

A photograph of two industrial workers in a refinery setting. The worker in the foreground is wearing a white hard hat, safety glasses, and a blue work jacket. The worker in the background is also wearing a white hard hat and safety glasses, and is wearing a grey work jacket. They are both looking towards the right. The background shows complex industrial piping and structures under a clear sky. A large white circular graphic element is overlaid on the left side of the image.

Advice at the Device™

Fisher™ FIELDVUE™ DVC7K Series
Digital Valve Controller

eBook



EMERSON™

“ Interpreting data to effortlessly create an optimized path to action by combining **patented technology, experience-based algorithms, and continuous real-time analytics** with flexible connectivity and easy integration. ”



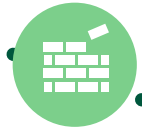
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Fisher™ FIELDVUE™ DVC7K Digital Valve Controller

The Fisher™ FIELDVUE™ DVC7K is the industry's leading digital valve controller with embedded prognostics. The DVC7K platform enables you to maximize the value of your digital journey with data in real time, flexible connectivity, and an easy-to-use interface!



Reliable By Design

Built on more than 30 years of FIELDVUE hardware technology, with 10B+ hours of run-time, and over 3 million units sold.



Performance

Built on field-proven technology, with control algorithm improvements in development that will redefine the industry standard.



Real-Time Awareness

Continuously monitored, on-board diagnostics that provide real-time information about the valve's performance and health.



Advice at the Device™

Provides plant-level visual indication of valve health, immediate visual indication and alerts with recommended actions on the LUI home screen, and the ability to see health across multiple valves using Emerson Secure Bluetooth® wireless technology.



Install with Ease

Does not require any changes to the mounting kit, has an increased terminal box size, and can be commissioned locally from the LUI.

DVC7K KEY FEATURES

Unleash the Power of Precision and Reliability with the DVC7K

The Fisher™ FIELDVUE™ DVC7K is transforming the way valves interact with the world, revolutionizing valve control and management.

In this section, we will explore the remarkable features that set the Fisher FIELDVUE DVC7K apart as an industry leading digital valve controller. Designed to provide unparalleled performance, reliability, and safety, the DVC7K empowers you to optimize your valve assemblies with ease. From non-contact position feedback technology to rapid response control algorithms,

this valve controller is engineered to exceed your expectations. Whether you seek enhanced safety, efficient commissioning, or straightforward maintenance, the DVC7K delivers. Let's dive into the exceptional features that make it the go-to choice for modern process control and automation.



Fisher™ FIELDVUE™ DVC7K

Key Features

**Linkage-Less
Non-Contact
Position Feedback**

**Local User
Interface (LUI)**

**Accurate and
Responsive**

Enhanced Safety

Ramped Cutoff

Valve Health

**Faster
Commissioning**

**Easy
Maintenance**

**Increased
Uptime**

Built to Survive



Hover over icons to discover more.





OPTIONS & ACCESSORIES

Expanding Possibilities

In this section, we will explore the wide range of options and accessories available for the Fisher™ FIELDVUE™ DVC7K, designed to enhance its capabilities and adapt it to your specific needs. These additional components and features unlock new possibilities, allowing you to tailor your DVC7K setup to achieve even greater precision, efficiency, and control in your valve applications. Whether you're looking to expand functionality, improve performance, or simplify installation, you'll find valuable solutions here that elevate your experience with the DVC7K. Let's dive into the options and accessories that empower you to get the most out of your valve controller.

Additional Options



**Integral Mounted
Filter Regulator**

**Integral 4-20 mA
Position Transmitter**

Low-Bleed Relay

Integral Switches

Extreme Temperature

Vent Connections

High Temperature



Hover over icons to discover more.

Accessories

Explore our range of accessories designed to enhance your experience. From precision tools to specialized add-ons, discover how these accessories can optimize your operations, streamline maintenance, and provide valuable insights into your valve control processes.



AMS Device Manager

[Find Out More](#)



AMS Device Configurator

[Find Out More](#)



**Fisher™ FIELDVUE™
ValveLink™ Mobile Software**

[Find Out More](#)



**Plantweb Insight™ Valve
Health Application**

[Find Out More](#)



**Fisher™ FIELDVUE™ 4400
Digital Position Transmitter**

[Find Out More](#)



**Fisher™ 377 Pressure-
Sensing Trip Valve**

[Find Out More](#)



**Fisher™ 2625 Series
Volume Boosters**

[Find Out More](#)



**Emerson Wireless 775
THUM™ Adapter**

[Find Out More](#)

Fisher™ Control Valves



Fisher™ easy-e™ Globe Valves

[Find Out More](#)



