Pro.Energy ©

The Software solution
for Energy Monitoring
and Efficiency

progea

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The software solution to collect, display and analyze **energy consumptions**, essential for any Energy Efficiency policy. Permits companies to **reduce costs**, **increase competitivity** and **eco-sustainability**.
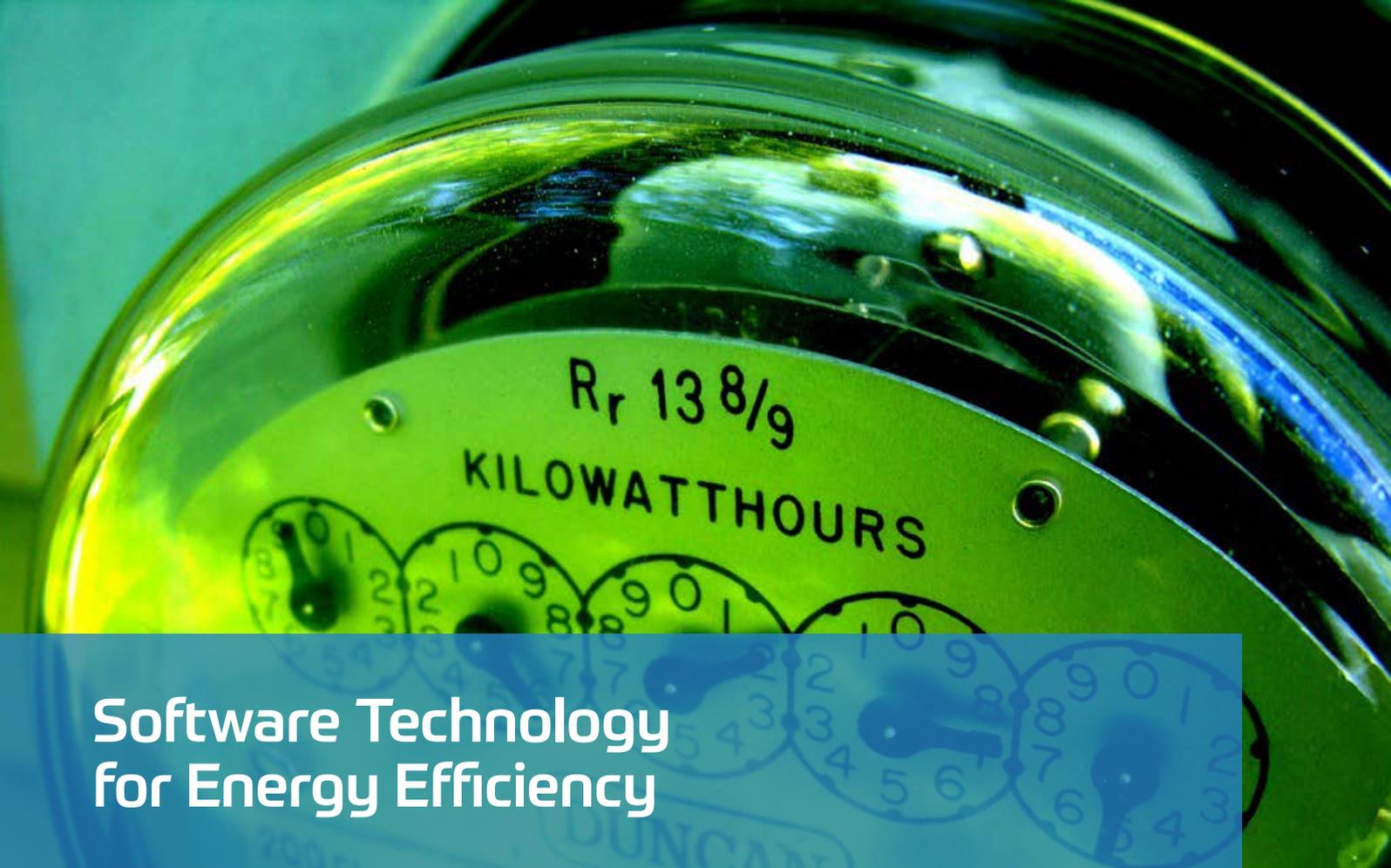
Software Technology for Energy Efficiency

Progea offers software solutions aimed at monitoring consumptions to guide the company in the right direction to reducing costs, increase efficiency and sustainability.

