



This details shows schematically the piping and instrument details for a typical cogen hot water heat transfer station. The cogen hot water is supplied by the central plant at supply operating temperatures ranging from 160 degrees F to 225 degrees F based on outdoor temperatures. Brazed plate heat exchangers are typical unless larger size dictates a gasketed plate and frame type. Glycol systems shall have a double wall heat exchanger as do domestic water systems. Pressure drop through the heat exchanger on the cogen side is limited to a maximum of 3 psid. A 'Y type' strainer with a 30 mesh screen to be placed at inlet of HX. All valves and flanges on cogen system to be ANSI 300# class. Piping to be A53 carbon steel Grade B, schedule 40. Provide local temperature and pressure indicators as shown. Design for the cogen system is 232 psig and 248 degrees F. Hydrostatic test pressure on the cogen system is 348 psig. Total cogen side pressure drop not to exceed 15 psid at maximum flow. Heat Exchanger approach temperature shall be designed for 10 degrees F.

Control valve on the cogen return will control the secondary loop supply temperature as measured by the Building HW Supply temp transmitter. For HX's with over 80 gpm rating, provide 1/3-2/3 control valves in parallel for improved low load control. Control by building BAS. BTU meter requires using a mag flow meter in the cogen return piping and cogen supply and discharge temp transmitters. Control valve to provide tight shutoff at 100 psid.

**Detail A- Cogen Hot Water Typical Energy Transfer Station Details**

**Cogen Hot Water ETS Details  
Standard 232200 - Appendix A  
Detail A  
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