Engineering for a better world.

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GEA OMNI CONTROL PANEL

An advanced, digital solution for compressor control, refrigeration & heating system control, and retrofit upgrades for existing equipment

MARKET-DRIVEN INNOVATION

GEA is synonymous with precision-engineered solutions, and the GEA Omni control panel extends its history of leadership and innovation. Featuring a high-definition, multi-touch screen, GEA Omni delivers the flexibility, ease of use and technical wow factor that industry professionals have come to expect from GEA. Powerful, yet approachable. Cerebral, yet intuitive. Sophisticated, yet simple. Simply – GEA Omni.

GEA Omni offers what operators expect from a control panel: maximum efficiency and reliable operation of their system. This advanced, industrial control panel integrates and optimally coordinates all required system components, resulting in a demand-driven and highly energy-efficient facility operation.

GEA Omni Energy Saver functions allow operators to evaluate system energy usage and adjust for maxi mum benefit.

High-definition, easy-to-use HMI

Featuring a 15.6-inch, high-definition (1366 x 768 pixels) color display, the GEA Omni human-machine interface (HMI) provides clear visualization of drawings, images, and text. Furthermore, GEA Omni incorporates single- and multiple-finger gestures used in many modern consumer electronics, adding an instinctive aspect to paging through selections and zooming documents or historical graphs. An intuitive menu system, where the information you need remains only a touch or two away, ensures routine functions are easy to perform by non-technical personnel. On-screen buttons and commands required for daily operations have been clearly and logically grouped and includes Omni's QR code function, which creates a quick operating data report by simply scanning the QR code on the main compressor screen. The GEA Omni HMI makes membrane keypads and tedious navigation obsolete.