Deploying energy management systems has now become an even greater priority to help reach energy reduction goals by making its use more efficient. Energy bills make up a significant percentage of company production and building management costs. In addition to this, the enforcement of more stringent norms are forcing companies to endorse new energy efficiency standards such as those defined by the recent ISO-50001 norm relating to Energy Management standards, or the EN-15232 which classifies energy efficiency into four classes.

An Energy Management system is the basis for detecting the corrective measures needed to achieve continuous energy efficiency improvements that are now a top priority for every company.

The Pro.Energy© module offered by Progea enables companies to reduce energy costs by analyzing consumptions and to implement efficiency concepts with considerable financial returns and carbon footprint reduction that contributes to the company's eco-safe image. This software is a Movicon.NExT™ platform function module and therefore ensures standards and openness to manage not just energy efficiency but control functions, alarms, notifications, load release and data visualization.

Pro.Energy© provides an opportunity to all manufacturing companies to confront the energy crisis effectively and setup new policies that target efficiency improvement with rapid return of investment and consequential important benefits.

Pro.Energy© is a simple and effective solution

Pro.Energy© makes plants run more efficiently by detecting the Key Indicators (EnPIs) that consent to reducing consumptions and increasing profits.

Energy indicators (EnPI: Energy Performance Indicator) provide the information necessary for monitoring consumption.

Energy comsumption visibility
Consumption measurement acquisition provide a clear and complete picture of energy usage and how it is distributed within the company.

Identify potential energy savings
Knowing consumption measures relating to production site, period and company business situations makes it easier to identify where to intervene to improve efficiency of energy use.

### Monitoring the result of corrective actions
To assess the real benefits gained by administering corrective actions, you can monitor them in real-time and consequently evaluate other corrective methods as part of a continuous effort for improvement.

Documenting efficiency
A complete set of powerful consumption data analysis tools allow you to verify, document, export and send reports on the effective consumption reductions achieved to concerning parties and take advantage of incentives to obtain desired certifications.

Supporting Energy Managers
Pro.Energy© is the best solution that supports Energy Managers, and others responsible for analyzing energy consumption with in company, in their decision-making to improve energy efficiency. Pro.Energy© is a Movicon. NExT functional model that connects to different meters of different energy providers, measure the consumptions in real-time, record and aggregate them a relational database (SQL Server), for subsequence data analysis by period, provider or cost center. Data comparisons can also be performed according to period, values or different production sites, independently from the data source. This will help managers make the right decisions and take quick action.
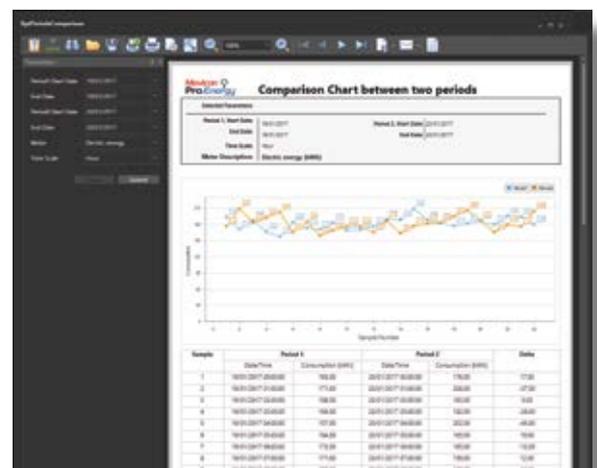
Indispensable for Energy Certification

Norms, Certifications, Incentives: Pro.Energy© offers you an integral, flexible and transparent solution for your certification systems.

In today's World it is not just 'power-hungry' companies that need to reduce consumptions. It is a well-known fact that the energy factor consistently affects company running costs significantly. Companies feel obligated to endorse energy efficiency programs not just to save on energy bills but also as a principal of ethics and sustainability that will reflect on the company's image. With today's modern technology monitoring systems are being used to obtain energy efficiency that enable businesses to access incentives conceded by government and power companies in order to render energy efficiency a worthwhile investment.

In addition, the increasingly stringent norms penalize 'power-hungry' companies and oblige them to adopt the appropriate tools for reducing consumptions and CO_2 emissions.

