



ATS-500 HVAC Testing

Consolidated, functional test, part of the ATS-5000 Series

Ultimate Flexibility

Astronics has consistently provided the mass transit industry with automated testing for complete HVAC systems and sub-systems utilizing proven hardware and software solutions. We have successfully delivered test systems for HVAC units with integrated control circuits as well as providing real-time control and safety systems for rooftop units separated from the controller.

Completely automated testing as well as technician level control over the various HVAC subsystems have been provided for various subway and commuter rail customers over the last ten years.

Services

- Engineer-to-engineer collaboration and customization
- Interface Test Adapter (ITA) Development
- Program management
- Installation and ongoing support

Test Solutions

- **Save time and cost** - complete turn-key solution
- Upgradable, modular, and configurable
- **Efficient** - consolidated footprint to maximize space in your depot or factory
- **Flexible** - based on industry-standard instrumentation such as LXI, PXIe, and others

Expandable. ATS-500-HVAC is based on an open architecture and industry standards, including PXI, LXI, GPIB, IVI, IEEE-488, USB, Windows and others.

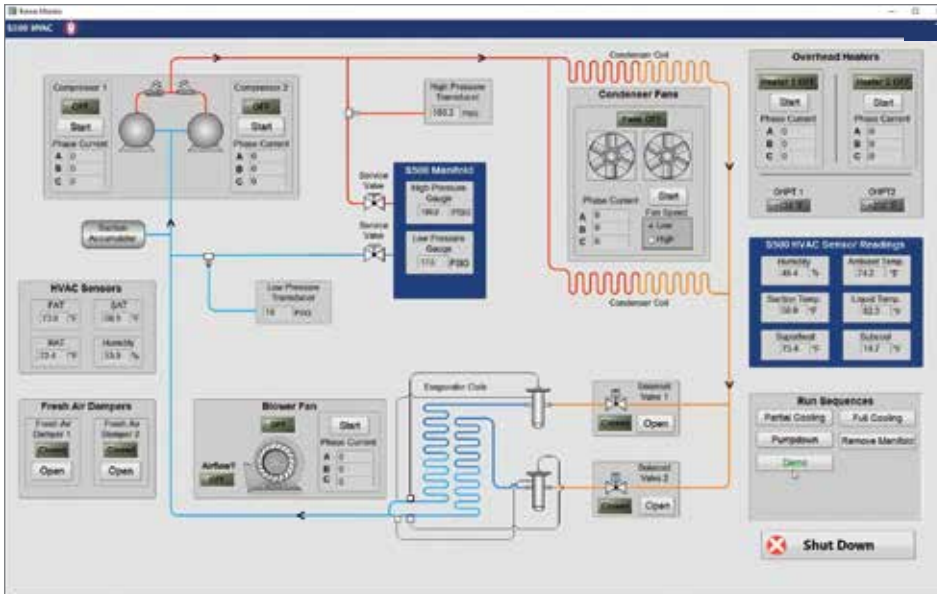
Configure your system as you need it now and add as you go to expand in size, power, and functionality.

Software. Astronics' proven TestCue® software comes standard.

With TestCue® you receive intuitive, easy-to-use system software that minimizes your time and cost to deliver, run, and maintain test program sets. With plugins to COTS software such as LabView, test programs sets are easily created.

HVAC TEST HIGHLIGHTS

- HVAC systems powered from DC third rail or catenary
- Support testing of integrated controllers and inverters
- HVAC systems powered from 3 phase AC inputs
- BTE real time control of HVAC systems
- Safety controls for pressure, temperature, voltage and current
- Service port options for automated monitoring via manifold gauges
- Diagnostic testing of HVAC sub-assemblies
- Verify blower motor current and voltage
- Verify Condenser fan current and voltage
- Verify compressor motor current and voltage
- Phase imbalance
- Full cooling verification
- Partial cooling verification
- Superheat and sub-cooling performance measurements



Get Started Today

For additional details, please contact Astronics Test Systems.

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AstronicsTestSystems.com

Manufacturing At Scale. With more than 150,000 square feet of certified manufacturing capability, our manufacturing processes follow industry-standard quality guidelines set forth in ISO 9001 and AS9100, as well as CMMI. We can manufacture one unit or thousands, depending on your need.

All from the Logistics Experts. Astronics Test Systems excels at delivering complete logistics support, with installation, training, and support engineers deployed to your location.

Astronics' long history of field support and obsolescence management ensure long term success and maximum utilization of your functional test investment.



ATS-500-HVAC SPECIFICATIONS

CAPABILITIES

- Full functional test of HVAC complete assemblies and sub-assemblies
- Ethernet, LAN communications support
- Test miscellaneous electronic components including circuit breakers, contactors and sensors.
- Perform system level software updates and maintenance.
- Diagnostic self-test capability for the tester will be provided including diagnostic to module level.

PXIe

- 18 slot PXIe Chassis for COTS instrument

BUS EMULATION

- Serial Bus Capabilities - I2C, SPI, UART, USART, CAN, USB, RS232, RS485, RS422, Ethernet, ESPI, 1-Wire, MICROWIRE
- Parallel Bus - IEEE-488

SAFETY

- Integrated safety systems
- Hardware controlled safety locks
- Hardware controlled voltage monitoring
- Locking mechanisms prevent input power to the unit under test if safety conditions are not met.

ANALOG

- Automated manifold gauge transducers for high side and low side pressure measurements
- Ability to perform parallel testing of Analog and Digital circuits at all I/O pins
- High current probes
- High voltage probes

POWER

- Integrated third rail DC power 2000V+
- Serviceable 15KW power supplies built up to required input power
- Automated control of Three phase 408/230/208 input power distribution