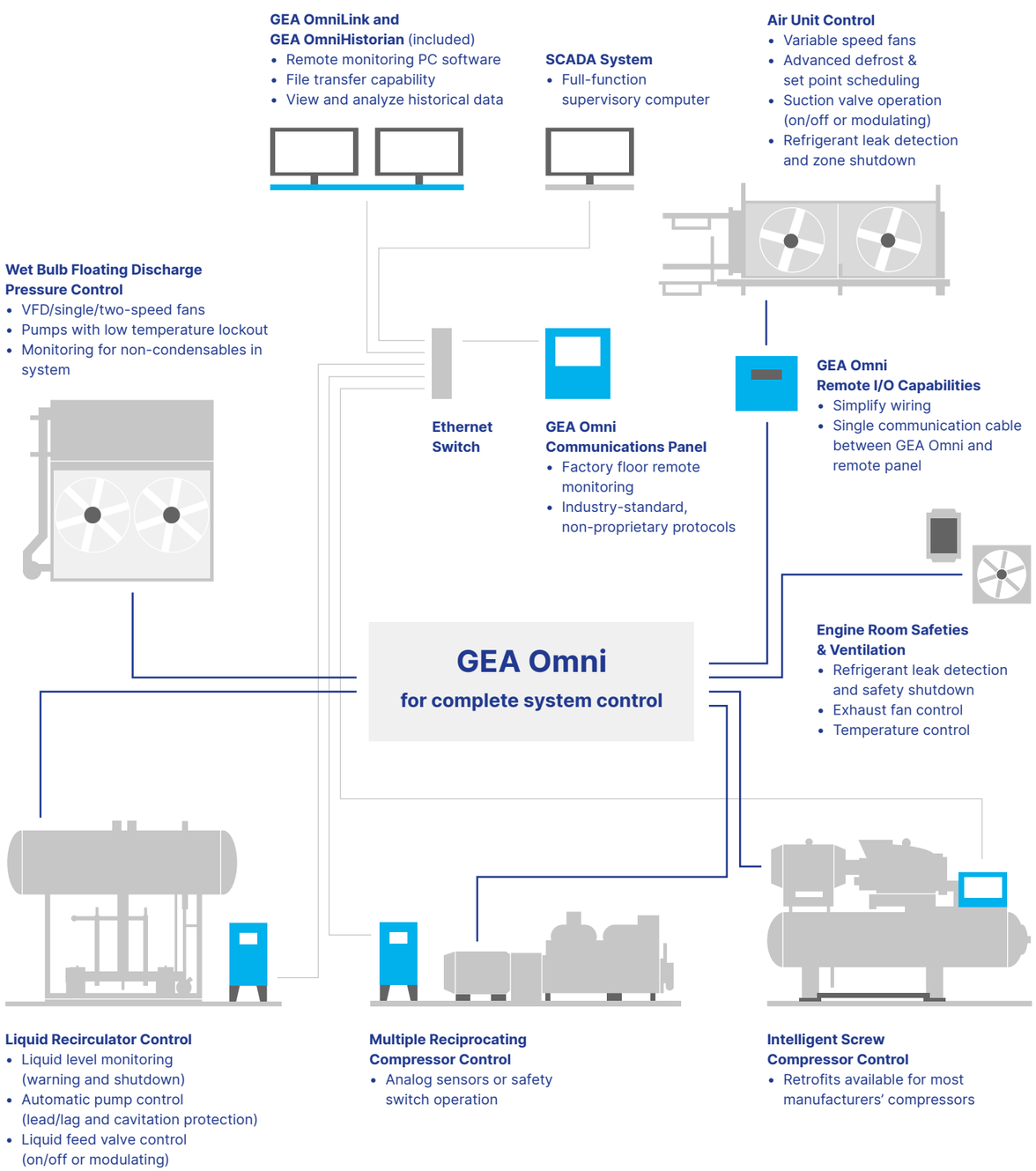
One solution

GEA Omni has been designed as an open system. As a result, it can monitor and control not only the relevant components from GEA, but also those from other companies. Configuration of the control system and the operation modes takes place initially at the GEA factory and then may be adjusted during commissioning on-site, directly at the GEA Omni. The system openness makes it an all-inclusive command center, eliminating the need for auxiliary control systems. GEA Omni shows operating states not only for main components, but also for ancillary equipment. Whether it be monitoring and managing the position of a valve or the operation of a pump, the entire refrigeration, heating or gas compression system can be controlled from one panel.

The "Classic" view gives operators essential information that's easy to check at a glance, even from a distance.

Live operating data can be captured using the QR-code scanner from a mobile device.

Authorized maintenance staff and service companies can access GEA Omni from remote locations.



In addition to compressors, GEA Omni can be applied to the entire refrigeration and heating system to control components and efficiently manage energy usage.

Integration
In addition to its visually stunning and intuitive HMI, the GEA Omni control panel appeals to not only operators but system integrators as well. As it comes from the factory, GEA Omni satisfies typical industrial communication standards (Modbus TCP, EtherNet/IP, Modbus RTU, Allen-Bradley DF1 and standard options Profibus-DP and Profinet) for purposes of data exchange with auxiliary, supervisory control and data acquisition (SCADA) and building managment systems.

Moreover, a standard Ethernet interface is provided that enables the use of wireless technology and smart phone or tablet viewing capability. Use a VNC viewer app on your smart device to easily connect to the IP address of your GEA Omni panel. Combined with a secure connection, you have 24/7 access to your system. Authorized service staff and service companies can access the control system remotely. GEA Omni also sends email and text message notifications to on-site and off-site personnel, ensuring proactive response to system conditions that need immediate attention.

GEA OmniSketch
GEA OmniSketch provides graphical representations showing real-time operating data. Featuring multi-page availability, this data can be shown on illustrations of your choice, i.e. floor plan, 3D drawing, PFD, photo. Colors add visual emphasis. OmniSketch provides the illustrations our customers use the most, without the need for an additional SCADA system.

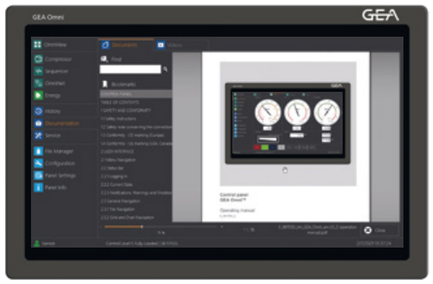
This OmniSketch example illustrates a typical refrigeration system layout with key status information.

