

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 and the #600-056 Differential Pressure Transmitter. 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

DISCLAIMER: *Product Dimensions are approximate. Shipping Dimensions and Weights are for directional use only and may change based on manufacturer variables. For the most accurate Shipping Dimensions and Weights, please contact the manufacturer.*

- **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
- #600-051 - 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.
- #617-022 - Ultrasonic level detector assembly, economy.
- #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).

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