Fisher™ Vee-Ball™ V150
Flanged Control Valve

[Find Out More](#)



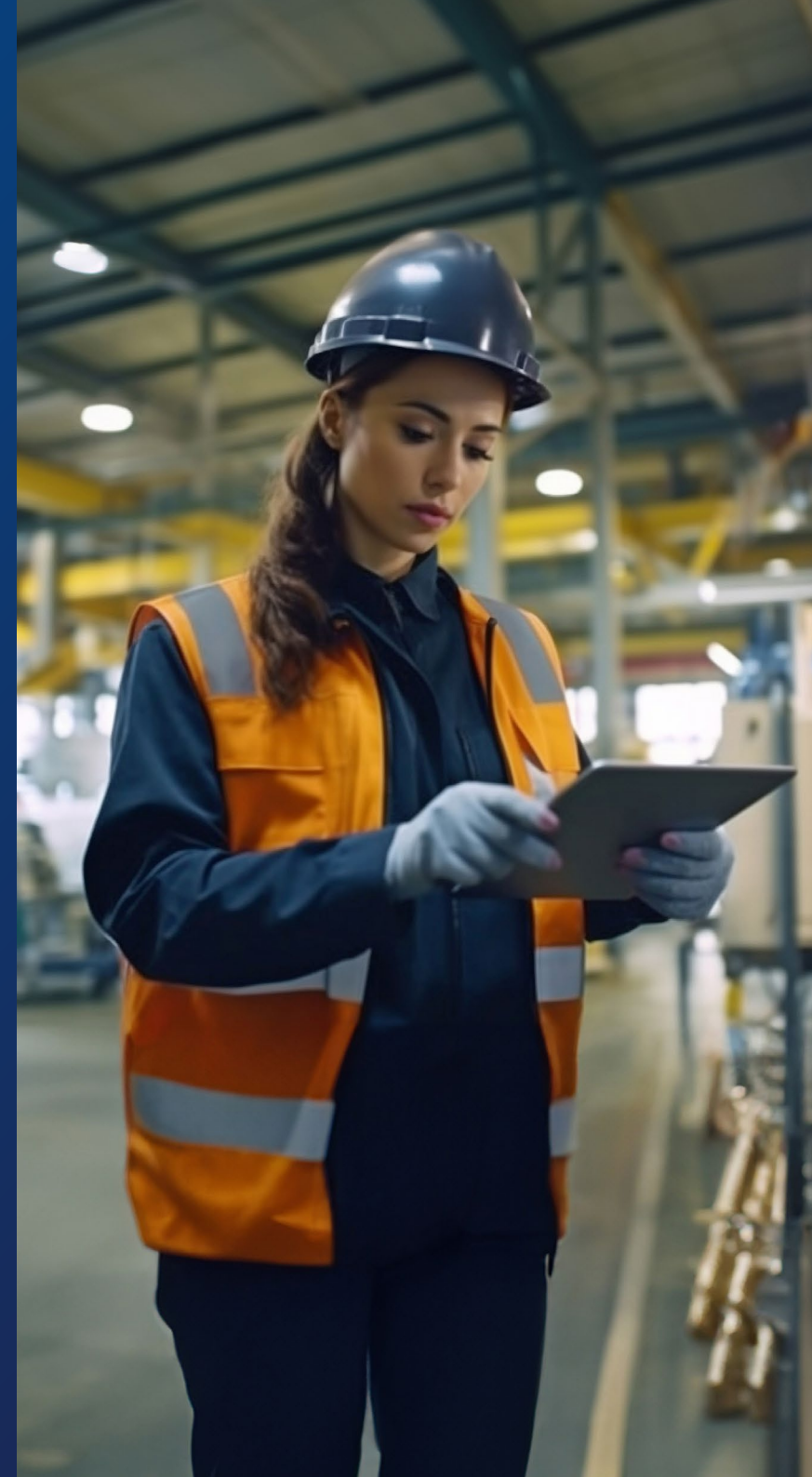
Fisher™ easy-e™ EW Series
Control Valves

[Find Out More](#)



Fisher™ 8580 High
Performance Butterfly Valve

[Find Out More](#)



Emerson Isolation Valves



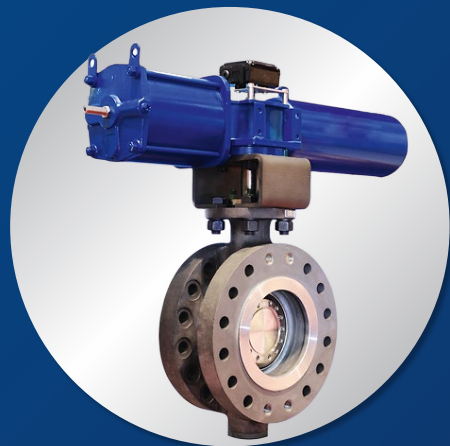
**AEV ²XC™ Severe Service
C-Ball Valve**