The ISO 50001 Standard
This recent standard provides business organizations with a reference framework for integrating energy performances in the daily running of their activities; in addition, it aims to promote the best practices for energy management as well as to improve management using projects designed to reduce emissions caused by the greenhouse effect. The basic structure of the normative is designed on the Deming cycle model with the Plan-Do-Check-Act approach. In order to achieve this type of certification it is essential to deploy a Monitoring and Analysis system such as Pro.Energy©

The UNI EN 15232 standard
The UNI EN15232 standard is used as a guide to define energy efficiency in buildings. This is does by using a classification of 4 classes to assess what impact automation and control systems have on the energy performances of thermal and electrical installations in the building. It also establishes the potential savings in electricity and heating that can be obtained by deploying plant automation systems. Ultimately, in order to obtain certification, companies are required to adopt a Monitoring and Analysis system such as Pro.Energy©.
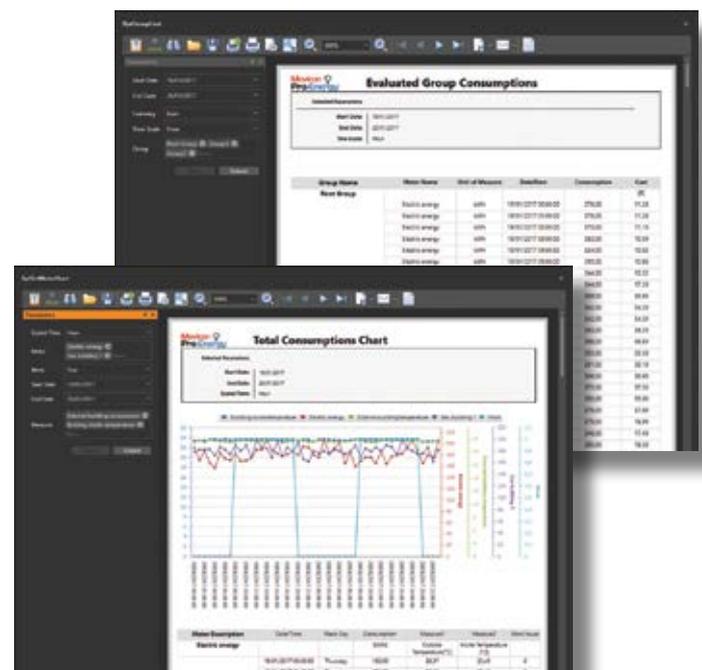
Simple, immediate and transparent energy consumption visualization

Pro.Energy© offers visualization of all energy consumptions: effective, complete, quick and transparent to all.

Pro.Energy© has been designed to ensure transparent visualization of all energy consumption values collected by measuring systems and meters throughout the entire company locally and from remote sites. Thanks to the Movicon.NExT™ technology, on which the Pro.Energy© module is based, you will be able to view energy information using local display monitors and the internet (i.e. common internet browsers, smartphone or tablet). The information obtained by using this technology will help you to make drastic reductions management costs, maintenance and license costs, and minimize company investments like no other energy monitoring system available on today's market can do.

The Energy Dashboard
The collected data are displayed in real-time by Pro. Energy© on a dashboard with clear and pleasant operating status indicator graphics. Operators will find it easy to control all production situations, whenever and wherever using the Web-enabled graphical interface. The Dashboard interface has been designed to satisfy the most recent ergonomic requirements and is completely open to customization by integrating advanced management and control functions of a supervisory system.

Pro.Energy© offers integrated and ready-to-use analysis tools based on reports, charts, data tables and billing.

The Energy Performance Indicators (EnPIs) indicators are essential to performing effective consumption analysis. Pro.Energy© collects all energy carrier data, records them on database to enable thorough and accurate analysis using purposely designed reports, charts and tables based on simple and reliable technology that is ready to use and customizable as needed. In addition to recording real-time meter measures, the system also allows the user to define and record virtual calculations as pleased. This will enable users to run comparisons on the current trends and virtual ones or use virtual calculations to manage and reallocate energy logic groups by, for example, recalculating specific meters. By applying these different methods Energy Managers and users will be able to obtain sophisticated and powerful analytical reports containing all the information they need to detect areas where energy is being wasted.

Total Connectivity to the Field and to the Cloud

Pro.Energy© is based on reliable, scalable, modular and standard technology for open solutions that integrate with any architecture.

