



Plumbing Installation General Guidelines CWA2/MPAH/CMAH 18KBTU-60KBTU

- Total manifold size and length will vary depending on specific circumstances, numbers of air handlers, etc. Choose a supply size that is sufficient for the flow rates of all equipment supplied by the manifold. If you're not sure, there is an excellent reference tool available at <http://flexpvc.com/WaterFlowBasedOnPipeSize.shtml>
- Return manifold should be a minimum of ¼" larger than supply manifold.
- Manifold material is dependent on local codes, but Schedule 40 PVC is generally sufficient.
- Install shut off valves at the main supply manifold and a shut off valve at each air handler. This allows you to take individual air handlers out of the cooling loop should they need service.
- Install a fresh water bypass on the main supply manifold. This allows you to use a municipal water supply for cooling should your chiller require service.
- Use only long turn 90's whenever possible to avoid restriction of the water supply.
- Insulate all supply and return lines to avoid condensation outside the air handler(s).
- Flow rate requirement for air handlers is 2-3 GPM per ton. For example, a 5 ton air handler requires 10-15 GPM. Higher GPM results in more cooling.
- Air handler outlet is ¾" NPT. Inlet is either ½" NPT (when ducted intake plenums are in use) or ¾" (when ducted intake plenums are not in use).
- Chiller temperature should be set at 55 degrees F to start. Adjust temperature up or down depending on specific circumstances. Do not adjust chiller below 45 degrees F.
- Propylene Glycol (marine and RV coolant) should be utilized at a minimum 30% solution. This prohibits freezing and acts as a system lubricant/anti-corrosive to keep the chiller and air handlers working at peak performance. DO NOT use Ethylene Glycol (standard car antifreeze).
- Once all plumbing is complete, start system with clean water to flush out all residue from system and to check for leaks. After running for roughly 5 minutes, drain the water from the system, correct leaks as necessary, and refill with water/glycol mix. Turn on the system and top off reservoir as needed.