[Find Out More](#)



**AEV ²XC™ Cryogenic
C-Ball Valve**

[Find Out More](#)



**Vanessa Series 30,000 Standard Triple
Offset Valve with Powered Actuator**

[Find Out More](#)



Fisher™ FIELDVUE™ Instrumentation



**Fisher™ FIELDVUE™ DVC2000
Digital Valve Controller**

[Find Out More](#)



**Fisher™ FIELDVUE™ DVC6200
Digital Valve Controller**

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**Fisher™ FIELDVUE™ DPC2K
Digital Process Controller**

[Find Out More](#)



**Fisher™ FIELDVUE™ L2t Liquid
Level Controller**

[Find Out More](#)



**Fisher™ FIELDVUE™ DLC3100
Digital Level Controller**

[Find Out More](#)



**Fisher™ FIELDVUE™ 4400
Digital Position Transmitter**

[Find Out More](#)

FIELDVUE™

Industry Use Cases



Chemical



Pulp & Paper



Refining



Hydrogen



CHEMICAL

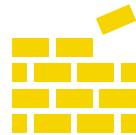
During a Naptha Cracker Revamp, Diagnostic Tools Saved 24,000 Hours on Commissioning

Following a revamp of its naptha cracker, a petrochemical plant processed 100% of its NGLs and produced 1.8 billion pounds of ethylene annually.

SAVING AT LEAST

\$1,200

per valve, avoiding unnecessary valve repairs.



Improved control valve reliability and asset management.



Completed the turnaround on time and within budget.

Increased production throughput and efficiency by **1%**

"Diagnostic resources like FIELDVUE™ digital valve controllers and AMS software have improved control valve monitoring and reliability. They enable us to work smarter, not harder."

- Operations Manager
Petrochemical Plant



EMERSON

PULP & PAPER

FIELDVUE™ Instruments Change Best Practices for Control Valve Maintenance in Florida Paper Mill

Fisher™ FIELDVUE™ digital valve controllers give easy access to information critical to process operation.

SAVED APPROXIMATELY

\$250,000

ANNUALLY



Achieved better control resolution and less valve variance.



Required less time for planned shutdowns and outages.

The customer was provided with the valve diagnostic capabilities and data recovery methods that were vital in helping them conduct efficient and preventative maintenance.


EMERSON

REFINING

Indian Refinery Saves \$115K Yearly by Upgrading to FIELDVUE™ Digital Valve Controllers in Digital Transformation Drive

The project needed an end-to-end retrofit solution to ensure responsibility on a single vendor.

SAVED APPROXIMATELY

\$115K

ANNUALLY FOR 500
UNITS



Increased plant
productivity and
efficiency.



Achieved
Top Quartile
performance.

More than five hundred digital valve controllers with low-bleed relay option are being installed on Fisher™ and non-Fisher valves to reduce air consumption.



EMERSON

HYDROGEN

Hydrogen Unit Uses FIELDVUE™ Diagnostics to Increase Uptime and Optimize Critical Loops

During a site visit, Emerson sales and service experts helped hydrogen unit personnel understand their control issues. The team began by generating signature curves on valves in critical loops and monitoring their performance during process operations.

AVOIDED PULLING A CRITICAL

NPS 36

TAIL-GAS VALVE



Restarted a hydrogen unit two days ahead of schedule.



Improved the reliability of 30 critical control valves.

DOUBLED

time between maintenance outages.

“Using diagnostic tools such as [FIELDVUE instruments], we are able to see the mechanical aspects of control valve performance and plan maintenance. Access to better data makes our job easier and improves valve and unit reliability. We plan to expand our use of Emerson diagnostics technology at our other hydrogen units in North America.”

EMERSON

SERVICES

A trusted technology and service partner can help you reach Top Quartile Performance.

Valve Maintenance



Scheduled Onsite Support

[Find out more](#)



Shutdown, Turnarounds, and Outages

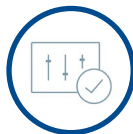
[Find out more](#)



Technical Support

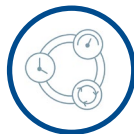
[Find out more](#)

Valve Reliability & Performance



Calibration

[Find out more](#)



Equipment Lifecycle Strategy

[Find out more](#)