Pro.Energy© is based on open architecture that integrates with a diverse number of different measurement tools used in the company. Integrated must have the capability to collect any measurement field value, whether it be from meters, I/O sensors and instrumentation, PLC, RTU, Inverters, fieldbus or network.

I/O Drivers
A vast library of native I/O Drivers integrated for communicating with communication protocols of measurement and control system (i.e. Modbus, Bacnet, Konnex, LON, Simatic, Schneider, ABB, Profibus, Profinet IEC 60870, IEC 61850 and many more).

OPC UA
The OPC UA standard technology (IEC62541) is supported and native as the platform's information Model. It is supported as both Client and Server for the maximum data integration and openness.

Networking and Data Sharing
Vast network connectivity for distributed architectures, or SQL database table sharing with distributed workstations for connecting to any managerial system (ERP) or SAP business system.

IIoT Gateway
Communication Drivers for integrating IoT systems, for example reading tools on public networks. PubNub, OPC UA Azure, MQTT and other Protocols.

Microsoft SQL Server-based
All process data collected by Pro.Energy© are recorded and archived for subsequent analysis using Data Logger objects that are automatically created by the Wizard. The modul functions without a Microsoft SQL Server™ license in simple architectures.

Data Collection Openness
The collection of measurements, operating states and alarms, if not already available as digital information from the PLC, require a HMI interface on the local production monitor. The Pro.Energy© architecture is ideal as it allows you to connect visualization to local HMI, networks or over the HTML Web. Therefore, the Pro.Energy© integrated functions will manage any needed data collection points or distributed data visualization, allowing you to safeguard company investments, save on costs and invasive interventions.

Data Redundancy
Pro.Energy© offers the possibility to manage the Data Redundancy function, by automatically synchronizing historical data on PC systems with redundant hardware and communications permitting its application in "Mission Critical" data collection systems.

Open flexible architecture

Pro.Energy© uses the powerful and open Movicon.NExT™ platform technology for communications and recording data.

Pro.Energy© enables you to deploy an Energy Efficiency Management system in your company by connecting it to preinstalled energy measurement systems and integrating it with your production lines without worrying about which connection methods to use. The Movicon.NExT™ connectivity enables Pro.Energy© to offer numerous integrated solutions that consent connectivity to production systems by means of native I/O drivers to connect direct to PLCs, Multimeters, Analyzers Remote I/O or control systems.   It also consents to connectivity through OPC UA Client and

Server towards HMI or SCADA systems already installed on production lines, or towards remote telemetry devices in Industrial Internet of Things (IIoT). Therefore, data can be collected without investing heavily and without additional installations on production side. As Pro.Energy© used the Movicon. NExT™ technology, it is very simple to integrate all the features needed to create a true a powerful supervision architecture.

Analytics	Web Access
SCADA/ERP	Cloud	Pro.Energy
Gas	Energy	Steam	Water	Compressors
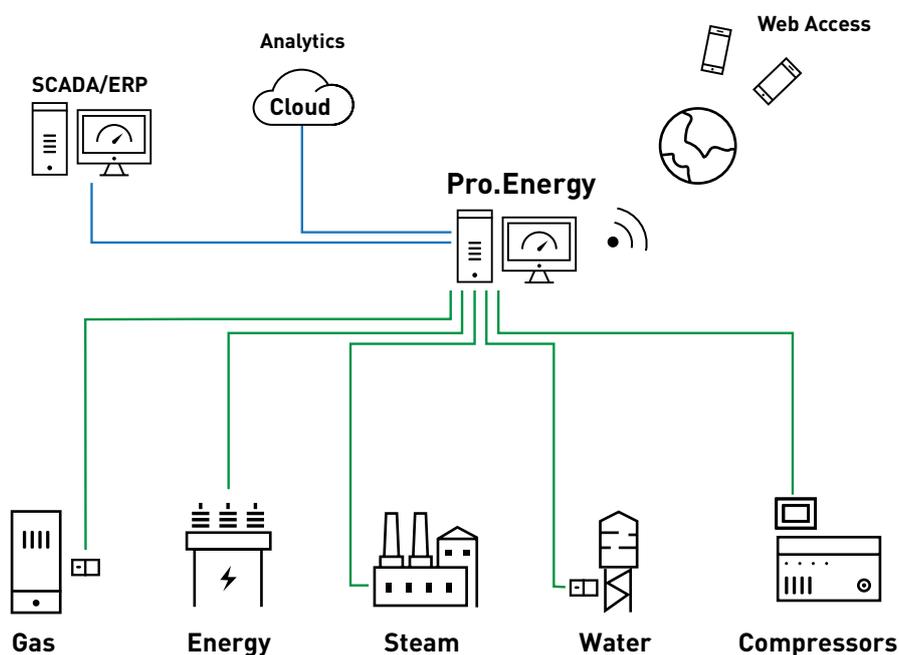
Fast and safe return of investment

