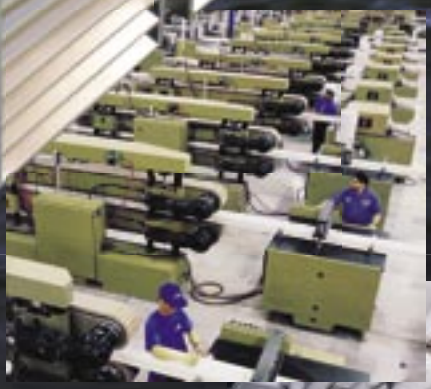
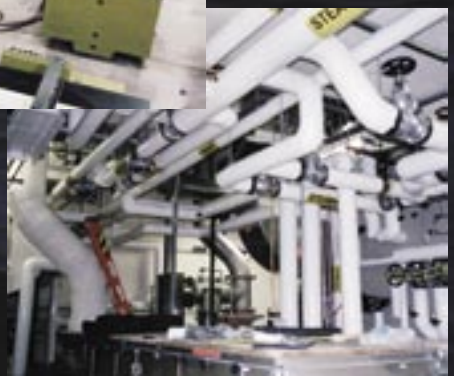
Process Chiller Systems
Engineered to Exacting Standards

- Industrial Process Liquid Cooling
- Central Drinking Water Chillers
- Food and Beverage Applications
- Semiconductor Manufacturing
- Government and Military Applications
- Hydraulic Test System Cooling
- Therapeutic "Cold-Plunge" Chillers

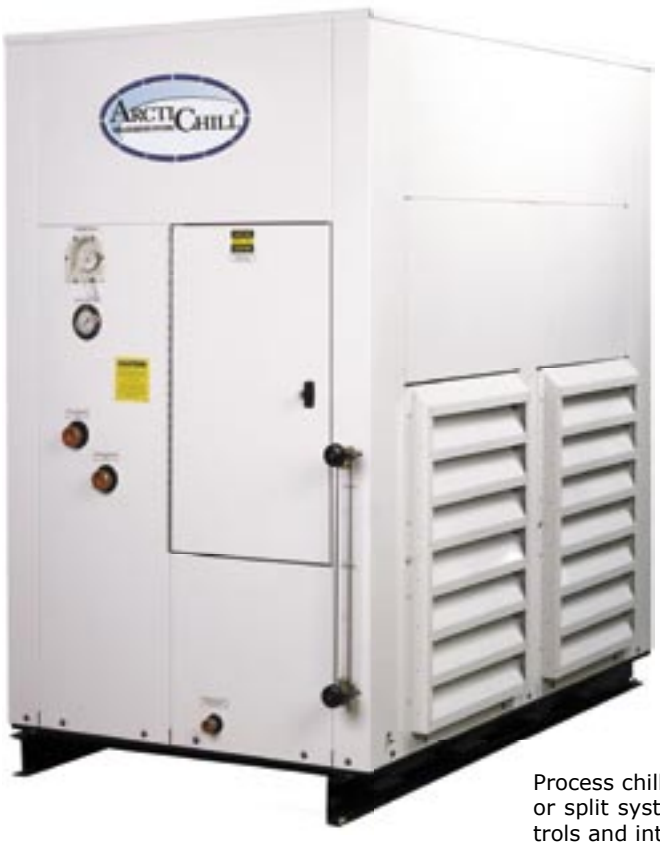




ARCTICHILL®
CHILLED WATER SYSTEMS

PROCESS CHILLER SYSTEMS

When precision counts, count on us.