Instructional videos add a dynamic, visual element to the Documentation section.

Digital content
Drawings, manuals, reports and videos are easily accessible for on-screen viewing, which can prove to be invaluable during new system commissioning, day-to-day operation, maintenance and troubleshooting. Every GEA Omni includes supporting documentation from the factory. In addition, users can create or provide their own videos and PDF documents that can easily be stored and retrieved via the USB port in the panel door, or via an Ethernet connection using OmniLink, for example:

- Operating manuals
- Process Safety Management documents (PSM)
- Electrical wiring diagrams
- Piping and instrumentation diagrams
- Mechanical drawings
- Component specifications
- Standard Operating Procedures (SOPs)
- Logic diagrams
- Service and maintenance reports
- Videos in AVI, MP4, or WMV format

All important documents, such as wiring, piping & instrumentation diagrams and manuals, are a finger tap away.



THE GEA OMNI ADVANTAGE

Complete system control in one panel
Control your entire refrigeration, heating or gas compression system with one GEA Omni

Hardware layout
Standard industrial components with modular layout

High-definition display
15.6” display with 1,366 x 768 resolution

Unique user setup and auditing
Create 25 unique users and monitor usage/actions

GEA OmniLink
Remotely view, manage and automatically backup all data

Configurable communication
Read and write information to and from other controllers without additional wiring

Projective-capacitive, multi-touch technology
Natural and intuitive operation

GEA peace of mind
Invented, manufactured and supported by a global industry leader

Digital content
Drawings, manuals, reports and videos at your fingertips

Field configurable
Easily make compressor configuration changes on site to facilitate panel retrofits

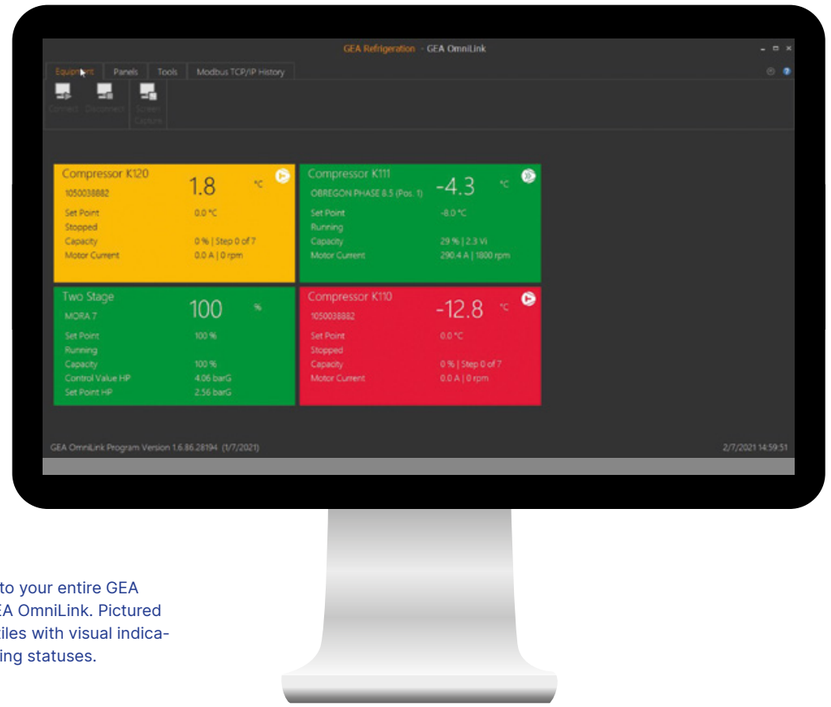
Predictive maintenance
Notifications for recommended service

Global product with local sales and support
- Manufactured in North America, Europe and Asia
- Preconfigured in more than 30 languages
- Worldwide, original spare parts availability

GEA OmniHistorian
Application to remotely view historical data from GEA Omni panels and perform detailed analysis

MONITOR THE PRESENT – ANALYZE THE PAST

Integrated apps keep you in touch with your equipment



Enjoy remote access to your entire GEA control system via GEA OmniLink. Pictured are four compressor tiles with visual indication of current operating statuses.

