

Backflow Prevention Learning System (single-sided)

580161 (46105-J0)

FESTO

LabVolt Series

Datasheet



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Festo Didactic
en 120 V - 60 Hz
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General Description

Learn about common back flow prevention devices, and test them in a compact workstation

This system is designed to learn the necessary skills to test backflow prevention devices (BFP) using industrial-grade test equipment. The single-sided version accommodates 1 team.

BFP are of crucial importance for authorities responsible for the supply of potable water to populations. To make sure that public water is safe, cross-connections in the water distribution system with potentially harmful fluids must be identified. Proper backflow prevention devices must be installed to prevent the contamination of potable water.

The BFP Learning System, features the most common backflow prevention devices used in typical residential and commercial installations. Students learn to perform test procedures on BFP devices.

A mobile workstation forms the basis of the system. It includes various BFP devices and several other components such as a centrifugal pump, a flowmeter, valves, and pipes. Using modern, commercial-grade equipment is helpful in teaching theoretical and hands-on knowledge required to work in backflow prevention.

Features & Benefits

- Compact double-sided workstation for two teams of students
- Closed-loop recirculating water circuit with drip tray to keep the floor dry
- Includes industrial-grade tools used by technicians installing and testing BFP devices

List of Equipment

Qty	Description	Model number
1	Pumping Unit _____	579984 (46750-00)
1	Backflow Preventers Supports (Front) _____	579987 (46751-A0)
1	Flowmeter GPM _____	579990 (46760-00)
1	Backflow Preventers (Front) _____	580009 (46787-00)
1	Mobile Workstation, Piping _____	580033 (46801-A0)
1	Test Kit Backflow Prevention (Basic) _____	582119 (20495-00)

List of Manuals

Description	Manual number
Backflow Prevention Devices (Workbook) _____	583865 (20640-20)
Backflow Prevention Devices (Workbook (Instructor)) _____	583866 (20640-30)
Manual of Cross-Connection Control (Workbook) _____	583871 (20703-00)

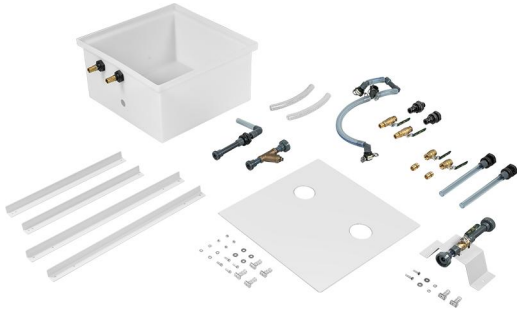
Table of Contents of the Manual(s)

Backflow Prevention Devices (Workbook) (583865 (20640-20))

- 1 Introduction to the BFP Training System
- 2 Pressure Measurements
- 3 Backflow Prevention Principles
- 4 Test Procedure for a Spill-Resistant Vacuum Breaker
- 5 Test Procedure for a Reduced Pressure Zone Assembly

Equipment Description

Pumping Unit 579984 (46750-00)



The Pumping Unit is designed to be installed in the Mobile Workstation. It contains a motor-pump assembly, a reservoir, and a disconnecting switch. The pump is connected to the reservoir via a strainer, ball valve, and pressure measurement point. The pump is controlled by a Start/Stop push-button station protected by a disconnecting switch with lockout/tagout devices. The Pumping Unit and the Mobile Workstation form a stand-alone pumping system that is used to test the piping circuits for leaks.

Specifications

Parameter	Value
Power Requirements	
Current	7.4 A
Service Installation	Standard single-phase ac outlet
Pump	
Type	Centrifugal
Flow	53 L/min (14 gal US/min) at 10 m (30 ft)
Maximum Pressure	16.1 m (53 ft)
Maximum Speed	3450 r/min
Motor	
Power	375 W (1/2 hp)
Current	7.4 A
Speed	3450 r/min
Electrical Protection	
Type	Fuses
Tank	
Capacity	115 L (30 gal US)
Accessories	
Accessories	Rust inhibitor
	Antibacterial solutions
Physical Characteristics	
Intended Location	Installed in the lower part of the Piping Training System workstation
Dimensions (H x W x D)	340 x 655 x 655 mm (13.5 x 25.8 x 25.8 in)
Net Weight	5.9 kg (12.8 lb)

Backflow Preventers Supports (Front) 579987 (46751-A0)

The Backflow Preventers Supports (Front) set includes all the struts, clamps, nuts, and screws required to support the backflow prevention devices on the front side of the workstation.

Flowmeter GPM 579990 (46760-00)



The Flowmeter GPM provides direct visual reading of the flow rate. It has a 0-20 gal US/min flow range. The Flowmeter GPM is fixed to a mounting bracket to be attached to metal struts.

Specifications

Parameter	Value
Flow Range	0-75 L/min (0-20 gal US/min)
Maximum Pressure	1000 kPa (150 psig)
Accuracy	3%
Physical Characteristics	
Dimensions (H x W x D)	240 x 63 x 89 mm (9.5 x 2.5 x 3.5 in)
Net Weight	0.91 kg (2.0 lb)

Backflow Preventers (Front) 580009 (46787-00)

The Backflow Preventers (Front) set includes various backflow prevention devices and the necessary equipment to perform the job sheets in the courseware.

List of Manuals

Description	Manual number
Backflow Prevention Devices (Workbook) _____	583865 (20640-20)
Backflow Prevention Devices (Workbook (Instructor)) _____	583866 (20640-30)
Manual of Cross-Connection Control (Workbook) _____	583871 (20703-00)

Table of Contents of the Manual(s)

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Mobile Workstation, Piping 580033 (46801-A0)



The Mobile Workstation is a versatile bench that enables two student groups to operate simultaneously. It is constructed from heavy-duty metal struts and painted using powder-coated paint for durability. The unit is mounted on four swiveling casters with a lock mechanism to ensure easy motion and stable operation, and is sized to pass through standard door openings.

Specifications

Parameter	Value
Physical Characteristics	
Dimensions (H x W x D)	1830 x 1980 x 800 mm (72 x 78 x 31.5 in)
Net Weight	TBE

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