

THERMAL VACUUM

Auxiliary Thermal Control Systems



Dynavac's Auxiliary Thermal Control Systems (ATCS) adds auxiliary heating and power to flight hardware during test periods. Our flexible design platform enables customization of power channels and DC power output ranges to best suit your testing criteria.

System Highlights

- Dynavac's Auxiliary Thermal Control System (ATCS) provides heating & power capability for hardware testing
- Flexible channel quantities and DC power output ranges can be supplied to meet your requirements
- Each channel can be controlled by voltage output, power output, temperature control, and temperature ramp control
- Operator monitors and operates all channels through a PC-based program
- Single or multiple power supply rack configurations available. Each rack is controlled by its own PLC
- Optional supervisory safety shut-off system available

The flawless performance you expect

From the most respected name in thermal vacuum systems: Dynavac



Highlights & Specifications

ATCS Features & Configurations

- Easy to use operator screens
- PID control
- Configurable alarm & trend screens
- Test configurations stored & retrieved from database
- Data transfer via serial port capability and storage to a text spreadsheet file
- Change multiple channel parameters through Dynavac's EZ Update Menu
- Create custom recipes
- Redundant thermocouple control
- Ability to control from a remote temperature reading

ATCS Hardware

- Power supplies, any manufacturer can be accommodated
- Programmable automation controller
- Rack-mount LCD monitor, keyboard, mouse drawer

ATCS Software Platforms

- Interfaces programmed using National Instruments LabVIEW®
- Microsoft SQL Database

The screenshot shows the 'AUX THERMAL CHANNEL CONTROLS' interface. At the top, it indicates 'LOGGING DATA', 'TEST 1015', 'TEST CONFIG ON 10-15', and the time '14:40:45' on '10/31/2012'. The main area is divided into seven columns for 'CHANNEL 1' through 'CHANNEL 7'. Each channel is associated with a 'Solar Array' (1-7) and contains various control parameters such as 'PROCESS VARIABLE', 'TARGET SPT', 'ACTIVE SPT', 'DEVIATION', 'LOOP MODE', 'OUTPUT %', 'RAMP STATUS', 'RAMP TIME (Min)', 'RAMP RUN/HOLD', 'TC SOURCE', 'VOLTAGE', 'CURRENT (AMPS)', 'POWER (WATTS)', and 'RECIPE'. On the right side, there is a vertical menu for 'RACK 1' through 'RACK 7'. Below this menu is a 'CHANNEL RANGE' section with 'From Channel' (1) and 'To Channel' (50) fields, a 'Select Item' dropdown, a 'Target Setpoint' field (0), a 'Master Run/Hold' button (HOLD), an 'APPLY' button, an 'APPLY RECIPES' button, a 'CHANNEL PARAMETER CONFIG SCREEN' button, 'PRINT WINDOW' and 'PRINT REPORT' buttons, and an 'EXIT' button.

Main Control Screen