Analyze past operating data, such as compressor pressures and temperatures, with GEA OmniHistorian.

GEA OmniLink

Included with every GEA Omni control panel is GEA OmniLink – a stand-alone Microsoft Windows® operating system application designed to automatically find GEA Omni panels on the same Ethernet network, read panel status, perform automatic data backup and reporting and view the present panel screen as if viewing the panel on-site. This application provides a convenient means of transferring configurations, programs, historical data, and parameters over an Ethernet network without the need to insert a USB memory device into the panel.

GEA OmniHistorian

GEA OmniHistorian is a Microsoft Windows® operating system application used to view and analyze historical data. GEA Omni stores years of operating information at a user-defined sampling rate. This information consists of input/output (I/O) data, event logs, parameters, energy analysis, maintenance, revisions, and annunciations, which can be easily transferred over Ethernet using GEA OmniLink. Furthermore, GEA OmniHistorian can create custom reports, and viewable data can be printed or exported to XLS-formatted files.

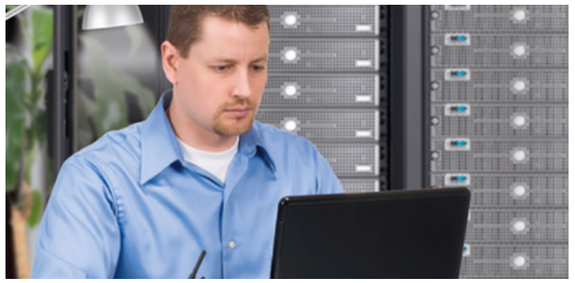
The IT security and data protection can be and must be adjusted as per customer's needs under customer's responsibility. GEA Omni control panel, including its various software applications, does not warrant any particular needs or customer's level of IT security or data protection. The level of data protection and/or IT security for access, handling and transmission of data remains the customer's sole responsibility. Specific security measures or requirements defined by the customer may be supported and provided by GEA upon request and after consultation and agreement.

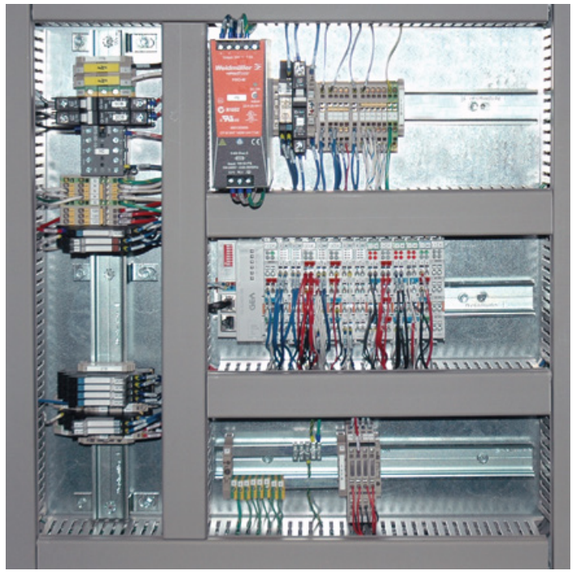
Secure – right out of the box
Up to 25 unique users can be created, each with a customizable view of operating data. Each unique user's login history and actions are recorded in the panel for auditing purposes. Control parameters may be adjusted only within allowable limits, and all changes are logged in the panel's history for security and administrative review. As a result, GEA Omni helps to minimize operator mistakes and system failure. GEA Omni provides three levels of security – Operator, Service, and Administrator.

Operator level can:
- Monitor parameters and equipment status
- Select operational modes and personalize data views
- Analyze historical data
- Observe and manage annunciations and error reports
- Change language and engineering units

In addition, the Service level can:
- Modify all parameters and settings
- Download program and configuration updates
- Define operator- and service-level users
- Troubleshoot I/O system with advanced on-screen diagnostic tools
- Display real-time status of customized program logic

In addition, the Administrator level can:
- Modify control system configuration
- Securely access GEA Omni with an encrypted file, eliminating the use of a common password
- Change the compressor selection and control options



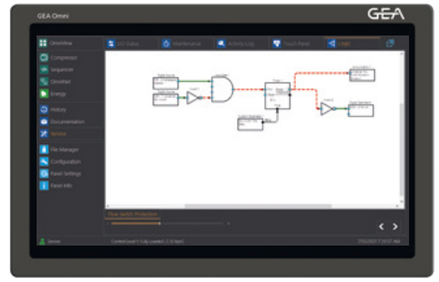


The panel interior is designed to provide clear and easy installation and serviceability.

