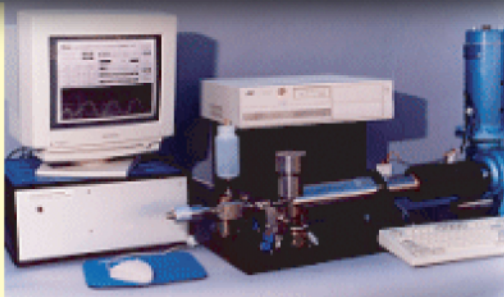




# Automated Pressure Holding System

## ● Description

The APP Automated Pressure Holding System and Tester (APHT) generates and holds a target pressure from atmospheric pressure to 5000 psi (pneumatic system) and to 60,000 psi (hydraulic system). The system is completely microprocessor controlled and fully automated, allowing the user to control the pressurization rate, target pressure, and holding time.



## ● Software

Easy-to-use APCS software runs with Windows '98 and higher. Throughout the holding process, this software provides useful reports and data, including a real-time graphical display of pressure versus time. Upon completion of the holding process, data can be downloaded to Excel for further analysis. Advanced Pressure Products also has the capability to customize the software to produce reports and data required for a specific application.

## ● Applications

The APHT can best be utilized as an integral part of a larger system. The APHT can work in conjunction with already existing equipment and processes to hold a desired pressure.

## ● Features

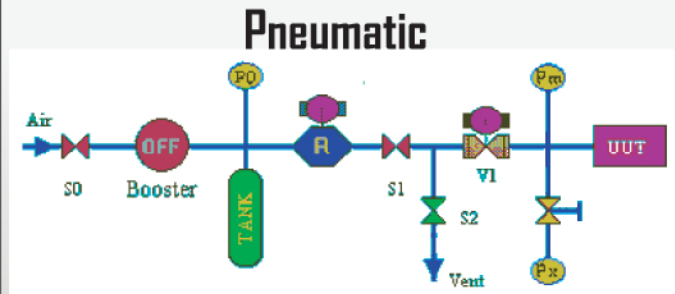
- Highly accurate pressure transducer monitors system pressure and provides feedback
- User-defined multiple target pressures, holding times, dwell times, and pressurization rates
- Tests can be performed under elevated temperature to simulate actual operating conditions (optional)
- Multi-level, fail-safe system provides over-pressurization protection operating conditions (optional)
- Windows-based software handles all control, measurement, data collection, and report generation; complete manual control also possible
- Compatible with Windows '98 and higher
- Real-time graphical test display depicts testing status and results throughout operation
- Multiple pressure outlet ports available
- Automatic pressure generator refill for high volume situations
- Multiple pressure generator systems for continuous and multi-axis pressurization (optional)
- Customized report formats available
- Minimal maintenance required

# HARDWARE

## Hardware: Pneumatic System (Applications up to 5,000 psi)

The Automated Pressure Holding Tester — Pneumatic System comprises a gas booster, motorized pressure regulator, pressure transducer, motorized valves, and a pressure controller. A highly accurate pressure transducer monitors system pressure and provides feedback.

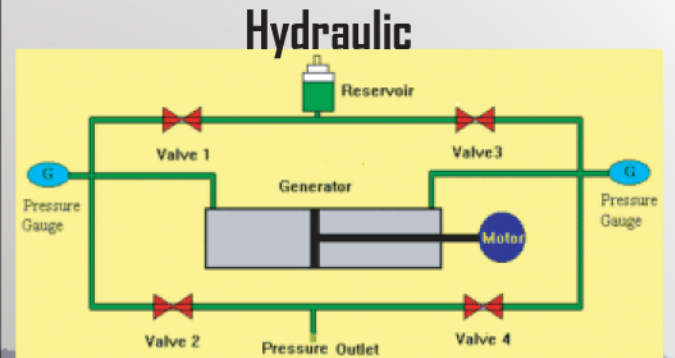
The APHT — Pneumatic System has two control modes: multi-target pressure control and pressurization rate control. (Control algorithms are based on PID control.) Multi-target pressure control allows the operator to reach the targeted pressure quickly and smoothly, while minimizing overshoot. Additionally, multi-target control holds the designated pressure for a specified length of time. The pressurization rate control provides operator control of the pressurization rate at which the target is approached.



## Hardware: Hydraulic System (Applications up to 60,000 psi)

The Automated Pressure Holding Tester (Hydraulic System) comprises a motorized pressure generator, pressure gauges, high-pressure motorized valves, and a pressure controller. The DC motor driven piston pressure generator produces up to 60,000 psi output. A highly accurate pressure transducer monitors system pressure and provides feedback.

The APHT (Hydraulic System) has two control modes: multi-target pressure control and pressurization rate control. (Control algorithms are based on PID control.)



## SPECIFICATIONS

### PNEUMATIC

### HYDRAULIC

Working Fluid.....	N/A.....	Water, Oil, or Alcohol
Air Requirement.....	80 psi Air.....	N/A
Pressure Range.....	0 - 5,000 psi	0 - 60,000 psi
Pressure Transducer.....	Range: 0 - 5,000 psi Accuracy: Up to 0.01% FS	Range: 0 - 60,000 psi Accuracy: Up to 0.01% FS
System Resolution.....	1/20,000 (65536 optional)	1/20,000 (65536 optional)
System Control Accuracy.....	+/- 0.02% FS	+/- 0.02% FS
Pressurization Rate.....	0.1 psi/sec - 200psi/sec	0.1 psi/sec - 200psi/sec
Maximum Hold Time.....	User Specifiable	User Specifiable
Power Requirements.....	110 VAC, 60 Hz (220 VAC, 50 Hz optional)	110 VAC, 60 Hz (220 VAC, 50 Hz optional)
Dimensions.....	51" H x 28.5" W x 26" D	51" H x 28.5" W x 26" D
Weight.....	150 lbs	300 lbs



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