



*Model  
HCS-501 Series  
Flow-Temperature-Humidity  
Control System*

## Features

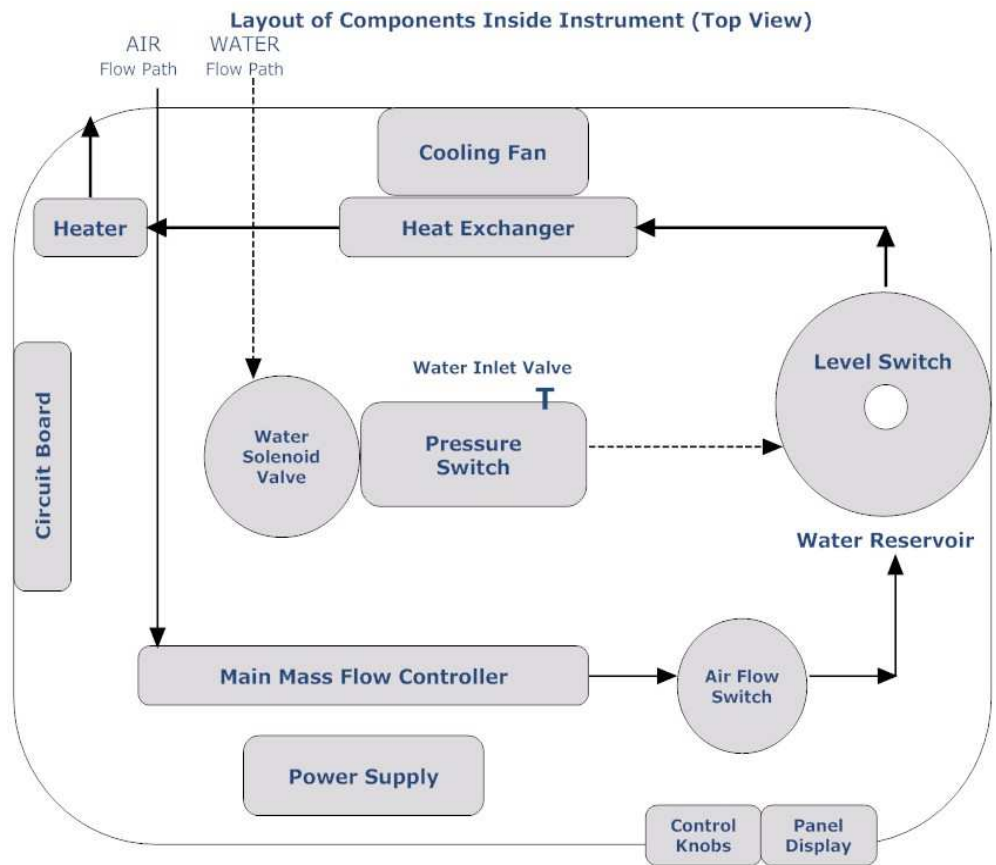
- ◆ Microprocessor Controlled Operation
- ◆ Audible Alarms & Shut-Downs to protect Instrument from Damage
- ◆ Updated Temp & RH Probe
- ◆ Easy to Install
- ◆ Digital Readout
- ◆ Direct Dial Controls
- ◆ 20-85% Relative Humidity at 25°C
- ◆ 20-35°C, with cooling option
- ◆ 2-20, 5-50, 10-100, 20-200, 50-500 L/min air flow ranges, Custom Flow Ranges available upon request.

## Applications

- ◆ Atmosphere Generation for Respirator Cartridge & Filter Evaluation
  - Instrument & Detector Calibration
  - PPE Permeation Studies
  - Air Sampler Evaluation
- ◆ Biosphere Studies
  - Small Animal Environmental Controls
  - Plant Growth Studies
- ◆ Environmental Chamber Design
  - Product Environmental Stability Studies
  - Micro Balance Environment
- ◆ Aerosol Generation
- ◆ Desiccant Capacity Measurements

## Description

The flow, temperature and relative humidity are set to the desired level using direct reading dial potentiometers. Air flow is measured and controlled using a digital mass flow controller. A temperature-humidity sensor measures the actual conditions. The electronic signals from the sensor form a feedback loop to the controller circuit board. This unit activates heaters in a water reservoir and the humidified air stream to attain and maintain the temperature and humidity conditions. Control functions require no operator intervention, except for periodic calibration. All parameters can be observed visually on digital panel meters or monitored with a strip chart recorder. Cooling below room temperature can be achieved using the cooling option (Item CP-100).



## Specifications

- Relative Humidity Range      30-90% @ 20°C; 20-85% @ 25°C; 10-75% @ 30°C
- Temperature Range            Ambient ± 2°C—35°C, without Cooling Option; 20-35°C with Cooling Option
- Air Flow Ranges                HCS-501-20, 2-20 L/min  
HCS-501-50, 5-50 L/min  
HCS-501-100, 10-100 L/min  
HCS-501-200, 20-200 L/min  
HCS-501-500, 50-500 L/min  
Custom Flows available, upon request
- Warm-up Time                    5-15 minutes
- Dimensions                        20" x 20" x 10"
- Weight                                40-60 pounds
- Power Requirements            120 VAC, 50-60 Hz
- Water Requirements            Deionized, purified water, ASTM Type I, resistivity > 18 MOhm-cm, very low organics
- Compressed Air Supply        Clean, dry compressed air delivered at a constant pressure of 65±5 psi