Security – An Omni Priority*
GEA Omni provides three levels of security: Operator, Service and Administrator.
- Up to 25 unique users can be created, each with a customizable view of operating data
- Each unique user's login history and actions are recorded in the panel for auditing purposes
- GEA Omni helps to minimize operator mistakes and system failure

*Please note that the level of data protection and/or IT security for access, handling and transmission of data remains the customer's sole responsibility. Refer to the guideline document, available from your GEA representative, entitled GEA Omni Control Panel Important IT Security Information and Recommendations.

Easier and safer fault finding and commissioning by interacting with the on-screen I/O system.



Custom logic diagrams – a valuable tool, especially for troubleshooting.

Reliable hardware
GEA Omni is a modular design, featuring a robust I/O system of standard industrial components. The compact space utilization of this I/O system allows for more devices to be controlled in a single panel. In addition, the Ethernet-based design allows for flexibility of remote I/O in separate enclosures, all of which are interconnected using standard Ethernet cabling.

Layout and wiring
The interior of the GEA Omni exhibits well-organized separation of high- and low-voltage sections, providing safe and simple wiring. Uniform connection design, clear labeling, and color coding contribute to easy installation. All control wiring to field devices is terminated in a dedicated panel section. Thanks to the flexible method of interconnecting I/O system components, wiring is kept to a minimum. These features allow fast inspection and commissioning.

Field configurability
Does the screw compressor have an economizer solenoid that was not accounted for in the panel configuration? Is the oil pump operation different than preconfigured on the control panel? These common issues during a retrofit panel installation will no longer require assistance from the factory. GEA Omni offers authorized personnel the flexibility to modify the configuration and reassign the I/O system to suit the needs of the application.

Energy Management
Energy costs are typically a facility's largest operating expense. But with the GEA Omni control panel's abundant capabilities, which include the effective management of energy usage, that operating expense can be significantly reduced. GEA Omni's Energy functions are designed to enable users to effectively reduce operating costs by finely controlling key aspects of their process to utilize the minimal amount of energy required. In addition, Omni's Recipe functionality makes it fast and easy to change multiple parameters, based on time and date, to optimize running conditions.

Through a fine-tuned approach to compressor control and sequencing, condenser control and sequencing, refrigerant vessel and pump control, evaporator control and a myriad of reactive and proactive energy management techniques, GEA Omni's Energy functions deliver where it counts most – on the bottom line – and contributes to the achievement of companies' sustainability-related goals by reducing their carbon footprints.

In addition, GEA Omni's Smart Sequencer option automatically prioritizes the compressors with the best part-load performance, ensuring high energy efficiency. Variable-speed-driven compressors can be grouped and speed synchronized, reducing energy consumption and extending the lifetime of the equipment.

One global product – GEA peace of mind
Manufactured in North America, Europe, and Asia, GEA Omni meets the needs of a global customer base. Preconfigured in more than 30 languages, GEA Omni carries the benefit of global sales and support. Rest easy knowing your facility is controlled by a product that is invented, manufactured and supported by a global leader in refrigeration, heating and gas compression control panel technology.

GEA Omni's Energy Management function allows operators to evaluate system energy usage and adjust to reduce operating costs.

