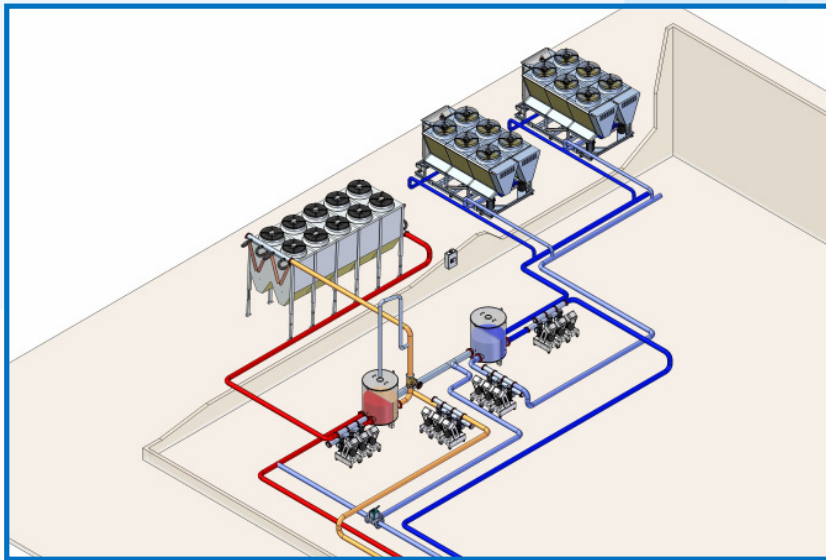


REMOTE MONITORING PANEL

- **PMR** is a microprocessor-based control with an **easy-to-use human interface**, designed to control Frigel Ecodry and Heavygel central systems. All main system variables and features are integrated into one control for optimal performance and system reliability.
- The panel can be installed at any distance from the equipment, allowing for easy and regular monitoring of operating conditions and prompt action in case of an alarm.
- The **graphic display** offers a selection of 10 different languages and a choice of metric (SI) or inch-pound (IP) systems. A **large 7-segment digital display** shows the main operating temperature of the system. The **ergonomic keypad** provides quick access to control screens and menus.
- All screens and menu arrangements are user-friendly, including **descriptive alarm messages** for immediate trouble-shooting.
- PMR6 includes a built-in gateway with an option for remote monitoring via Modbus™ (RS485 or TCP) or over the web for **remote assistance** (see page 3). Additional communication protocols are available on request (i.e. BACnet™, etc.).



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Frigel Firenze SpA reserves the right to modify/change the technical characteristics of this machine. This information is for presentation only and is not part of a legally binding contract



VERSIONS

PMR0 features:

- **Proportional (infinitely variable) fan speed control** of the Ecody liquid coolers, based on smart set point logic, ambient temperature and free-cooling set point temperature, if applicable. Perfect load variation response with maximum fan **energy savings** and real time alarm monitoring. No limitation on the number of system fans.
- **Adiabatic mode control** of EDK series Ecody units, based on ambient and process water temperatures, for **minimum water consumption**.
- Control of one GPP series process pumping group (up to 4 pumps).
 - Pump pressure control with step algorithm for system flow control and pump energy savings.
 - **Lead/lag** algorithm for smart standby management of balanced operating hours for all pumps.
 - Pump pressure warning and alarm bands for proper pump protection.
- **Free-cooling** valve management on any type of central chilled water system.
- Low reservoir level alarm and automatic make-up system option.
- Digital input for remote system interlock via timer, E-stop, etc. (device by others).
- Automatic drain valve management for self-draining, single pump systems.
- In-line monitoring of **filter pressure differential** with maintenance threshold warning selectable by user. See our **Aquagel KTF filter line**.
- Built in time and date clock with 40-alarm memory log, including main system variables for each alarm event recorded.
- Visual alarm standard. Audible alarm optional.

PMR6 *additional* features:

- Control of one GPR recirculation pump group (up to 4 pumps) for dual pump, self-draining systems.
- Real time monitoring of **fluid cooler flow rate** via pressure differential transducers for dual pump, self-draining systems.
- Control of an additional, independent GPP process pump group with same features as PMR0.
- Control of an independent recirculation pump group with basic on/off logic (i.e. for central chiller system).
- **Master/slave central chilled water system control** for up to 8 Heavygel series chillers.
 - Various capacity control strategies based on the type of compressors used, for **optimal temperature control and energy savings**.
 - **Lead/lag** algorithm for optimal standby management of balanced chiller operating hours.
 - Capability to remote into Heavygel chiller slave unit control via PMR6 display.
- Smart automatic reservoir make-up logic with real time water **level monitoring to 2,5 cm (1 in) resolution** via transducer.
- Integrated control of an optional main system shut-off valve (electrically actuated). Available models: *see next page*>



GATEWAY FOR REMOTE ASSISTANCE

Central systems can be remotely monitored by Frigel Customer Service Technicians via the Web. The PMR6 is provided with a small box, called Ping: an Ethernet device that allows for information to be sent over the web to a Frigel remote server.

