes in the specifications, materials and production methods without further notice. Be aware that you should independently evaluate the suitability of each product for the intended application. Ensto does not give any assurance of any particular quality or performance. Our responsibilities to the products are set forth in the "Orgalime S 2000 General Conditions for the Supply of Mechanical,

Electrical and Electronic Products". The products shall be installed only by a competent person having nationally required knowledge. Ensto is not responsible for its distributors or for any misuse, incorrect installation or ignored national safety or other national provisions.

Copyright Ensto Oy 2013, Ensto™

Ensto

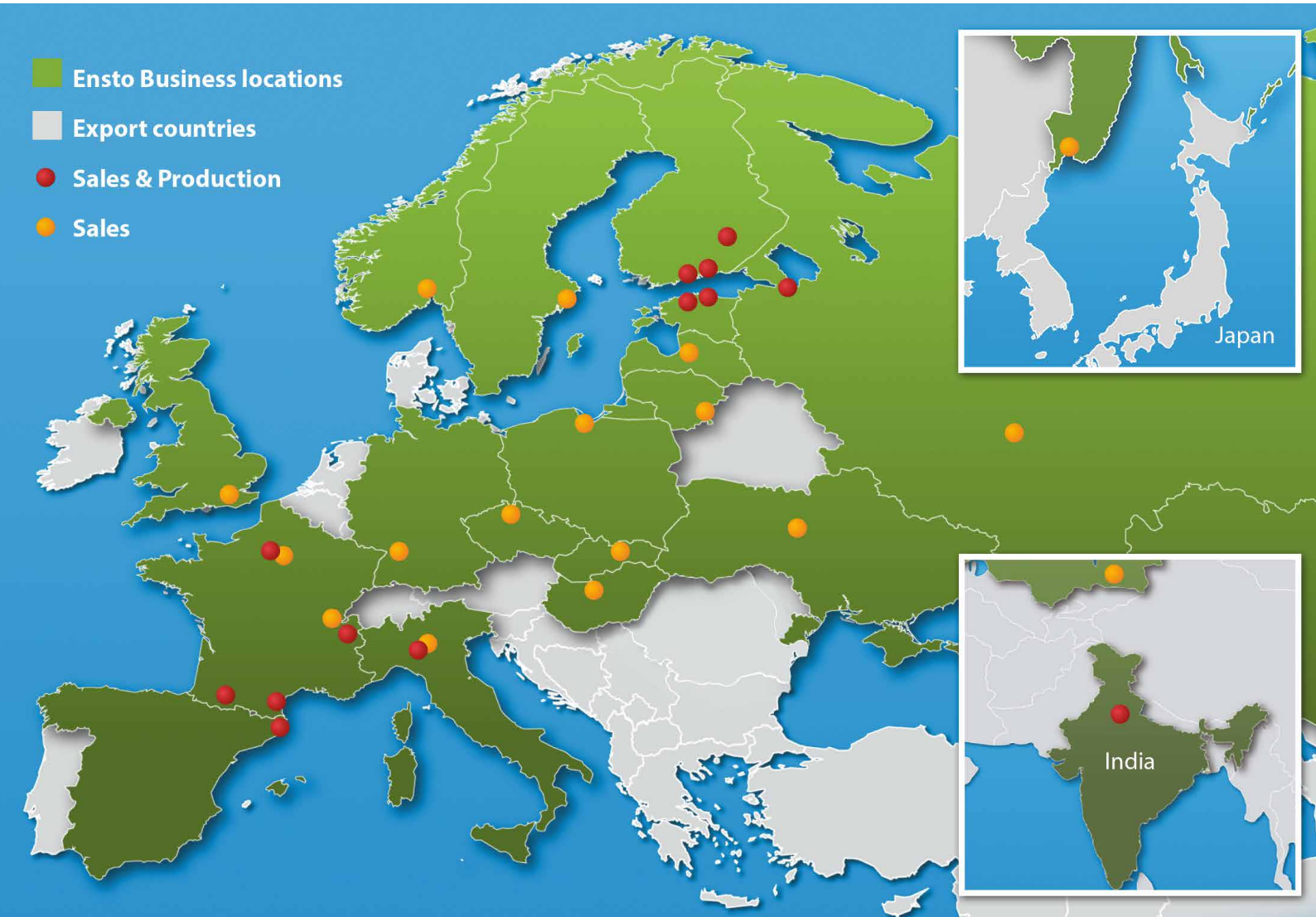
Ensto is a family business and an international cleantech company specializing in the development, manufacture and marketing of electrical systems and supplies for the distribution of electrical power as well as various electrical applications. We are committed to lasting sustainable development and our goal is to be a leading company in green energy efficiency and distribution. Our products, manufactured in seven countries, are environmentally friendly, energy efficient and leave a minimum carbon footprint.

Facts

- Established in 1958
- 1600 people in Europe and Asia
- Local presence in 20 countries
- Turnover EUR 260 million (2012)
- Headquarters located in Finland

Cleantech

Cleantech refers to all those products, services, processes, and technologies which prevent or reduce the impact of harmful actions on the environment. Cleantech stands for higher quality, efficiency, and profitability. Ensto and other Finnish companies are already world leaders in several key cleantech sectors.



Saves Your Energy

Ensto Finland Oy
Enso Miettisen katu 2, P.O. Box 77
FIN-06101 Porvoo, Finland
Tel +358 204 76 21
industrial.solutions@ensto.com
www.ensto.com

Local contact information can be found on our web pages