



## Fisher Course 1400 - Valve Technician I 10 - 12 Sept 2019

Those who complete this course will be able to:

- Correctly perform installation procedures
- Perform basic troubleshooting.
- Properly apply and calibrate positioners and FIELDVUE™ digital valve controllers
- Change valve trim, gaskets and packing.

Location: WPC, 33-35 Apollo Drive, Hallam VIC 3803

Cost: \$2200 per person

- WPC provides control, automated and relief valves to many organisations within the metropolitan, country areas and offshore sites in Victoria, Tasmania and Western Australia

- Our workshop has NATA laboratory and hydro testing accreditation and is a Certified Fisher Repair Facility

- WPC provides training for pressure relief devices designed to re-close and prevent further flow of fluid after normal operation conditions have been restored.

- WPC provides Foundation Fieldbus training which is ideal for technicians and engineers involved with the commissioning, operation or maintenance of plants utilizing Foundation Fieldbus technology

- WPC specialises in valve automation and Fieldvue solutions

- WPC is dedicated to providing its customers with quality products and services on time and to their requirements

- WPC provides an in-depth insight into maintenance, sizing and selection of pressure relief devices

- Our Service Centre workshops are fully equipped for the repair and overhaul of control valves, regulators, field instruments, actuated valves and associated process control equipment.

- Quality System is designed in accordance with Standard AS/NZS/ ISO9001; ISO/IEC



## Day 1

### Control Valve Specification

This section will discuss common valve specifications that are used to identify operational characteristics and limits of the control valve and trim components: Role of control valve, ASME pressure class, ANSI/FCI leakage class.

### Sliding Stem Valve Maintenance

This section will discuss common components used in the operation of sliding stem valves, such as plugs, cages, seat rings, and packing. Also discussed are common repair and maintenance practices that are commonly performed on the valve assemblies such as packing change, valve lapping, and trim replacement. Emphasis is on easy-e™ valves.

### Sliding Stem Spring and Diaphragm Actuators

This chapter discusses the operation principles of sliding stem spring and diaphragm actuators, like the Fisher™ model 657 and 667 assemblies. Topics covered will include identification, determining fail mode of the actuator, and determining fail mode of the control valve. Maintenance topics discussed include; bench set, diaphragm change, Oring maintenance.

### Sliding Stem Piston Actuators

This chapter discusses the operational principles of sliding piston actuators, like the Fisher model 585C and 685. Topics discussed include determining fail mode and performing maintenance to the assembly.

Maintenance topics discussed include; safely removing cylinder and spring forces, seal replacement, and properly setting travel.

### Workshop 1

1. 585C actuator and easy-e valve
2. 657 actuator and easy-e valve
3. 667 actuator and easy-e valve
4. Easy-e valve packing

## Day 2

### Butterfly Valve Maintenance

This chapter focuses on the operation and maintenance of butterfly valves. Both traditional and high-performance butterfly assemblies are discussed. Common maintenance practices covered are liner and seal replacement, disk removal and installation, and shaft maintenance.

### Ball Valve Maintenance

This chapter focuses on the operation and maintenance of Vee-Ball™ valve assemblies. Both Series B and non-series B assemblies are discussed. Common maintenance practices covered are seal replacement, zero deflection, ball removal and installation, shaft maintenance and setting proper valve travel.

### Eccentric Plug Valve Maintenance

This chapter focuses on eccentric plug valve assemblies. Both the V500 and CV500 designs and operations are discussed. Common maintenance practices covered are shaft and plug removal, bearing maintenance, seat ring installation, and setting proper travel.

### Rotary Valve Packing

This chapter discusses the proper removal and installation of packing that is used with rotary valve assemblies. Packing types discussed; PTFE, Graphite, ENVIRO-SEAL™

### Rotary Actuators

This chapter will focus on the operation and maintenance of both spring and diaphragm and piston rotary actuators. These topics focus on Fisher™ models 1052, 2052, and 1061. Topics discussed include; initial set, removing spring compression, setting valve travel, and proper orientation of the valve to the actuator.

### Workshop 2

1. Spring and diaphragm actuator with HPBV
2. Spring and diaphragm actuator with V500
3. Spring and diaphragm actuator with 9500
4. 1061 actuator with V150

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## Day 3

### **Pneumatic Instrument Principles**

In this session, the class will discuss the basic operating principles for pneumatic instrumentation. Topics covered in this session include: Nozzle/flapper relationship, Relay operation, primary and variable restrictions I/P Transducers. This chapter discusses the basic operation and maintenance of Fisher I/P transducers. Models discussed include the 546, 646, 846, and i2P-100. Topics include calibrating zero and span, torque motor operation, and basic maintenance tips for each model.