Models:

PMR6G

– allows connection to a LAN (standard supply)

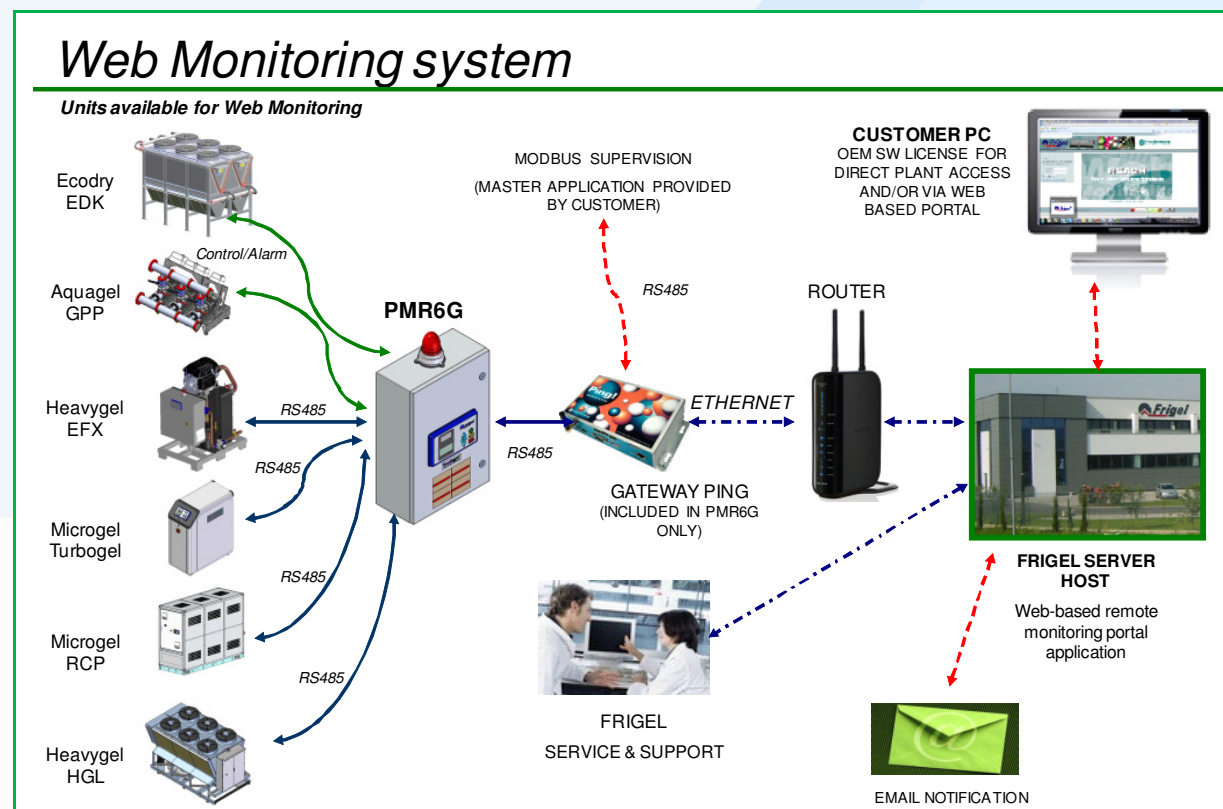
PMR6G Modbus

– allows connection to a LAN and to a serial interface, type Modbus™

PMR6G BACnet

– allows connection to a LAN and to an interface, type BACnet™

NOTE: Hardware, activation, licensing and maintenance fees may apply for customer access to these features.



This allows Frigel Customer Service to:

- View all **events, extended fault log** and the **status** of the cooling system.
- Access **historical system trend logs** for performance analysis and event trouble shooting
- **Change set-up parameters**, where appropriate, to ensure the best operation of the equipment, eliminating an alarm status and restoring normal operation.
- Access **real time trend log** for any main system variable for trouble-shooting, support and training.
- Receive alarm notifications and system status updates via **e-mail**.
- Monitor and register estimated **real time energy and water consumption**.

For a **demo** of web monitoring, go to: <https://frigel.proeng.eu/plants/list> (user name: **demo2** - password: **sales**)