

ESP 20/20

Compressor Monitoring System



GD
GARDNER DENVER

Experience Proven Results™

ESP 20/20 Compressor Monitoring System



At the customer's discretion, the manufacturer can view compressor performance or be notified of compressor advisories.

ESP 20/20 uses the latest in wireless technology to put the compressor in immediate contact with the appropriate people in the most expedient manner.



The compressed air expert can view compressor performance remotely and is immediately notified of advisories.

Educated decisions can be made on maintenance intervals and multiple site visits for repair services eliminated.

Opportunity for proactive repairs and operating training can be identified.

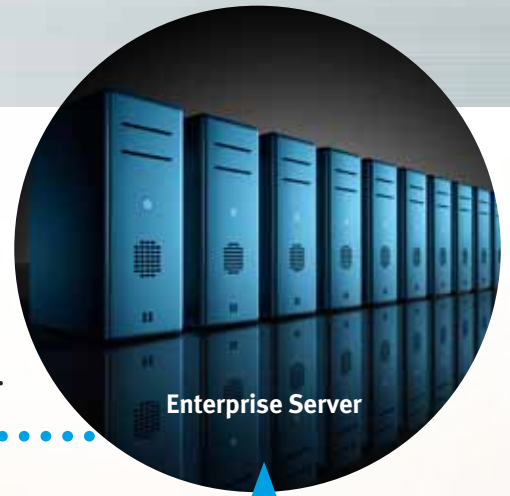
Response time to advisories and faults is reduced.





Information you need to manage your equipment at the convenience of your office.

Multiple compressor assets at multiple locations can be accessed through a single web-based interface.



Enterprise Server

Compressor vitals are relayed by wireless connection to the web application where they can be accessed 24/7.



The result: your compressors are kept operating in the most productive and efficient manner.



ESP 20/20 Advantages

ESP 20/20

SINGLE COMPRESSOR REMOTE MONITORING

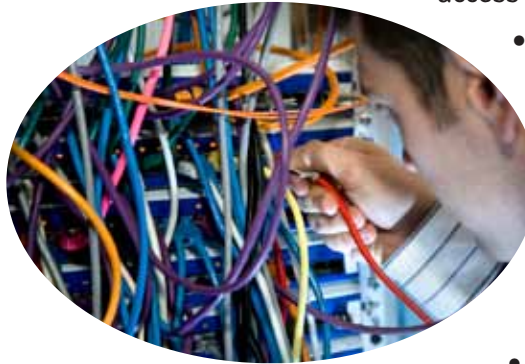
ESP 20/20 is a wireless remote monitoring solution that upgrades the air compressor to an intelligent asset providing system performance and advisory notification. Interfacing directly to Gardner Denver or third party compressors via discrete inputs and outputs, any compressor asset can be transformed to provide critical operational information through a single web-based application.

Wireless:

INSTALLATION HAS NEVER BEEN EASIER

One of the unique features of ESP 20/20 remote monitoring is wireless access to the compressor. This feature is only offered by Gardner Denver's ESP 20/20 and provides significant advantages over IP/Network or RS232/Serial based systems.

- Eliminates time and expense of running CAT5 or other types of cabling to the compressor.
- Eliminates IP configuration and Network setup.
- No need to access IT experts for installation.
- Remote monitoring channel is isolated from your IP network for excellent security.
- Flexibility in where a compressor can be located.
- Ease of relocating a compressor, if needed, without having to re-route wires.



Avoid IT wiring headaches with a wireless solution

Enterprise/Web Based Solution:

ANYTIME, ANYWHERE ACCESS

ESP 20/20 is an enterprise web-based solution, a Gardner Denver exclusive feature, which provides substantial advantages over peer to peer solutions offered in most competitive products.

- Allows multiple compressor assets, at single or multiple locations, to be viewed from single web-based interface.
- No application software needed to view and monitor compressor assets.
- Easy access from any computer anywhere with access to the internet.
- Enterprise password protection allows passwords to be assigned to specific personnel at appropriate levels.
- Alert preferences for personnel are assignable to meet individual needs.
- Automatic notifications of advisories, alarms, or scheduled maintenance via email, text, page, or voice to match today's mobile technology and work environment.

GD XTRA
10 Year Protection

ESP 20/20 qualifies the compressor for **GD XTRA**, Gardner Denver's extended warranty program on airends, delivering the tools to ensure the compressor is operating at peak performance with the peace of mind that the compressor is protected.

<http://www.esp2020.com>

Notification:

ALWAYS IN TOUCH

Being responsive when there is an issue with the compressor is critical in keeping an operation running and delivering product or services. This is where ESP 20/20 utilizes the latest technology to be more responsive without the intervention of valuable personnel.

When an advisory or measurement is outside the operating parameters that are considered “normal,” they are sent to the compressed air expert automatically. Notifications can be setup to contact multiple support persons each having their own personal preferences on how to be notified for best response. Notifications can be sent via email or text to a mobile device, pager, and voice. This type of direct connection ensures the appropriate service person is contacted automatically in the method of choice.

Extending this capability further, ESP 20/20 continually contacts the correct service personnel if an advisory is not responded to in an appropriate amount of time. Notifications are executed without having to involve additional personnel at the plant allowing them to focus on getting product out the door.



