Immersion Chillers

PORTABLE CHILLER SYSTEM

ATS' iM Series chillers, the ATS-Chill iM201, ATS-Chill iM202 and ATS-Chill iM402, are used to remove heat from a fluid tank with a high degree of flexibility and efficiency. The evaporator that is supported with a flexible hose is simply submerged into the fluid tank for heat extraction by the self-contained vapor compression system.
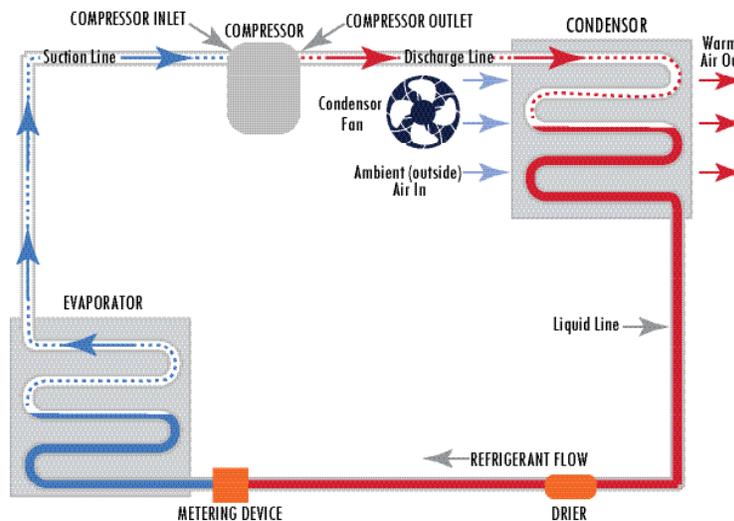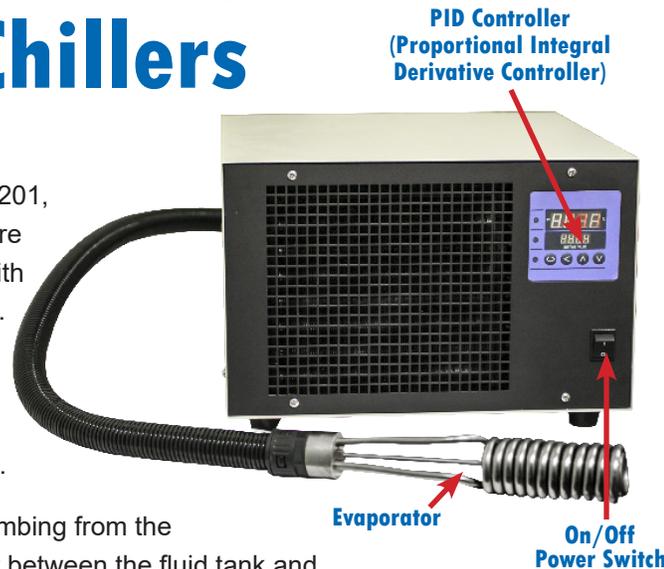
ATS' iM Series require no additional plumbing from the chiller to the tank. The thermal transport between the fluid tank and the chiller takes place via the ATS iM evaporator that is connected to the refrigeration system by a 1.6m long hose. To mitigate possible corrosion issues, the evaporator is made of nickel-plated copper tube winding to accommodate most common fluids used in multiplicity of industries such as electronics, automotive or biomedical.

The principle of operation is a standard refrigeration cycle where the refrigerant removes the heat from the fluid in the tank and carries it to the refrigeration system inside the chiller, transferring its heat to the environment. The temperature of the liquid inside the tank is monitored by a sensor connected to the evaporator assembly and controlled from the front panel. This chiller is air cooled, eliminating costly water cooling circuits.

ATS' iM Series are portable vapor compression cooled systems (as opposed to TEC) and are ideal for laboratory applications, laser cooling, micro molding and other industrial applications. The refrigerant temperature can be maintained from -40°C to 30°C from 140W to 800W

PID Controller (Proportional Integral Derivative Controller)

Evaporator

On/Off Power Switch

APPLICATIONS

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

Standard Refrigeration Cycle Within Immersion Chillers

For further information, please contact
Advanced Thermal Solutions, Inc.
at **1-781-769-2800** or **ats-hq@qats.com.**

FEATURES

» **SUB-ZERO Cooling**
Ability to go to -40°C or lower with IM402

» **VAPOR COMPRESSION**
Use of standard refrigeration cycle for effective heat removal

» **FLEXIBLE**
1.6m long evaporator hose, allows for ease of access and its insertion to liquid tank

» **MOBILITY**
22-35kg systems – readily transportable

» **RELIABILITY**
Proven technology for refrigeration – a highly reliable technology. Key components of refrigeration system such as compressor and circulation fans use high quality brands

» **FRONT PANEL CONTROL**
Temperature display and system control from the front panel

» **RESPONSE TIME**
Fast response time because of dynamic temperature control system with small temperature fluctuations

» **CORROSION RESISTANCE**
Compact Nickel-plated copper evaporator

» **COOLING POWER**
High capacity cooling at different temperature settings

Specifications for Chill-iM

Model	iM201	iM202	iM402
Constant Temperature Range @25°C Room Temperature	-20°C~30°C	-20°C~30°C	-40°C~20°C
No-load Constant Temperature Volatility	±0.5°C	±0.5°C	±2°C
Lowest Temperature	-20°C	-20°C	-40°C
Cooling Ability (W) **0°C**	300W	800W	780W
-20°C	140W	400W	360W
-40°C	---	---	120W
Working mode	Continuous	Continuous	Continuous
Overall Dimensions (W x D X H)	400 × 415 × 280 mm (15.8 x 16.3 x 11.0")	400 × 415 × 280 mm (15.8 x 16.3 x 11.0")	400 × 415 × 280 mm (15.8 x 16.3 x 11.0")
Evaporator Specifications (mm)	Φ50×150	Φ50×150	Φ75×180
Power Supply	AC220V, 50Hz, 6A	AC220V, 50Hz, 6A	AC220V, 50Hz, 10A
Weight	22kg	25kg	35kg

EASY TO USE INSTRUCTIONS

1. Install ATS chiller on a level surface capable of supporting the weight of the unit.

2. Allow 30cm (12") clearance around the air inlet and discharge areas to insure proper air circulation.

3. Connect the unit to a power outlet.

4. Place the evaporator coil into the container.

5. Turn the power switch on.

6. Set digital controller from Front Panel to the desired temperature.

7. The unit is ready for continuous cooling operation.

Mouser Electronics

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