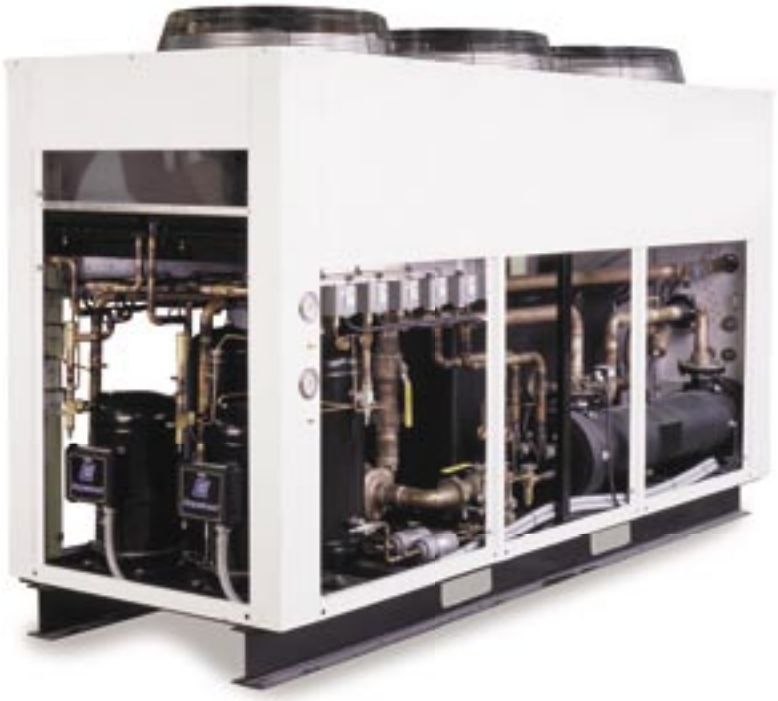
We were cool long before it was a trend.

Since the early 1980's, ArctiChill has produced mission-critical **precision chillers** and refrigeration systems for process and medical applications. Our close work with customers and equipment OEM's has evolved into a suite of products and accessories that are guaranteed to meet the flow, pressure and **precision delivery** requirements for accurate, dependable critical cooling. We can provide multiple circuits, open/vented or sealed/pressurized integral reservoirs, single or dual redundant pumping, stainless steel construction, complete redundancy, water/glycol or Deionized water, and many options to meet your **special refrigeration requirements**.

Process chillers are available as air-water cooled or split systems. Analog or microprocessor controls and internal or external pumps.

Unparalleled Commitment to Service

Ultimately, our reputation depends on your operational success. By employing the highest quality component selection, assembled and tested by highly skilled technicians, and supported by advanced microprocessor control systems, system redundancy, automated switch over schemes and our new web-based diagnostic and alerting system, there is simply no need for second-best - no better choice than ArctiChill. And when you do need us on site, our in-house and trained field service staff stands ready. Our dedication is to long term success is sustained by the caliber of people we employ, the resources we provide for product development, advanced controls, and the realization of "customer first" attitudes. With the combined strength of our sister companies, ArctiChill is equipped to respond to virtually any process cooling need.

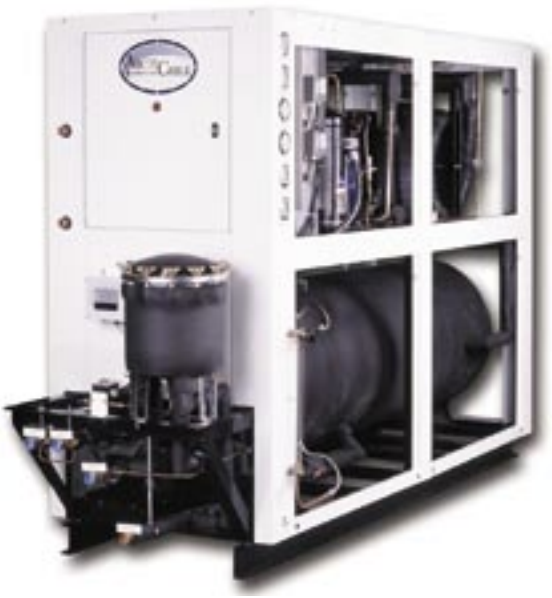


Shown is 20-ton redundant system for US Military. Includes high ambient condenser, large thermal reservoir, rigid welded channel frame for transportability.

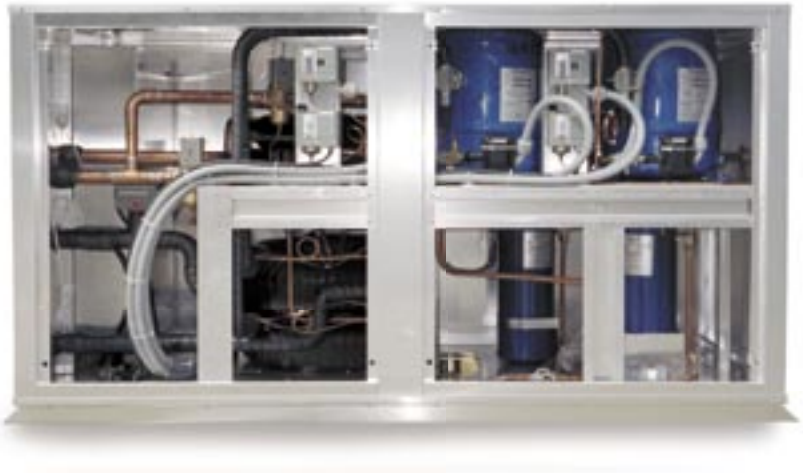
When cool is critical, so is design.

