



## Enhanced Automated Pressure Controlled System

### • Description

The APP Enhanced Automated Pressure Control System (EAPCS) is designed to provide fast, precise pressure generation and control. From atmospheric pressure to 60,000 psi, the EAPCS generates large volume, high pressure outputs in significantly reduced time. The EAPCS is microprocessor controlled and fully automated, thereby allowing user-defined multiple target pressures, holding times, and pressurization rates.



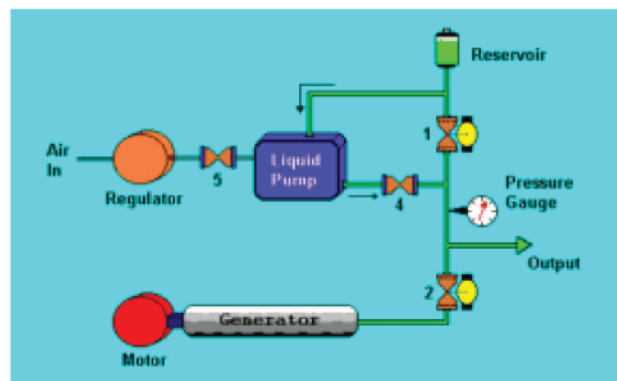
### • Software

Easy-to-use EAPCS software runs with Windows '98 and higher. Throughout the pressure control process, this software provides useful reports and data, including a real-time graphical display of pressure versus time. Upon termination of the pressurization process, data such as pressure, corresponding time, and motor speed 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 EAPCS is specially designed for large volume, high-pressure applications, including:

- \*Battery Cell Burst Tests
- \*Air Bag Inflator Tests
- \*High Pressure Chamber Fatigue Tests
- \*Multi-Gauge Tests Calibration
- \*Supercritical Fluid Extraction
- \*Custom Tests (Ask about such tests)



## FEATURES

- Hydraulic pump results in rapid high pressure, high volume output
- Highly accurate pressure transducer monitors system pressure and provides feedback
- User-defined multiple target pressures, holding times, and pressurization rates
- Tests can be performed under elevated temperature to simulate actual operating conditions
- Pressure cycling feature allows fatigue testing
- Burst pressure testing can be performed
- Multi-level, fail-safe system provides over-pressurization protection
- 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
- Uses a variety of pressurizing fluids
- Automatic fluid refill for large volumes
- Multiple generator systems available for continuous flow or multiple axes
- Customized report formats available
- Minimal maintenance required

## HARDWARE

The Enhanced Automated Pressure Control System is comprised of a motorized pressure generator and hydraulic pump. Compressed air, processed through an automated regulator, drives the hydraulic pump, resulting in large volume, high-pressure working fluid. Upon approaching the target pressure, control is passed from the hydraulic pump to the motorized pump for improved precision.

The EAPCS 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.

## SPECIFICATIONS

Working Fluid.....	Water (other fluids may be substituted)
Air Requirement.....	80 psi Air
Pressure Range.....	0 - 5,000 psi
Pressure Transducer.....	Range: 0 - 60,000 psi
	Accuracy: Up to 0.01 % FS
System Resolution.....	1/20,000 (65536 optional)
System Control Accuracy.....	+/- 0.02 % FS
Pressure Setting.....	Up to 40 different pressure steps
Pressurization Rate.....	0.1 psi/sec - 200 psi/sec
Power Requirements.....	110 VAC, 60 Hz (220 VAC, 50 Hz optional)
Dimensions.....	51" H x 28.5" W x 26" D
Weight.....	200 lbs

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