

POWER-COOL™

Re-circulating Chiller System

For applications including semiconductor, medical, pharmaceutical, electronics, solar, and industrial.



APPLIED INTEGRATED SYSTEMS

POWER-COOL™

Re-circulating Chiller System

Introducing *Power-Cool™*, Applied Integrated Systems' re-circulating chiller system for applications where temperature stability, reliability, and low cost are of critical importance.

Power-Cool™ applications include semiconductor, medical, pharmaceutical, electronics, solar, and industrial.

Features and Benefits

- **HIGH TEMPERATURE ACCURACY**
AIS's Power-Cool™ utilizes a combination of vapor compression and hot gas technologies to assure tight temperature accuracy is achieved.
- **COMPATIBLE WITH A WIDE RANGE OF HEAT TRANSFER FLUIDS**
Wetted flow path can be configured for operation with a wide range of heat transfer fluids.
- **MULTIPLE PUMP OPTIONS**
Various pump options are available to meet your flow and pressure requirements.
- **COMPACT FOOTPRINT**
Highly efficient system architecture allows for very compact footprints.
- **HIGH RELIABILITY**
The *Power-Cool™* product series has been engineered with the highest quality components available in the market and the condensing unit is never turned on/off for temperature control resulting in years of maintenance free operation.
- **COOLING AND HEATING CAPABILITY**
Power-Cool™ can be configured to operate either as a chiller or a heater/chiller making it ideal not only for cooling applications but also for a process requiring both heating and cooling.
- **FULLY EQUIPPED**
Power-Cool™ comes fully equipped and ready to use with insulated lines, factory refrigerant charged, and all other components necessary for safe and reliable operation.
- **FLEXIBLE DESIGN**
Modular design approach allows for a wide range of wattages, physical shapes, electrical configurations, plumbing connections, pump capacities, reservoir volume...all configured around your preference.
- **USER FRIENDLY**
Intuitive design makes it simple to install and operate.
- **ECO FRIENDLY**
Only non-ozone-depleting, nonflammable, recyclable and energy-efficient refrigerants are used.
- **SAFETY**
Process temperature protection, reservoir low level, and redundant over-temperature interlocks. CE, SEMI, UL compliance.



Specifications

Wetted Flow Path Material	Optimized to meet your heat transfer fluid requirement
Cooling Capacity	Up to 150KW (512,250 BTU/HR)
Cooling Technology	Condensing Unit
Voltages	120 - 600 VAC, 1Ø, 3Ø, 50/60Hz
Temperature Control Range	-20°C to 35°C or up to 130°C with high temperature option
Temperature Accuracy	±0.1°C (varies with application)
Temperature Control Method	PID
Pump Flow Rate	Up to 150 lpm (40 gpm)
Pump Head Pressure	Up to 1.7 MPa (250 psi)
Reservoir Volume	Up to 900 liters
Reservoir Refill	Optional auto-refill
Fluid Connections	½" - ¾" compression, ½" - 2" FNPT
Power Input Connection	Hard wired or connectors
Host Interface Connection	Hard wired or connectors
Enclosure Material	Powder coated steel
Compliance	CE, SEMI, UL
Warranty	12 months

Applied Integrated Systems reserves the right to change specifications without notice.

Safety Features

- Reservoir low level protection
- Heating/cooling module over-temp protection
- Process temperature protection
- Over-current and over-load protection
- Fire retardant enclosure
- Over-pressure protection
- CE, SEMI, UL compliance

Options

- Host communication via RS232, RS485, others
- Water cooled or air cooled condenser
- Tank-less configurations (single pass applications)
- Fluid filtration: 5, 25, 40, 100, 250 micron
- Air filter (air cooled condenser)
- High temperature configuration
- Noise reduction kit
- Reservoir volume
- Enclosure material
- Pump capacity (flow and pressure)
- Physical shape
- Plumbing connection size and type
- Electrical connection style and location
- DI water filtration for high purity or electrical isolation
- Automatic refill
- Leak detection
- Adjustable flow control valve
- Extended warranty
- Additional options upon request

For more information, contact AIS at: sales@appliedintegratedsystems.com



The AIS logo, consisting of the lowercase letters "ais" in a bold, black, sans-serif font, with a red swoosh underline that loops around the letters.

Please don't hesitate to contact us to help you determine the best product for your application. You may compose the part number of your *Power-Cool™* chiller by using the guideline below or simply call one of our product specialists for assistance.

PC [] [] [] [] [] [] [] [] [] [] [] [] **L** [] [] [] [] [] [] [] [] [] [] [] []

- BASE MODEL**
Enter base model from cooling capacity table. Example: if 10 KW is desired, enter PC3.0
Conversion: 1KW = 3,415 BTU/hr
- CONDENSER COOLING**
AC: Air cooled
WC: Water cooled
- RESERVOIR VOLUME**
Enter desired volume in liters. Example: for 50 liters enter 50.
Conversion: 1 liter = 0.264 gallons
- INTEGRATED HEATING**
NH: No heating
IH: Integrated heating
Heating capacity will be determined based on application (consult AIS)
- HOST COMMUNICATION**
LC: local via display
AN: Analog
R2: RS-232
R4: RS-485
ET: Ethernet
Consult AIS for additional options
- RECIRC PUMP CAPACITY**
Enter desired nominal flow rate and head pressure. Example: for a flow rate of 100 lpm at 35 psi of head pressure, enter 100F35.
Conversion: 1 lpm = 0.264 gpm
- PROCESS IN/OUT**
F1: ½" Compression
F2: ¾" Compression
F3: ½" FNPT
F4: ¾" FNPT
F5: 1" FNPT
F6: 1.5" FNPT
F7: 2.0" FNPT
F8: Other
- OPTIONS**
Consult AIS for additional options
- VOLTAGE**
1201: 120 VAC, 1Ø
2081: 208 VAC, 1Ø
2083: 208 VAC, 3Ø
2401: 240 VAC, 1Ø
2403: 240 VAC, 3Ø
3803: 380 VAC, 3Ø
4153: 415 VAC, 3Ø
4803: 480 VAC, 3Ø
6003: 600 VAC, 3Ø



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