Notification of remote personnel

Notification through multiple technologies



ESP 20/20 in Detail

Eyes & Ears for Your Compressor

In order to maintain the compressor asset and ensure operation uptime, ESP 20/20 monitors critical operating parameters.

Temperature

ESP 20/20 will monitor the compressor airend discharge and package discharge temperatures. Monitoring of temperature in real time provides powerful insight into the operation of the compressor and is a key monitoring point in avoiding catastrophic airend failures and extending the useful life of a machine.



Pressure

Discharge pressures are a clear indication if the compressor is operating at or near its intended design point. If the discharge pressure at package output is not at the intended design point, it can indicate demand in excess of capacity or a dirty inlet air filter. High pressure conditions at the airend and package outputs may also result in high temperature conditions. Coupling pressure with other readings, such as power, can provide further insight into the compressor operation.



Power

Ensuring overall system performance and efficiency are maintained, ESP 20/20 monitors the compressor input power consumption. This information can be viewed at specific points or captured over user-defined periods of time. Historical comparisons can be used to ensure the compressor is operating at the designed efficiency over its entire operating life.

Load & Run Time

Load and Run time are monitored directly from the main controller on a Gardner Denver compressor. By evaluating these times, it can be determined if the compressor is properly utilized or if adequate receiver capacity is in place to meet demand requirements. System configuration along with control and automation needs can be evaluated to ensure the compressed air system is optimized for its intended use and energy savings are realized.

Advisories

Unprecedented access to the operational advisories and monitor points within the compressor are provided by ESP 20/20. Access to these advisories provides key information that allows remote troubleshooting and can reduce or eliminate multiple site visits. Access to maintenance advisories allows educated decisions to be made on service and maintenance intervals.

typical alarms

Timers		
Search Results - 4 matches found.		
Status	Instrument	Timer
	Change_Oil	8562:56
	Change_Oil_Filter	8562:56
	Change_Air_Oil_Separator	8562:56
	Change_Air_Filter	8562:56

Graphing

Key operating parameters such as discharge temperature, discharge pressure, power, and load time can be graphed with ESP 20/20. This tool can be invaluable in trend analysis and evaluation of compressor performance over short or long periods of time.

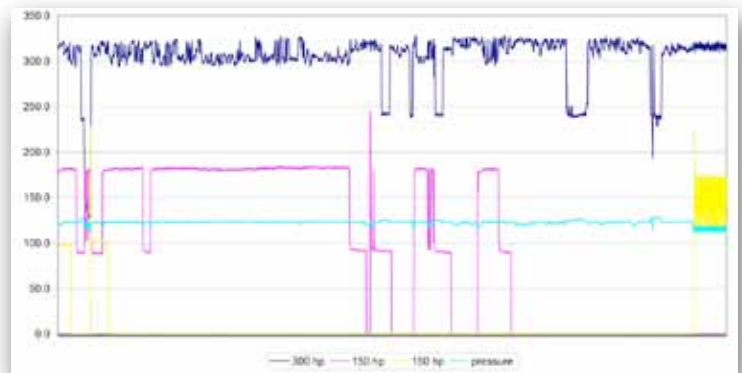
This data can also aid in troubleshooting a compressor if a problem is occurring at specific periods or specific points in time. Historical data can be captured at any previous time interval allowing review of compressor operation and isolation of a problem.



typical time period graph

Export Capability

In addition to being able to graph information on the fly within ESP 20/20, data can also be exported into a Microsoft Excel® format. This feature provides further capability in analyzing the performance and operation of a compressor asset in a custom fashion. Data can be exported in user selectable periods of time providing the tools and flexibility to evaluate a system at any historical period of time.



typical exported graph

Third Party Support

The features and information received is not limited to GD compressors. You can also interface ESP 20/20 to third party compressors. System performance and diagnostics can still occur if you own multiple brands of compressors.

Monitoring Kits

ESP 20/20 Compressor Monitoring System comes packaged as a kit for field installation. Kits with the Comm Module allow interface directly to an AirSmart controller that does not currently have the communication module installed. Kits less Comm Module interface with ES+/RS2000 Controllers or AirSmart controllers with the communications module already installed.

ESP 20/20 provides the ability to remotely monitor compressed air assets from any location over a wireless infrastructure. Critical operational information, advisories, and shutdowns are automatically communicated to one or more parties so preemptive or repair actions can be taken immediately. Opportunities for improvement in asset operation, efficiency and sustainability are identified through historical data collection and analysis.

OPTIONAL EQUIPMENT

- External Antenna
- Current Monitoring (ST40–ST400)



ESP 20/20 Compressor Monitoring Kit with Comm Module



ESP 20/20 Compressor Monitoring Kit less Comm Module

GATEWAY DEVICE SPECIFICATIONS

Compressor Interface	Cell Network Interface	LEDs	Temp. °C	Power VAC	Power VDC	Physical L x W x H (inches)	Certifications
RS-232/RS-485 or 2 Analog I/O, 2 Digital I/O	GSM/GPRS	Status Power Signal Strength Activity Link	-20 to +50	100–240 VAC 50–60 Hz 0.75 A	6–30 VDC 1.75 A Max	3.29 x 4.75 x .95	Safety: UL 60950 Emissions: FCC Part 15 (Class A)

Gardner Denver®

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