

**CURTISS -  
WRIGHT**

# Valve Group



## SmartPRV<sup>®</sup>

Wireless Pressure Relief Valve Monitoring  
Farris Engineering



## Wireless Pressure Relief Valve Monitoring is here!

Farris SmartPRV technology is a simple, powerful solution to improve your ability to monitor critical safety valves and their effects on plant performance. Overpressure events are unpredictable, can go unnoticed and consequently can be difficult to estimate. Using the SmartPRV system, facilities are now able to record overpressure events.

### What is SmartPRV?

Farris Engineering, in partnership with Emerson, offers Farris SmartPRV technology, a 2600 Series pressure relief valve PRV equipped with a Fisher® 4320 wireless position monitor.

Areas of the plant that had previously been too expensive, too difficult or even impossible to monitor using traditional technologies can now be monitored with SmartPRV. SmartPRV also extends the range of field applications within Emerson's Smart Wireless solutions network, including coverage of critical assets. Wireless monitoring of PRVs provides equipped plants with the ability to track and monitor valves in real time, providing immediate feedback during an overpressure event.

### Why wireless monitoring?

Until SmartPRV, monitoring PRVs and the amount of product being released has been a daunting task due to limitations of traditional equipment and technologies.

Data captured through the monitoring of process pressure could be used to determine the quantity of product being released; however it would be an inherently complex and time consuming endeavor.

Other traditional methods include environmental monitoring of the plant site and simple physical observation of PRVs and flare volume. In both instances, plants are left with the inability to estimate product losses without using overly conservative assumptions. Emission fines based on unquantified releases are typically assessed based on the worst case scenario. Plants are forced to pay the highest possible fine along with the additional administrative and documentation costs incurred during the emissions reporting process.

SmartPRV provides feedback on every PRV discharge event including the time and duration, allowing plants to more accurately estimate releases.



Fisher 4320  
wireless  
position monitor





SmartPRV provides feedback on every PRV discharge event including the time and duration, allowing plants to more accurately estimate releases.

Technology built on solid foundations – Farris SmartPRV leverages the proven technology of Emerson’s Smart Wireless solutions network.



Farris Engineering is a pioneer in pressure relief valve design and pressure relief management solutions. Our 2600 Series valve has a long history of service to the process industry. Farris SmartPRV technology integrates the legacy of the 2600 Series valve with the performance of Fisher 4320 technology to provide a unique solution for PRV wireless monitoring.

Part of our commitment to total pressure relief management solutions is providing aftermarket service and repair through our Farris Authorized Service Team, or FAST Centers. Selected FAST Centers have been trained and certified to perform conversions of existing 2600 Series PRVs to SmartPRVs. For more information about the SmartPRV technology, contact your local Farris representative.



Emerson’s Smart Wireless products and solutions extend PlantWeb™ predictive intelligence into areas that were previously out of physical or economic reach, opening the door for new possibilities in process improvement. Smart Wireless is based on the *WirelessHART*® communication protocol, a global IEC-approved standard (62591) incorporating self-organizing mesh technology that dynamically mitigates obstacles in the process environment. *WirelessHART* and HART® allow wireless devices to leverage the training of existing process organizations, minimizing change and extending the benefits of automation to end users where in some cases the technology simply wasn’t ready for the real world.

Issues with Unmonitored Pressure Relief Valves:

- Unidentified production and profitability losses
- Emission fines and associated administrative costs related to investigations
- Plant safety and environmental issues

Farris SmartPRV is available on 2600 Series BalanSeal Bellows Design:

- Retrofit kits and new PRV installations available
- Orifice Sizes D through U
- Readily integrates into plants with existing Emerson wireless infrastructure
- Contact your local Farris representative for more information



**Next Generation Emissions Reporting** – Achieve next generation emissions reporting and pressure relief system management by tapping

into the engineering power of iPRSM® technology. Take discharge calculations to the next level with Farris’ pressure relief system design software, iPRSM, a powerful engineering calculation and document repository tool. Plants can leverage iPRSM’s capabilities by feeding time stamp data into iPRSM. Using the data, iPRSM accurately calculates the volume of discharge and automatically generates the documentation and reports required. In addition, iPRSM can be used to diagnose the cause of the overpressure scenario and provide actions toward mitigation. iPRSM is an elegant alternative to the arduous task of manual calculations for long term emissions management.

PlantWeb is trademark of Emerson Process Management.  
HART and *WirelessHART* are registered trademarks of the HART Communication Foundation.  
iPRSM is a registered trademark of Curtiss-Wright Flow Control Corporation.

# Farris Total Pressure Relief Management Solutions

In addition to our SmartPRV technology, Farris provides total pressure relief management solutions, supporting a facility's entire lifecycle:

## Design

Using the power of iPRSM technology and our Farris Engineering Services team, correctly design your pressure relief system to respond to every overpressure scenario.

## Equip

Farris has been manufacturing pressure relief valves for almost 70 years. Equip your plant with Farris' full line of spring loaded and pilot operated pressure relief valve hardware.

## Monitor

Monitor your pressure relief valves with the SmartPRV and leverage the technology of proven leaders, Farris and Emerson.

## Maintain

Localized aftermarket service and repair assistance through the Farris Authorized Service Team – or "FAST" Centers.

## Audit

Keep your pressure relief systems audited and in compliance with our Farris Engineering Services team and iPRSM technology.



**CURTISS -  
WRIGHT**



10195 Brecksville Road, Brecksville, OH 44141 USA • Telephone: 440-838-7690 • Fax: 440-838-7699

**Facilities:** Brecksville, OH, USA; Brantford, Ontario and Edmonton, Alberta, CA; Corby, Northants, UK; São Carlos-SP, Brazil; Tianjin and Beijing, China; Delhi, India

**Offices Worldwide:** For a listing of our global sales network, visit our website at [www.cw-valvegroup.com/farris](http://www.cw-valvegroup.com/farris).

While this information is presented in good faith and believed to be accurate, Farris Engineering, division of Curtiss-Wright Flow Control Corporation, does not guarantee satisfactory results from reliance on such information. Nothing contained herein is to be construed as a warranty or guarantee, expressed or implied, regarding the performance, merchantability, fitness or any other matter with respect to the products, nor as a recommendation to use any product or process in conflict with any patent. Farris Engineering, division of Curtiss-Wright Flow Control Corporation, reserves the right, without notice, to alter or improve the designs or specifications of the products described herein.