GEA OMNI RETROFIT PANEL

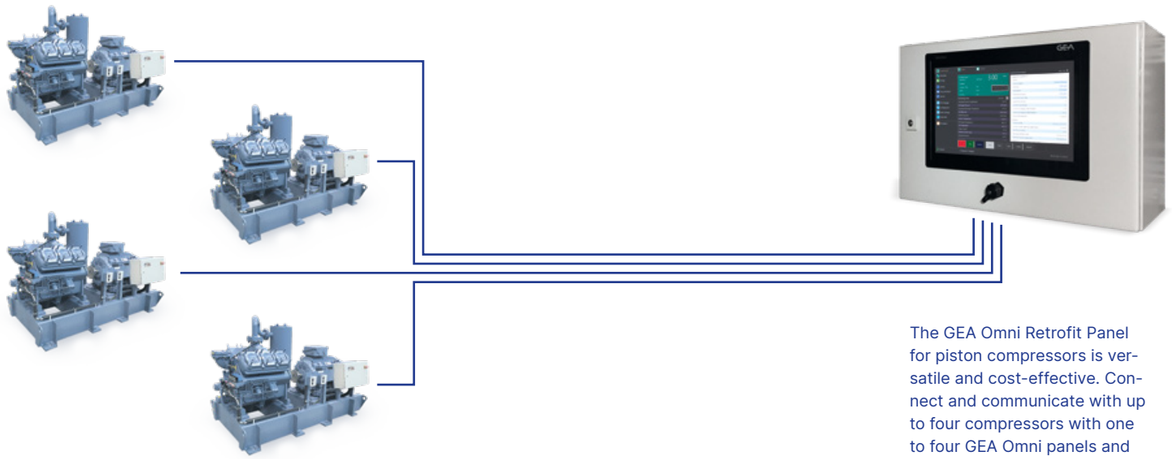
The GEA Omni retrofit kit includes all the items necessary for easy installation and on site configurability, with minimal downtime. With the latest software release, available via Internet download or on an included USB memory device, the GEA Omni will have all current built in features and functions.

Lifetime software updates and the ability to evaluate system performance further enhance the value of GEA Omni Retrofit Panels.

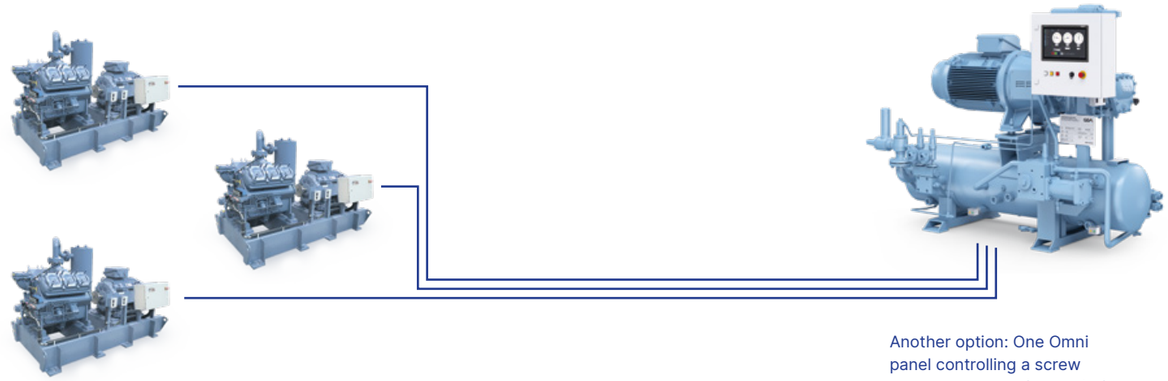
Quick access to invaluable on screen tools:

- Maintenance tracking and alerts
- Historical trending
- Manuals, drawings and videos
- Ability to upload user generated materials
- Diagnostic tools and troubleshooting aids

For piston/reciprocating compressors



The GEA Omni Retrofit Panel for piston compressors is versatile and cost-effective. Connect and communicate with up to four compressors with one to four GEA Omni panels and I/O Box.



Another option: One Omni panel controlling a screw compressor can also control up to three piston compressors.

For screw compressors

An off-the-shelf solution designed to be retrofitted to standard, single compressor screw packages of any brand with minimal installation and commissioning time.

The 600mm x 600mm panel enclosure allows a dedicated display per screw compressor package or piston package. The panel is designed to link and blend seamlessly into the engine room along side standard GEA compressor packages.

