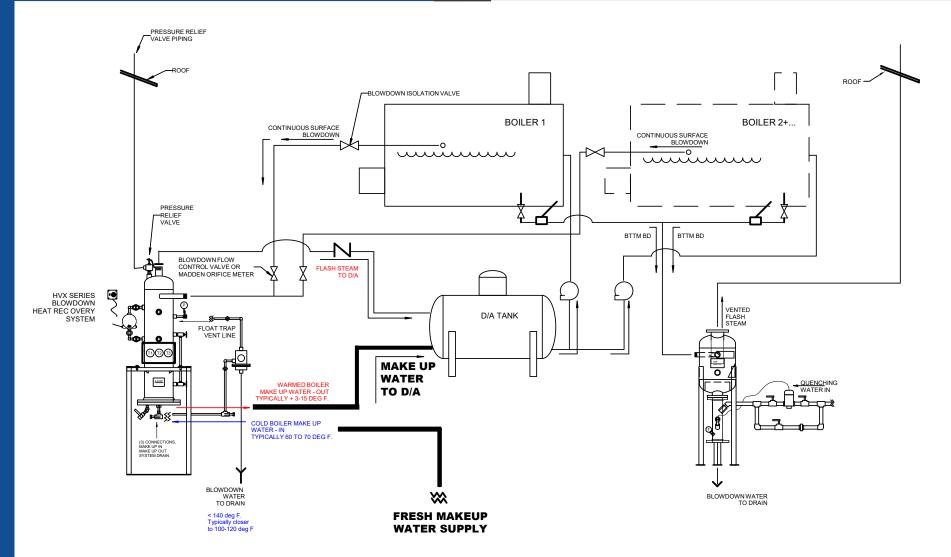
MADDEN HVX SERIES P&ID

FOR MAKE UP WATER FLOWS < 20 GPM

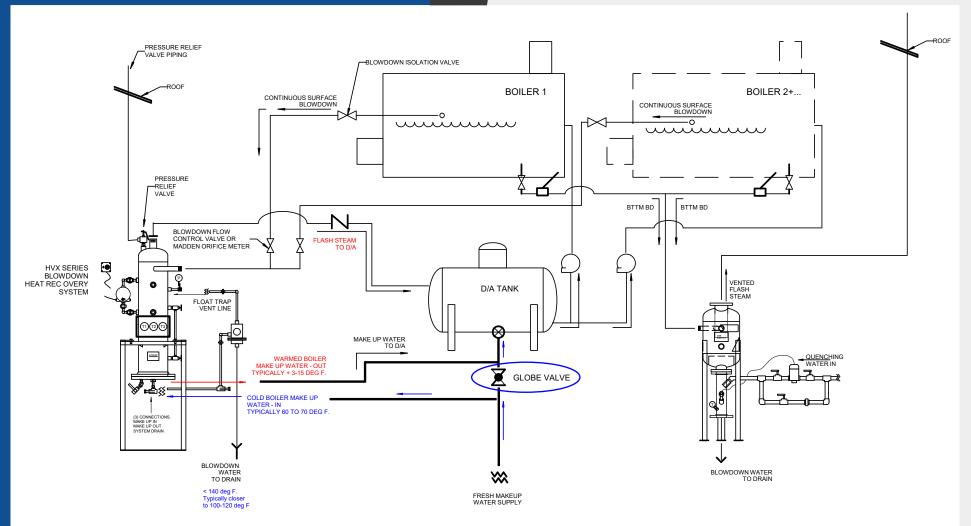


* In the HVX heat recovery system design, the makeup water passes through a single 7/8" OD copper coil. If your boiler room's makeup water flow rate requirement is less than 20 GPM or 10,015 PPH, passing 100% of this flow through the Madden HVX unit is appropriate. However, if the boiler(s) may call for significantly higher makeup flow rates for extended periods of time, you'll want to consider a piping adjustment. At 20+ GPM flow rates, the resulting 10+ FPS velocity through the coil will reduce the heat exchanger's intended service life.

See following page for +20 GPM P&ID recommendations.

MADDEN HVX SERIES P&ID

FOR MAKE UP WATER FLOWS > 20 GPM



** The simplest way to help increase the heat exchanger coil's service life, is to continue running the main makeup water line straight to the D/A tank, then diverting only part of the flow to the HVX system.

Add a globe valve, or similar flow control valve, between the outgoing and incoming HVX water line. This will allow the operator to throttle the main makeup water flow until he or she sees enough flow is also passing through the HVX system to ensure the boiler waste water drains below 140 deg F.

If for any reason this is not acceptable in your boiler room, please then consider going "up" to our HV30 heat recovery system design as this style can handle much higher makeup water flow rates - which passes through the shell side opposed to the coil.