An investment for Energy Efficiency with immediate returns, to reduce energy waste in any industrial sector and infrastructure.

Pro.Energy© is a "standard" solution that can be used in all energy measurement and energy consumption meter data collections and analysis applications. It can be applied as a simple monitoring system or Building Management System (BMS) supervision of production sites or infrastructures, in combination with Movicon™ SCADA/HMI supervisory projects, or in independent or stand-alone architectures applied on a server for the smart metering existing remote systems. For example, Pro.Energy© can be deployed in existing business architectures, without changing, modifying or replacing existing energy measuring or automation systems. It has been designed to reduce your investment to a minimum, without making changes to your existing system unless absolutely necessary. It is the best technology available for collecting, managing and analyzing energy production data with the possibility to control and automate lighting, energy distribution, HVAC and other systems.
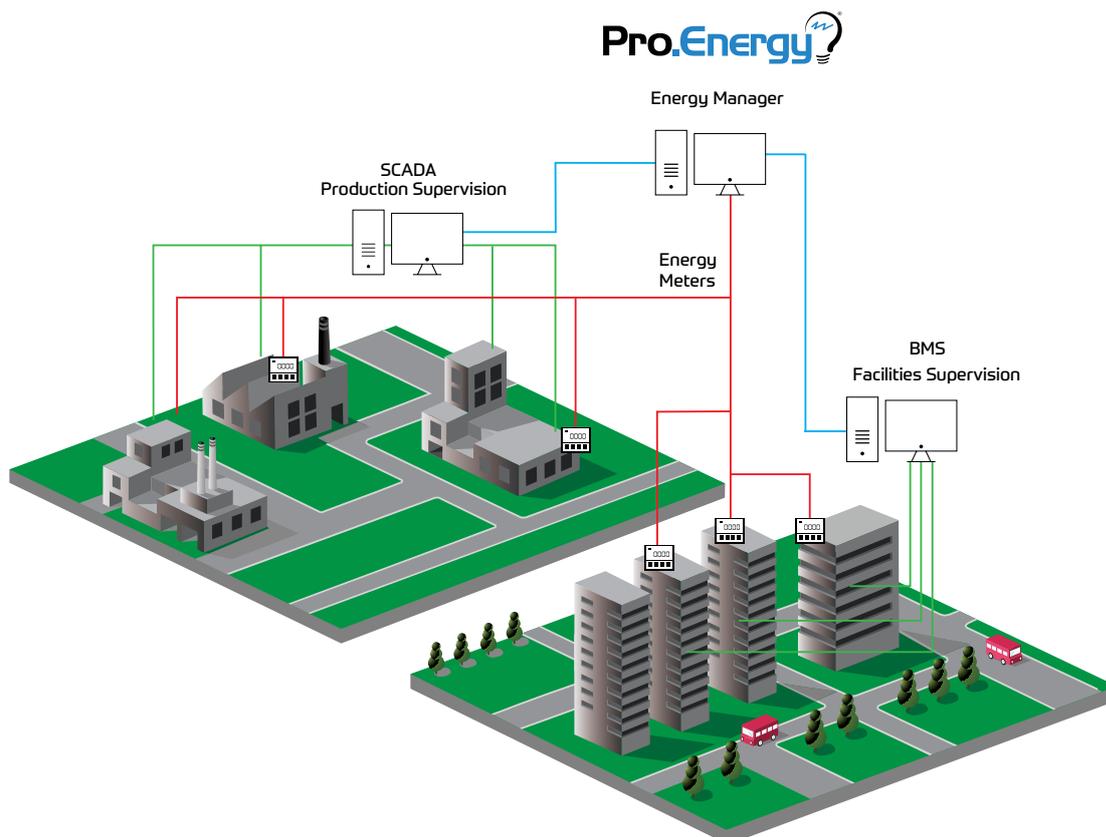
Key Features

Openness.
Pro.Energy© is a Movicon functional model and inherits the platform's .NET, XAML, SQL Server™ and HTML5 technology.