### **Basics of Positioner Operation**

This chapter explains the basic operating principle for positioners used on pneumatic control valve assemblies. It provides a detailed explanation about the use of input and feedback to provide an accurate means of maintaining precise valve positioning control.

### **Fisher Traditional Positioners**

This chapter discusses the specific operation of individual Fisher positioners used with both sliding stem and rotary actuators. Models that are discussed are the 3582, 3611JP, 3610J and 3610JP. Topics include the proper mounting, calibration of zero and span, and common maintenance procedures.

### **Workshop**

1. 3582 Positioner on 657 Actuator
2. 3582 Positioner on 667 Actuator
3. 3610J Positioner on 1052 Actuator
4. 3610JP Positioner on 1061 Actuator

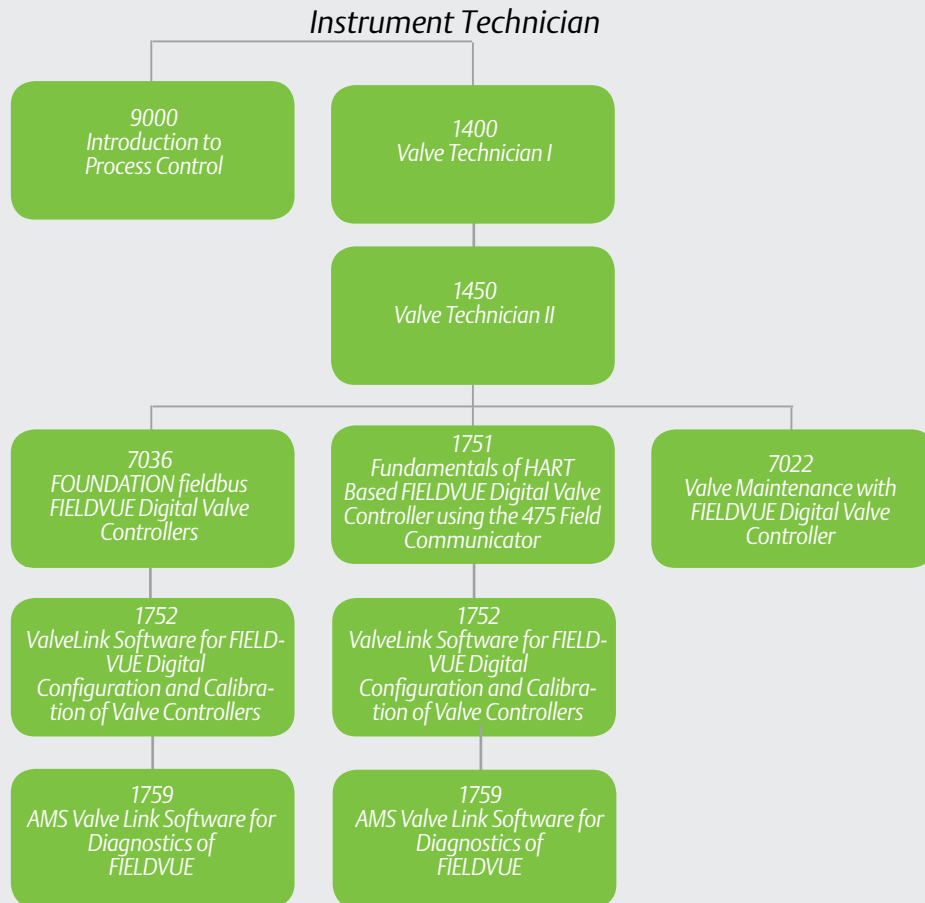
### **FIELDVUE™ Digital Valve Controllers**

This chapter discusses the basic operation of the Fisher FIELDVUE DVC6200. Also discussed are the proper procedures for mounting and calibrating these instruments to both sliding stem and rotary actuators. Calibration procedures include running a setup wizard and auto travel calibration using a 475 Field Communicator.

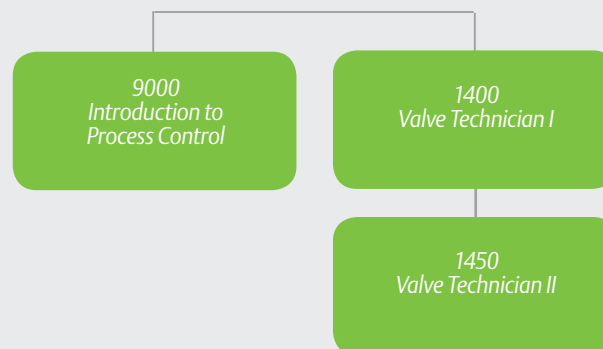
### **Workshop**

1. DVC6200 on sliding stem spring and diaphragm
2. DVC6200 on sliding stem piston
3. DVC6200 on rotary spring and diaphragm
4. DVC6200 on rotary piston

# Learning Paths



## Valve Mechanic or Maintenance Technician



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