Never lose your cool.

When critical process cooling equipment is deployed, downtime due to equipment failure, or poor delivery of process liquids within the temperature and pressures required can be disastrous. Even unplanned circumstances such as inconsistent power, improper maintenance, failure due to normal wear and tear, or improper usage can result in unnecessary downtime. To ensure that conditions remain within your parameters, ArctiChill has developed a number of practical methods to reduce downtime. System and component redundancy, city water backup and remote diagnostics and performance alerting available.



Shown is the drinking water chiller and purification system installed in the US White house serving the executive offices. Includes charcoal filtration and UV light systems to kill bacteria.



Chiller systems can be built in many configurations including low-profile designs as shown. Tanks and pumping systems can be installed within the chiller or as a remote module. Single or dual redundant pumps and vented or pressurized tanks are available.

Know us by the customers we serve and the company we keep

Nothing speaks louder than the trust and long-term loyalty from customers. In a world where competitors are a click away, we know our niche is in creating higher value with close performance, highly reliable and attractive products and innovative services.

- **Factory engineering for specific or OEM applications**
- **Meticulous quality-control & excellent documentation**
- **Customer-centric professional attitudes**
- **North American sales, technical support and service network**
- **Advanced web-based monitoring, alerting and remote control system**

STANFORD SCHOOL OF MEDICINE

HITACHI

UNITED STATES WHITE HOUSE

hp invent

MOTOR HARLEY-DAVIDSON COMPANY

IMAX

BOEING

MERCY MEDICAL CENTER

Copeland

Parker

EATON

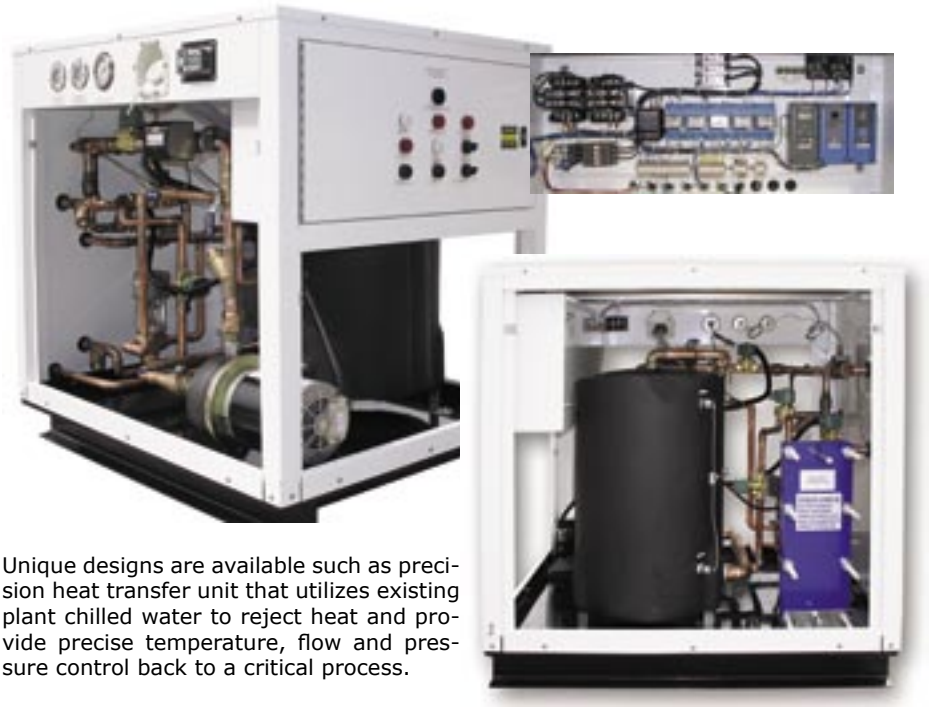
Ford

BEARS

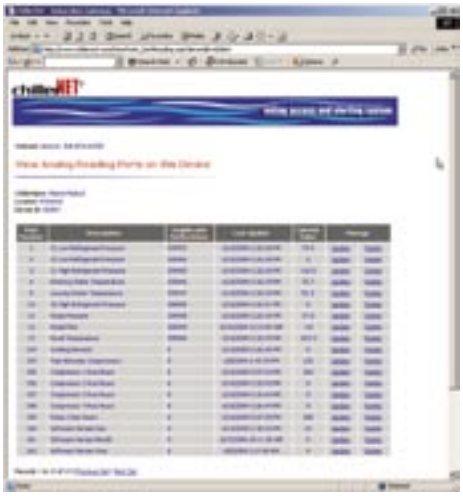
Any Process, One to a thousand tons.