Simplicity and Wizard.
By using a simple wizard, Pro.Lean© makes it easy for users to select field variables and create data collection databases automatically. It just takes a few steps to automatically create real-time dashboards, calculation databases and analytical reports.

Standards.
Pro.Energy© is based completely on the most modern standard technology to safeguard your investment.

Performance.
Pro.Energy© guarantees real-time data management and offers a structured data analysis management on databases and for handling big data as well.

Powerful Historian.
Collected data are recording using Historian objects that record on SQL Server archive tables with automatic data recycling management.

Connectivity.
Pro.Energy© integrates a library containing a vast selection of communication drivers for connecting to all types of automation devices (Modbus, Siemens, Schneider, Rockwell, Omron, Saia, Mitsubishi, Profibus, Profinet, Ethernet/IP and many others). The drivers include functions for automatically importing tags, remote connectivity with telemetry systems or IIoT. In addition, it offers full connectivity with OPC UA both as Client and Server.

Report ready-to-use and Customizable
Pro.Energy© offers integrated and ready-to-use Analytical Reports of historical data which are both local and web-based. Data on the Server can be access by using internet browsers. The performance and security of the HTML5 standard contribute to cost and maintenance reductions.

HTML5 Web Architecture
Pro.Energy© offers dashboards with real-time energy measuring tools and Reports both locally and Web-based. Data can be access on Server using internet browsers. The HTML5 standard's performance and security ensure reductions in costs and maintenance.

Open and customizable EnPIs

Analysis Modules.
The EnPIs analysis modules offer simple and effective solutions to obtain all the energy consumption measure from energy carriers that is practical, fast and open. Reports, Tables and Charts permit complete analysis of energy consumptions with the option to print and export the represented data. All data can be managed in customizable architectures.

Integrated Movicon™ Connectivity.
In addition to interfacing with any supervisory system, Pro.Lean© also offers the great advantage of integration and connectivity with the Movicon.NExT SCADA/HMI systems.

Service and Consulting

The service, an added value

The Total Cost of Ownership (TCO) of a software platform is also strongly influenced by the quality of related services. Important parameters such as learning times, response times, quality of service and consultancy are generally considered to be the true added value of a software product. Progea services have the quality that only the manufacturing company can guarantee. Training, Assistance and Consultancy guarantee the user in coping with any application or unexpected need, which contribute towards reducing internal implementation and development costs.

Progea is directly present with its offices in Italy, Switzerland, Germany and the United States. Furthermore, an international distribution network guarantees the presence of the Progea™ trademark all over the world.

A solid partnership

Progea software technologies are widely used in automation by leading companies in every industrial sector, with over 150,000 licenses installed worldwide. As a demonstration of the quality and reliability of its software products, Progea is proud to have been selected by the major players in the industrial automation sector.

Progea technology is used and distributed, even with product customizations with the customer's brand, by the world leaders in automation.

Do not hesitate to contact us, we will be happy to analyze your needs and offer you the ideal solution, also through the international network of System Integrators who are experts in Progea technologies.

Progea is available for any analysis and consultancy needs, and to support you in all your Industry 4.0 projects. Contact us for a demo and for any further information:

info@progea.com | +39 059 451060

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progea

Progea Srl
Via D'Annunzio, 295
I-41123 Modena
info@progea.com
Tel +39 059 451060

Progea International SA
via Sottobisio, 28
6828 Balerna (CH)
international@progea.com
Tel +41 91 96 76 610

Progea Deutschland GmbH
Marie-Curie Str., 12
D-78048 VS Villingen
info@progea.de
Tel +49 (0)7721 99838 0

Progea North America Corp.
2380 State Road 44, Suite C
Oshkosh, WI 54904
info@progea.us
Tel. +1 (888) 305-2999

Progea Technik GmbH
Marktplatz, 8
I-39043 Klausen (BZ)
info@progea.com
Tel. +39 0472 694050