

Level Measurement Trainer



Model: 617-000

Process control systems maintain precise control of liquid and gas variables, such as liquid level, flow rate, pressure, temperature, and pH level. These multifaceted systems are a critical part of major industries like power generation, refineries, petrochemicals, chemical manufacturing, pharmaceuticals, biotechnology, and food processing and bottling.

DAC Worldwide's Level Measurement Trainer (617-000) is a working, large-scale fluid process system allowing for hands-on training relating to basic hydrostatic principles, as well as the installation, calibration and maintenance of process field instruments, using a column of water.

Level Measurement Training Features Real-World Industrial Components

The level measurement training system includes a 3-gallon, 36" high, clear acrylic tank, and a 15-gallon reservoir. An "open architecture" allows for installation of instrumentation of various designs from many manufacturers at multiple locations within the system and on the tank using quick-connect fittings.

With optional and/or user-supplied equipment, the Level Measurement Trainer can be used for creation of basic process loops relating to level control using a variety of measurement and control methods.

The system requires the #600-006A Economy Standard Test and Calibration Equipment Package, #600-056 Differential Pressure Transmitter, and #600-107 Differential Pressure Gauge. It includes a caster set, 3-gallon tank, 15-gallon reservoir, centrifugal pump, GFI circuit protection, tank overflow protection, power distribution panel, power supply, pipe stanchion, and #617-500 Use/Exercise Guide.

Level Measurement Trainer Includes User Guide with 8 Hands-On Exercises

The system's Use/Exercise Guide, useful in both an instructor-led or self-directed format, includes eight, hands-on exercises. The exercises include a variety of topics, including: principles of hydraulic pressure, level measurement using a bubbler assembly, effects of level sensor position, level measurement with a dry reference leg, level measurement with a wet reference leg, installation and calibration of a level measurement channel, and installation and calibration of a level measurement channel with zero elevation and suppression.

FEATURES & SPECIFICATIONS

- Service requirements: electric - 110/240 VAC, 50/60Hz.
- Welded steel frame using 14-gauge 1-1/2" x 1-1/2" tube and 1/8" plate.
- Four casters two with locks.
- Front panel faces fabricated from 1/8" aluminum sheet.
- Clear, 1/2"-diameter, PVC piping and fittings throughout.
- Clear acrylic process tank, 3-gallon capacity.
- Wet leg demonstration tube fabricated from clear PVC pipe.

- Primary reservoir, 15-gallon capacity.
- Centrifugal pump, 1/4 HP, with inlet strainer.
- GFI circuit protection.
- Tank overflow protection.
- Power distribution panel/electrical enclosure mounted on 19" rack panel and including: on/off power switch, pilot light, fuses for all circuits, pump power switch with provision for external control via relay, 110/240 VAC service connections, and motor controller.
- 24 VDC power supply with banana jack connections.
- Quick-disconnect fittings located throughout, allowing for attachment of instruments, accessories, and optional equipment.
- Pipe stanchion, allowing for attachment of optional pressure gauges, pressure switches, differential pressure transmitters, and pressure transmitters at varying heights.
- 100' 1/4"-diameter instrument connection tubing.
- Eight 36" test leads.
- Four 60" test leads.
- Eight quick-disconnect nipples.
- Six tubing tees.
- Six tubing couplers.
- Pressure gauge, 0-3 psig.
- Two 250 ohm conversion resistors.
- Use/Exercise Guide.
- Crating for shipment via motor freight.

PRODUCT DIMENSIONS

- **Product Dimensions**
(L x W x H)
23in. x 34in. x 76in. (590 x 865 x 1930 mm)
195lbs. (89kg)
- **Shipping Dimensions**
(L x W x H)
39-1/4in. x 27in. x 85in. (997mm x 686mm x 2159mm)
300lbs. (130kg)

OPTIONS

- #600-006A - Test and Calibration Package, Hand-Held, Economy (required)

- #600-056 - Differential pressure transmitter, supplemental. (required)
- #910 - Rolling Rack Assembly
- #600-022 - Ultrasonic level detector assembly, economy.
- #600-051 - Strip chart recorder, 2-pen (Yokogawa, SR 1000) (additional).
- #600-059 - 3-Valve manifold (supplemental).
- #600-066 - Supplemental PID controller and I/P converter panel.
- #617-047 - Supplemental diaphragm-type control valve assembly, downsized.
- #617-500 - Additional Use/Exercise Guide.
- #617-CTL - Quick-Start Control Package, including: #617, #617-047, #600-066, #600-067, #600-056, #600-059.
- #940-001 - Control Module Base Assembly.
- #940F - Control Module Assembly Frame (for supplemental panels).

Address

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