Chemicals. Water. Pharmaceuticals. Equipment. Laboratory.

ArctiChill is the one you chose when the duty is precise and your requirement for reliability is paramount. We have more experience in these types of applications than most others. Our application engineers can work with your engineers to design and build just the right solution with components, pumps and controls.



Unique designs are available such as precision heat transfer unit that utilizes existing plant chilled water to reject heat and provide precise temperature, flow and pressure control back to a critical process.

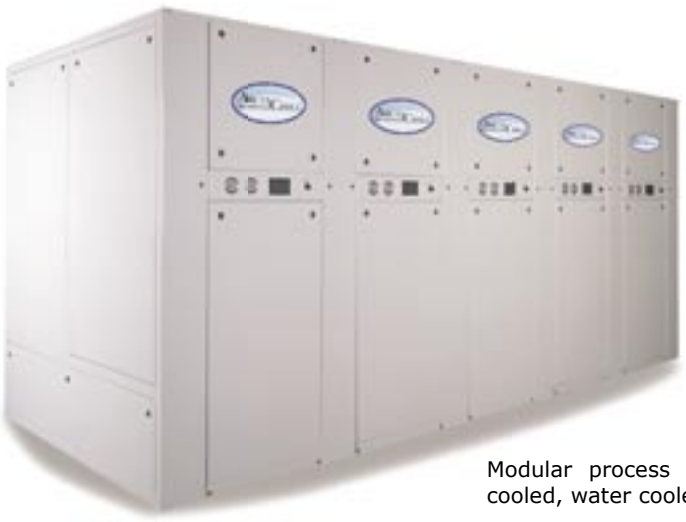


chillerNET

ArctiChill can provide controls ranging from simple low cost analog and PID designs, to advanced microprocessor based systems. We can provide remote monitoring, alerting and read/write capabilities using web technologies.

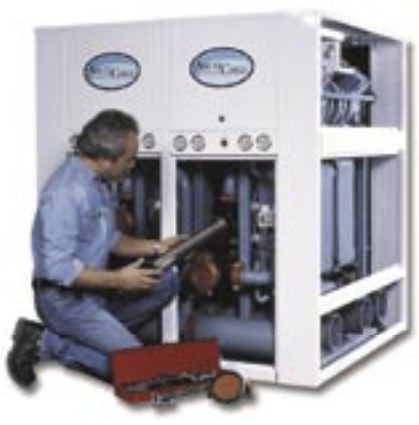
NEW! Modular Process Chillers

ArctiChill is unique in our ability to build true process chillers with true modularity. The significance of modularity is the ability to expand capacity as process duties change and grow. Modularity also offers the ability to provide generally flat energy usage regardless of load and the ability to use variable flow schemes to reduce pumping energy as load and processes change. Systems with Scroll screw and semi-hermetic compressors are available with brazed plate and shell and tube condensers. Modular pumping systems with air separation and glycol control are available.



Unique condenser and/or evaporator strainer systems allow easy cleaning of heat exchangers and headers. We can provide mesh, wedge wire or bag filters that can be isolated with internal valves.

Single-point electrical and piping connections. Advanced distributed PLC controls allow modules to run independent of the master controller.



Modular process chillers are available as air cooled, water cooled or split systems.

P-Series Chillers. Performance Specifications.