GEA Omni can be designed and supplied to fit any other compressor package, including multiple compressor configurations.

THE INTUITIVE TOUCH FOR COMPRESSOR CONTROL

Powerful, yet approachable.
Cerebral, yet intuitive.
Sophisticated, yet simple.
Simply – GEA Omni.

Upgrade your compressor control
GEA offers both standard and engineered retrofit control panel solutions for industrial screw and piston/reciprocating compressors.

Virtually any industrial screw or piston/reciprocating compressor can utilize the GEA Omni Retrofit Panel – those manufactured by GEA as well as those of other manufacturers.**

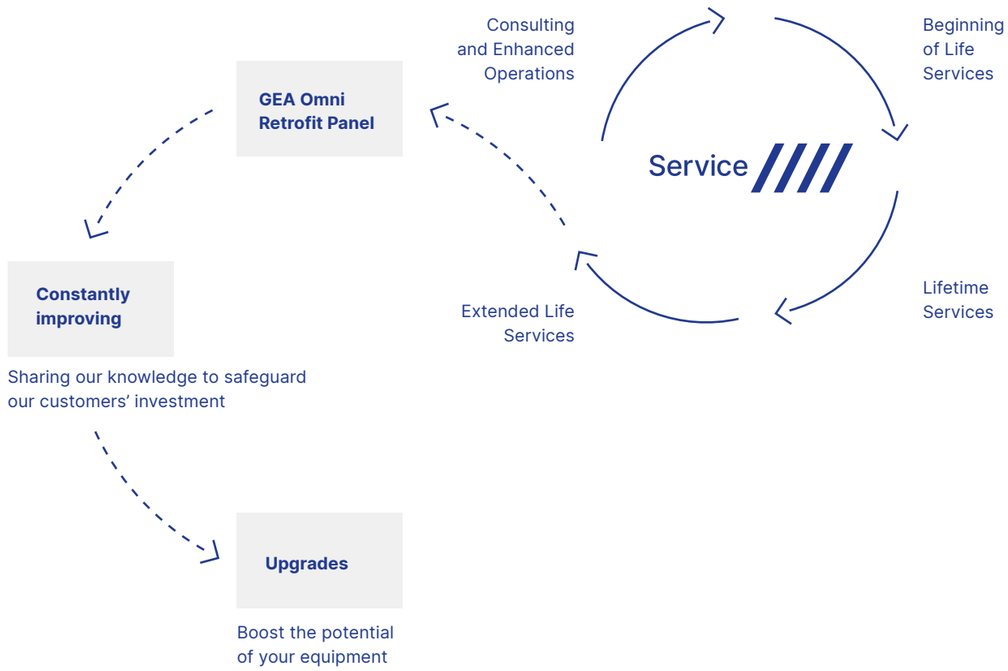
Easy to connect
The GEA Omni Retrofit Panel includes hardware designed to allow the connection of different types of compressor sensors, motor current sensors and solenoid coil voltages. This reduces the number of loose shipped items to a minimum, thus simplifying and reducing installation time. Compressor-specific electrical drawings and preconfigured software are provided electronically.

Easy communications
By simply connecting GEA Omni Retrofit Panels to an Ethernet network, the use of wireless technology and smart phone or tablet viewing is possible. With IT security in place, which is the customer's sole responsibility, authorized service staff and service companies can access the control system remotely and GEA Omni can send email and text message notifications. For connection to other control systems, GEA Omni Retrofit Panels support both Modbus TCP/IP and EtherNet/IP protocols for data exchange.

** Certain products and services may not be available in all areas.
Please contact your local GEA contact for additional information.

GEA Service – For your continued success

The GEA Omni Retrofit Panel is but one of the many ways by which GEA helps customers to upgrade, modernize and optimize their refrigeration & heating systems. As a strategic partner, the GEA Service team applies its proactive approach to reduce downtime, enhance safety and optimize equipment performance.



A GEA Omni Retrofit Panel installed on a non-GEA compressor package (foreground) has the same appearance and functions as GEA Omni panels supplied on standard GEA compressor packages (background, left).

Engineering for a better world.

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