



# Process Chiller Selection Requirement Questionnaire

Fax Back to: ArctiChill at 803-321-1898

ArctiChill can produce chillers to meet virtually any chiller application from 1 to hundreds of tons. Systems can be engineered to deliver chilled water or liquid down to minus 40 degrees F and can include internal or external tanks, pumps and filtration. The more we know about your application, the better we can access your thermal and mechanical requirements.

<b>Your Name:</b>	<b>Project Name:</b>
<b>Company:</b>	<b>Date Equipment Required:</b>
<b>Phone Number:</b>	<b>Email Address:</b>

<b>Your Process</b> - Briefly explain your process.	
<b>Heat Load</b> - Provide the heat load in BTUH, tons, kW if known. If you do not know the heat load, it can often be calculated from known temperatures and flow rate. If your process has a minimum and maximum heat load, please specify	
<b>Liquid to be Chilled</b> - If the liquid has ethylene or propylene glycol, please provide the percentage. If a chemical, please provide specifics such as chemical name, thermal conductivity, viscosity, specific heat and any known material incompatibilities.	
<b>Temperature Required at your Process</b> - This is the exiting temperature of the liquid leaving the chiller. Specify in degrees F or C.	
<b>Temperature Returning from your Process</b> - This is the temperature of the liquid entering the chiller to be cooled. If you do not know this, it may be calculated if you know the flow rate. Specify in degrees F or C.	
<b>Flow Rate of the Process Liquid</b> - Specify in US GPM. If you do not know this, it may be calculated from the entering and exiting temperatures together with the Heat Load. Chillers are typically sized for a 10 degree change across the process. Some processes vary from this standard substantially.	
<b>Flow Rate Constancy</b> - Rather than a continual steady flow, processes may vary or stop process flows during normal operation. If flow rate is variable, please specify.	
<b>Type of Chiller Circuit</b> - Open loop means the liquid flows to the process and back to the chiller using an open vented tank. Closed loop uses a heat exchanger to separate the process liquid from the chiller water. Pressurized non-vented tanks also available.	
<b>Pressure Required at the Process</b> - Typical is 30 to 100 PSI	
<b>Type of Condenser Cooling Required</b> - Air cooled uses ambient air. Water cooled uses city or tower water. Split systems have the chiller components inside and a remote air cooled condenser outdoors.	
<b>Temperature of the Condenser Cooling Medium</b> - Ambient air is typically 95°F to 105°F, Tower water is typically 85°F to 90°F, City water typically 65° to 75°F	
<b>Installation Location</b> - Indoors or outdoors. Specify if dirty or corrosive environment	
<b>Electrical Service Available</b> - Common voltages are 120, 208, 230, 460 and 575 volts at 60 hertz. Single phase is only available in 120 and 240 volts. All others are 3-phase service. Specify if electrical service is 50 Hz.	
<b>Type of Package</b> - Self contained packages including tank, pump(s) and controls. Condensing units have no tank or pump and require external pumping.	
<b>Physical Restrictions</b> - Specify any maximum length, width, height or weight.	
<b>Type of Compressor</b> - Scroll, hermetic recip, semi-hermetic and screw compressors are available. Scroll are common for lower HP. Semi-hermetics have cylinder unloading and are rebuildable, Screw compressor are typical for higher HP needs	
<b>Other Notes</b> - Anything else we should know. Special materials, export packaging, temperature stability, required connection sizes, remote monitoring, etc.	