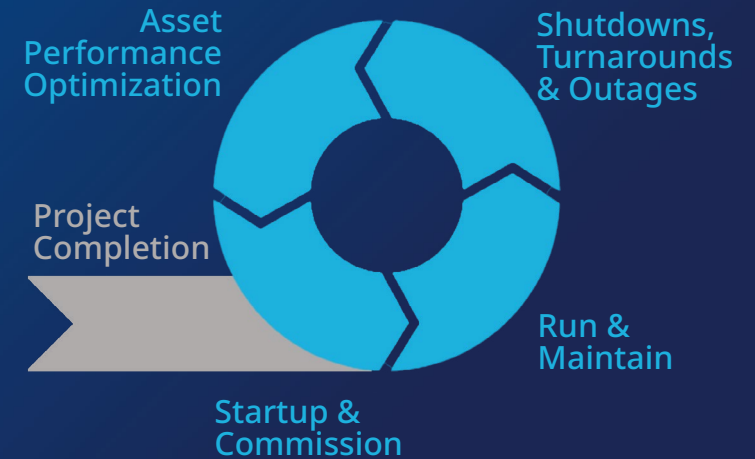


Technology Upgrades & Retrofits

[Find out more](#)

Operational Lifecycle Solutions

Only Emerson has what it takes to provide you with complete support throughout each stage of your plant's lifecycle.



[Find out more](#)



FAQ

DVC7K FAQs

- **Will there be new mountings for the DVC7K?**

The DVC7K will use the same mountings as the DVC6200, DVC2000, DPC2K, and 4400.
- **Do I need to have different spare parts for the DVC7K?**











Yes, some parts will change. However, the DVC7K shares the same I/P, Relay, magnetic array, and mountings as the DVC6200.
- **Can I configure my DVC7K with my current ValveLink software?**

No, you cannot. However, you can set up your instrument with the Local User Interface (LUI) or using the Device Description (DD) on the Trex, your laptop using AMS Device Configurator, or through any HART™-based Host System.

- **How can I tell if there are active alerts in the DVC7K?**

The LED will indicate if an alert is active. You can also see the active alerts, NE107 status, and recommended actions on how to correct the alert from the LUI or using the DD.

NE107 Valve Health Indicators

Solid			Good
Blinking			Maintenance Required
Blinking			Out of Specification
Blinking			Check Function
Solid			Failed

- **Can I disable the buttons on the Local User Interface (LUI)?**

Not for first release. However, the LED light can be disabled from the LUI. Additionally, there are Protection methods planned for future releases to provide more restriction on access to the device both locally and remotely.

- **Can I use the transmitter and switches at the same time?**

Yes, if the DVC7K is ordered with the I/O options package it will support a 4-20 position transmitter and two switches.

- **Does the DVC7K maintain time during a power outage?**

Yes, there is a battery backup onboard the instrument for the standard temperature and high temperature option. The extreme temperature option will not provide a battery backup of the instrument time. Note: At an operating temperature of 25°C (77°F) estimated battery life is 7 years. Battery life will vary depending on operating conditions.

- **What pneumatic and electrical connections are available in the DVC7K?**

There are three options for electrical and pneumatic connections:
 Imperial = ¼" NPT electrical and ¼" pneumatic
 Metric = M20 electrical and G¼ pneumatic
 Metric/Imperial = M20 electrical and ¼" pneumatic

- **Does the DVC7K support multiple languages?**

Yes, we will support 13 languages: Arabic, Chinese, Czech, English, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, and Spanish.

- **Does the DVC7K support HART™ 5?**

The device is HART™ 7 compliant. HART 7 is backwards compatible with most HART 5 systems. The main difference between HART 7 and HART 5 is that with HART 5 you won't have access to the Long Tag. You will be limited to the eight characters that you are limited to in your current HART 5 device.

- **How will I do firmware upgrades? And how long will it take?**

- Upgrading to firmware 2 will require a specific cable to download the new firmware. It's estimated to take around 2-3 minutes and requires the instrument to be in Manual Mode.
- After the implementation of Bluetooth® and if Bluetooth® is enabled on the device, future firmware upgrades can also be done on a Trex, tablet, or phone utilizing the Emerson Bluetooth® App.

- **Is the On/Off Control Tier a different DVC7K?**

The DVC7K has two Control Tiers. The Control Tier determines the control available for the instrument.

- Throttling Control (TC): Supports Throttling and On/Off Application Modes
- Discrete Control (DC): Supports On/Off Application Mode

- **Does the On/Off Control Tier have a SIL certificate?**

No, the DVC7K On/Off tier is not SIL certified, but we are pursuing this for a future release.

- **Are there new alerts for the On/Off Control Tier?**

Yes, there are stroke time degradation alerts that can be configured in the instrument.



Transforming the way valves interact with the world

The industry's leading digital valve controller with high performance, reliability, and embedded prognostics. Improving performance, reliability, and uptime of your plant or fleet, saving you money and improving safety.