

# Diagnose Your Control Valves In Service, Without Being a Valve Expert



**S**uccess in today's competitive environment requires operational excellence. Achieve your goals with revolutionary new FIELDVUE® Performance Diagnostics (PD). PD detects and tells you how to correct conditions that could lead to valve failure, preventing unplanned shutdowns. Valves are notorious for friction and deadband problems that add variability and cost you money. PD will uncover them so you can maximize throughput. PD will help you make sound predictive maintenance decisions.

## Easy Diagnostics, No Roadblocks

*"I can't shut down my process to run valve diagnostics!"* FIELDVUE DVC-PD instrument users can diagnose, analyze, and trend valve diagnostic data while the valves are in service. You are given a real-time, accurate picture of valve health, not just numbers and graphs, without impacting your process.

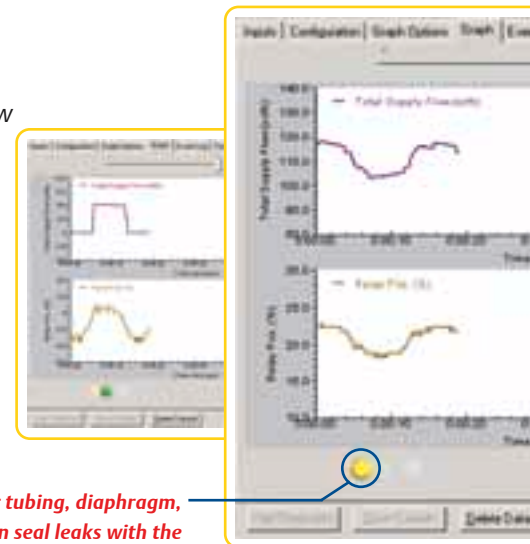
*"I can't sit at my computer all day watching the valves!"* You decide when the DVC-PD instrument collects diagnostic data. Schedule it to collect data automatically or when triggered by a certain event. Or configure AMS ValveLink® Software's Event Messenger feature to e-mail or page you when a critical problem is detected.

*"Even if I can get the diagnostic information, I don't know what the curves mean!"* Know the condition of your valve at a glance by checking the "green, yellow, red light" feature in AMS ValveLink Software. Green, yellow, and red light symbols designate the level of urgency. Recommended actions are also provided.

- **Green light** - OK
- **Yellow light** - Needs maintenance soon
- **Red light** - Maintenance required



*The Digital Valve Controller (DVC) with PD capability captures data from the valve assembly. AMS ValveLink Software displays the results graphically with recommended actions.*



*Detect actuator tubing, diaphragm, and piston seal leaks with the PD Air Mass Flow test. The yellow light indicates a leak that needs attention, for instance.*

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## Unmatched FIELDVUE Diagnostics

Performance Diagnostics is the newest addition to the FIELDVUE diagnostic collection, which also includes:

- On-line valve and device alerts
- On-line trending of critical variables
- Off-line valve signature test, dynamic error band test, drive signal test, and step response test

## Get FIELDVUE Performance Diagnostics

To use Performance Diagnostics on any valve you need two things: (1) a FIELDVUE instrument (DVC5000, DVC5000f, or DVC6000) with PD level and (2) AMS ValveLink Software.

You may purchase new DVC-PD instruments or upgrade existing DVCs to include Performance Diagnostics. Your local Emerson sales contact can provide a simple instrument step up. In most cases, there are no hardware changes to the instrument and the upgrade can be done on-line while the process is running.

Contact your local Emerson sales office or sales representative location for a PD demonstration. Their highly skilled and experienced applications personnel are ready to help you take advantage of the many benefits of FIELDVUE Performance Diagnostics.

### One-Button Sweep

*In one keystroke, you can instruct AMS ValveLink Software to run several PD Tests. When the sweep is complete, the software will show **problems**, **possible causes**, and **recommended actions**.*

*The software documents PD Test results in a preformatted Microsoft Word report.*



*On-line PD Tests can detect more than 200 fault conditions and provide recommended actions while the control valve remains in service. Here are a few examples where PD can detect problems before they adversely impact your process:*



Detected Problem	PD Test
Valve blockage or binding	Valve friction calculated and trended on-line
Broken or loose linkages	Deadband calculated and trended on-line
Dirty instrument air	I/P and relay integrity test
Actuator and tubing leaks	Air mass flow test
Poor calibration	Travel deviation
Insufficient air supply	Supply pressure test
Instrument elastomer wears out	I/P and relay integrity test



*As a core component in the PlantWeb® digital plant architecture, Fisher valves and FIELDVUE DVCs give you the power to deliver flow control accuracy of less than 0.25%!*

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