Air Cooled Vertical	Nom Tons Btu/h	Tank Gal	Pump HP	GPM	Power Supply	Compressor		Fan Motors		Chiller			Installation	
						LRA	RLA Amps (ea)	Fan HP	RLA Amps Total	RLA Total	Min Ckt	Max Fuse	Dimensions WxLxH	Wght (Lbs)
PACVPV0010S1	1.0 13,900	25	3/4	2.4	208-230/ 1/60	41	6.7	(1ea) 1/2	3.5	15.0	17	20	34″x34″x61″ *32″x54″x61″	400 500
PACVPV0015S1	1.5 16,900	25	1.0	3.6	208/1/60	54	12.1	(1ea) 1/2	3.5	24.1	28	40	34″x34″x61″ *32″x54″x61″	400 500
PACVPV0015S3					230/3/60	45	7.9		3.5	16.6	19	25		
PACVPV0015S4					460/3/60	22	3.9		1.7	10.5	15	15		
PACVPV0020S1	2.0 26,400	25	1.0	4.8	208/1/60	65	12.5	(1ea) 1/2	3.5	24.5	28	40	48″x32″x61″ *54″x32″x61″	450 550
PACVPV0020S3					230/3/60	101	10.3		3.5	19.0	22	30		
PACVPV0020S4					460/3/60	51	4.8		1.7	10.5	15	15		
PACVPV0030S1	3.0 34,100	25	1.0	7.2	208/1/60	91	17.3	(1ea) 1/2	3.5	29.3	34	50	48″x32″x61″ *54″x32″x61″	500 600
PACVPV0030S3					230/3/60	101	10.3		3.5	19.0	22	30		
PACVPV0030S4					460/3/60	51	5.4		1.7	11.1	15	15		
PACVPV0040S1	4.0 44,100	50	1.5	9.6	208/1/60	145	27.7	(2ea) 1/2	7.0	47	54	80	60″x32″x78″	700 1,100
PACVPV0040S3					230/3/60	101	14.5		7.0	29.1	33	45		
PACVPV0040S4					460/3/60	51	7.2		3.8	15.8	18	25		
PACVPV0050S1	5.0 55,700	50	1.5	12	208/3/60	150	29.0	(2ea) 1/2	7.0	48.3	56	80	60″x32″x78″	750 1,150
PACVPV0050S3					230/3/60	118	16.5		7.0	31.1	36	50		
PACVPV0050S4					460/3/60	71	10.0		3.8	18.6	22	30		
PACVPV0060S3	6.0 67,500	50	1.5	14.4	230/3/60	124	18.8	(2ea) 3/4	8.4	35.2	40	50	68″x42″x70″ *86″x42″x70″	950 1,350
PACVPV0060S4					460/3/60	64	9.2		3.4	17.4	20	25		
PACVPV0075S3	7.5 87,200	50	1.5	18	230/3/60	195	32.1	(2ea) 3/4	8.4	48.1	57	80	68″x42″x70″ *86″x42″x70″	1,000 1,400
PACVPV0075S4					460/3/60	95	16.4		3.4	24.6	29	45		
PACVPV0100S3	10.0 109,300	50	2.0	24	230/3/60	251	31.6	(2ea) 3/4	8.4	48.0	56	80	68″x42″x70″ *86″x42″x70″	1,100 1,500
PACVPV0100S4					460/3/60	117	14.3		3.4	22.5	27	40		
PACVPV0125S3	12.5 136,600	50	3.0	38	230/3/60	350	47.1	(2ea) 3/4	8.4	66.4	79	125	86″x42″x70″	1,250 1,650
PACVPV0125S4					460/3/60	158	25.0		3.4	34.6	41	60		
PACVPV0150S3	15.0 165,100	100	3.0	36	230/3/60	425	55.2	(2ea) 1.5	10.4	76.5	91	125	96″x44″x70″	1,500 2,300
PACVPV0150S4					460/3/60	187	27.2		5.2	38.6	46	70		
PACVPV0200S3	20.0 220,300	100	3.0	48	230/3/60	251	42.2	(4ea) 3/4	16.8	111.6	122	150	82″x68″x68″	3,400 4,200
PACVPV0200S4					460/3/60	117	18.4		8.4	51.4	56	70		
PACVPV0250S3	25.0 272,700	100	3.0	60	230/3/60	350	47.1	(4ea) 3/4	4.2	121.9	134	175	74″x86″x68″	3,700 4,500
PACVPV0250S4					460/3/60	158	25.0		1.7	63.0	70	90		
PACVPV0300S3	30.0 324,200	200	5.0	72	230/3/60	376	62.2	(4ea) 1.5	5.2	160.6	177	225	74″x96″x84″	4,300 6,000
PACVPV0300S3					460/3/60	178	27.6		2.6	74.3	82	100		
PACVPV0400S3	40.0 462,000	250	5.0	96	230/3/60	511	75.0	(4ea) 2.0	6.8	192.6	212	250	82″x96″x84″	5,400 7,500
PACVPV0400S4					460/3/60	225	34.0		3.1	89.1	98	125		
PACVPV0500S3	50.0 560,800	250	5.0	120	230/3/60	350	34.2	(6ea) 1.5	5.2	183.4	192	225	96″x112″x87″	6,000 8,100
PACVPV0500S4					460/3/60	158	15.8		2.6	87.5	92	100		
PACVPV0600S3	60.0 688,000	300	7.5	144	230/3/60	425	55.2	(6ea) 1.5	5.2	275.0	289	300	96″x112″x87″	6,000 8,100
PACVPV0600S4					460/3/60	187	27.2		2.6	136.1	143	150		

