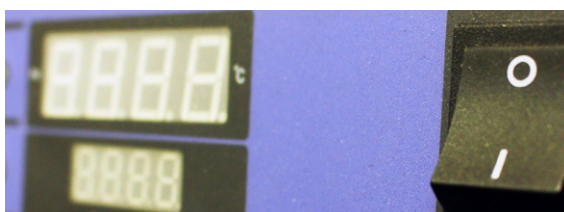


ATS-Chill150V™



# ATS-Chill150V™ Re-Circulating Chiller Instructional Manual



# Warranty Agreement

## Limited Warranty

Advanced Thermal Solutions, Inc. (hereinafter “ATS”) warrants that: (1) ATS-Chill150v™ will perform in accordance with the written materials for a period of ninety (90) days from the date of purchase; and (2) Any Hardware accompanying the Software will be free from defects and errors in materials and workmanship, and covered for a period of one year from the date of purchase if utilized under normal use and service. Any implied warranties on the Software and the accompanying material are limited to ninety days (90) and one year respectively.

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## COPYRIGHT

The ATS-Chill150v™ and its operating software is patent pending and proprietary to Advanced Thermal Solutions.

## DISCLAIMER

While every effort is made to ensure accuracy, Advanced Thermal Solutions cannot be held responsible for errors or omissions in this Manual. Furthermore, it reserves the right to revise this document and make changes without notice.

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# Introduction

## Section 1: Introduction

### 1.1 Introduction

The ATS-CHILL150V series is a portable re-circulating system that offers precise coolant temperature control using a PID controller.

### 1.2 Features

- High cooling capacity & stability
- Easy to read LED display located on the front panel for water level, pressure and temperature control
- PID Control
- Safety feature for protection against over pressure and compressor overload, with automatic shut off when ventilation is poor

### 1.3 Application Fields

- Laboratory Testing
- Industrial Processing
- Sensor Calibrations
- Bio-Medical Testing
- Laser Thermal Management
- Component Characterization

### Other ATS Liquid Cooling Products:

- Flow Meters
- Leak Detectors
- Cold Plates
- Heat Exchangers



For these products and the entire ATS product line visit [www.qats.com](http://www.qats.com).

**Note: Please read the Manual before operating the system.**

## Section 2: Specifications

Part# ATS-Chill150v		
Temperature Range 25°C	Temperature Stability	Cooling Capacity
0-40°C	+0.1°C	150w
Pump Pressure	Pump Flow Rate	Water Tank Capacity
0.4BAR	7-10 L/MIN	1.0L
Overall Dimension (W x D x H)	Power Supply Requirement	Weight
230 x 260 x 380mm (9.06 x 10.24 x 14.96")	AC220V 50HZ,5A	10kg (22.05lbs)



Figure 1 Water Outlets

### 2.2 Operations

- 1. Pipe connection:** the back of this machine is equipped with water outlet mouth and back water mouth (figure 1), each one unit, respectively connected to needed cooling equipment, among which water outlet mouth connected to water inlet mouth of needed cooling equipment, back water mouth and connected to water outlet mouth of needed cooling equipment. To avoid the possibility of wrong or inverse connection of water inlet and outlet, causing cooling fault or seriously affect the cooling effect, please be sure to check the cooling waterway direction of needed cooling device first, or to read the detailed specification of the needed cooling equipment first.
- 2. Add water:** This machine is prohibited running without water. Tank filler (figure 2) is located on the top of the machine, twist the filler, add water into the water tank, and generally use the special medium such as distilled water, clean oil. When the water cycle is longer, occupy more circulation medium, run the machine at the first time, observe the water level, when the water level is not enough, alarm buzzer sends out alarm sound, please add circulation fluid in time, make sure the machine work normally. In order to guarantee a certain water level inside, the machine is equipped with a buzzer, when the water level is not enough, the buzzer will send out the voice of “di di”, please add circulation fluid in time.

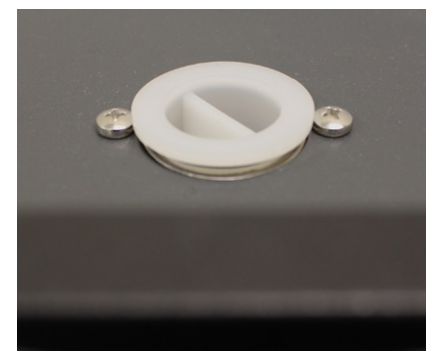



Figure 2 Water Tank Container


## Section 3: Operation of the Control Panel





**POWER** supply switch press the key to start control instrument, refrigeration units and circulation water pump at the same time:



- 1) Control instrument starts working, temperature display window (PV) is the actual measured temperature of tank liquid, (SV) shows the temperature of the set goals.
- 2) Start the refrigeration unit, machine starts to work.
- 3) Circulation pump starts, constant temperature cooling water out through the circulating pump.

 **Function key:** Press the key, (SV) numerical value flashing, adjust its numerical value through the displacement key, increasing key and reduction key, and then press the key to confirm, if numerical value stops flashing, target temperature setting is complete.

 **Displacement key:** Press the key, move the cursor, select the number you want to change.

 **Increase key:** Selected numerical digit value increase.

 **Reduction key:** Selected numerical digit value decrease.

Note: when you hold down  function key for a longer time, the instrument turns into the internal parameter modifying state, users typically do not need to modify the internal parameters, so as not to cause control confusion. And then hold down  function key for a longer time to exit the state.

Out of factory parameters (for reference only): the first alert AL-1=10.0 automatic setting AT=OFF temperature deviation PU-b= 4.0 setting temperature upper limit P-SH=40.0 setting temperature lower limit P-SL=5.0.

- 4) The application of self-setting (intelligent control) function:  
Enter parameter setting state after the machine working properly, set AT after the ON, press the SET key, start self-setting function, instrument display returns to normal PV/SV display. AT light is blinking on the Panel, SV displayer continuously displays -AT-, after the self-setting, the instrument automatically returns to normal display, and cannot be forced to exit the self-setting state.

## Section 4: Standard Precautions

1. Avoid direct sunlight on the instrument.
2. The instruments should be placed in a temperature below 35°C, no corrosive gas, in an environment of relative humidity below 80%.
3. When using, around the instrument should be well-ventilated, distance from the walls or barriers shall be not less than 30cm.
4. This instrument has to use a separate power supply (AC 220V, 50Hz, 10A) and properly grounded.
5. Stop the machine and release the medium before carrying or moving the instrument. Upright carrying the instrument.
6. Refrigeration system shall not be opened or stopped frequently; otherwise it may damage the compressor.
7. The product has free warranty for one year from the date of sold this product.



## Advanced Thermal Solutions, Inc

Advanced Thermal Solutions is a leading engineering and manufacturing company supplying complete thermal and mechanical packaging solutions, from analysis and testing to final production. ATS is world renowned for its portfolio of more than 5,000 high performance heat sinks, research-quality test equipment's, and leading-edge R&D, specifically tailored to the telecom, LED and computing industries. In addition, ATS provides thermal design consulting services and training for the electronics cooling industry. For more information about Advanced Thermal Solutions, please visit [www.qats.com](http://www.qats.com).

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