Note: Nominal tons based on R-22, 45°F LWT and 95°F ambient air. Evaporator pressure drop for all models is less than 10 psi. Chiller flow based on 2.4 GPM/ton. Water cooled condenser flow based on 3 GPM/ton at 85°F. Horizontal cabinet models and remote condenser models are also available. * Dimensions with lead/lag process pump.

P-Series Chillers - General Specifications

Component	Standard Specifications	Optional Specifications
Model Range	16 sizes from 1 ton through 60 tons. Single or dual pump system with insulated epoxy coated steel tank.	• Special tonnage. Modular designs through 240 tons • Special temperature range and pressure delivery specifications
Cabinet	Models 1 through 8 ton have all aluminum, reinforced metal cabinet and frame of white epoxy painted aluminum. 7.5 tons and above have welded steel frame and white epoxy painted aluminum panels. Easy access hardware.	• Stainless steel cabinet panels • Epoxy finishes or casters • Custom Colors • Engineered frames to accommodate special size restrictions
Controls and Safeties	Control circuit on/off, compressor anti short-cycling delay, water flow switch, fan cycling, manual reset high and low refrigerant pressure, water regulating valve on water cooled models.	• Microprocessor with LED user interface • Dual pump lead/lag controls • Flooded head pressure controls • Remote web-based diagnostics • Automatic city-water switch over
Electrical	Models can be specified for 208-230/50 or 60 Hz, single phase. Three phase service is available for 208/230/460/50/60/3, 380/50/3 or 575/60/3 operation. 24 volt control circuit.	• Fused or non-fused disconnect • Single phase for large models • Special voltages
Indicators	Water temperature, pump pressure, low tank, high temp and no flow alarms. Gauges are liquid filled.	• Refrigeration pressure gauges • Remote panel with flow, temp, and pressures indicators
Refrigeration	Single R-22 circuit includes filter dryer, receivers with 90% capacity, liquid line solenoid vales and service valves.	• Alternate refrigerants • Redundant circuits with staged capacity • Hot gas bypass capacity control
Air Cooled Condensers	Enhanced seamless copper tubing. Mechanically bonded aluminum fins. Integral subcooling. Overload protected TEAO fan motors. Aluminum fans.	• Coated or copper fins for corrosion resistance • High ambient designs • High altitude designs
Water Cooled Condensers	Coaxial type through 10 tons. Cleanable shell & tube heat exchanger on larger models.	• Special construction materials • Shell and tube on smaller models • 3-way water regulating valve
Evaporators	Coaxial type through 5 tons. Direct expansion shell & tube on larger models. Closed cell insulation.	• Special construction materials • Shell & tube (small models) • Dual circuit evaporators
Compressors	Hermetic scroll or reciprocating types. Internal overload protection. Crankcase heaters and service valves.	• Tandem scroll sets • Multiple circuit designs • Lead/lag operation
Reservoirs	Generously sized, vented epoxy coated steel tank with sight glass and low water level controls.	• Special tank sizes • Remote pump/tank designs
Pumps	Cast iron or stainless steel, high head pressure, end suction centrifugal designs	• Dual lead/lag configurations • Higher pressure designs • Stainless steel construction
Piping	Refrigerant piping is rigid copper with service valves. Insulated suction lines. Water circuit is insulated seamless heavy grade copper.	• Alternative materials for special fluids and corrosion resistance
Warranty	One year parts, five year limited compressor warranty	• Extended parts & labor warranty • Guaranteed emergency response • Factory start-up and maintenance

Represented By:

200 Park, Inc. dba ArctiChill
200 Park Avenue
Newberry, SC 29108
Phone: (803) 321-1891
Fax: (803) 321-1898
TOLL FREE - 1-800-849-7778
www.arctichill.com