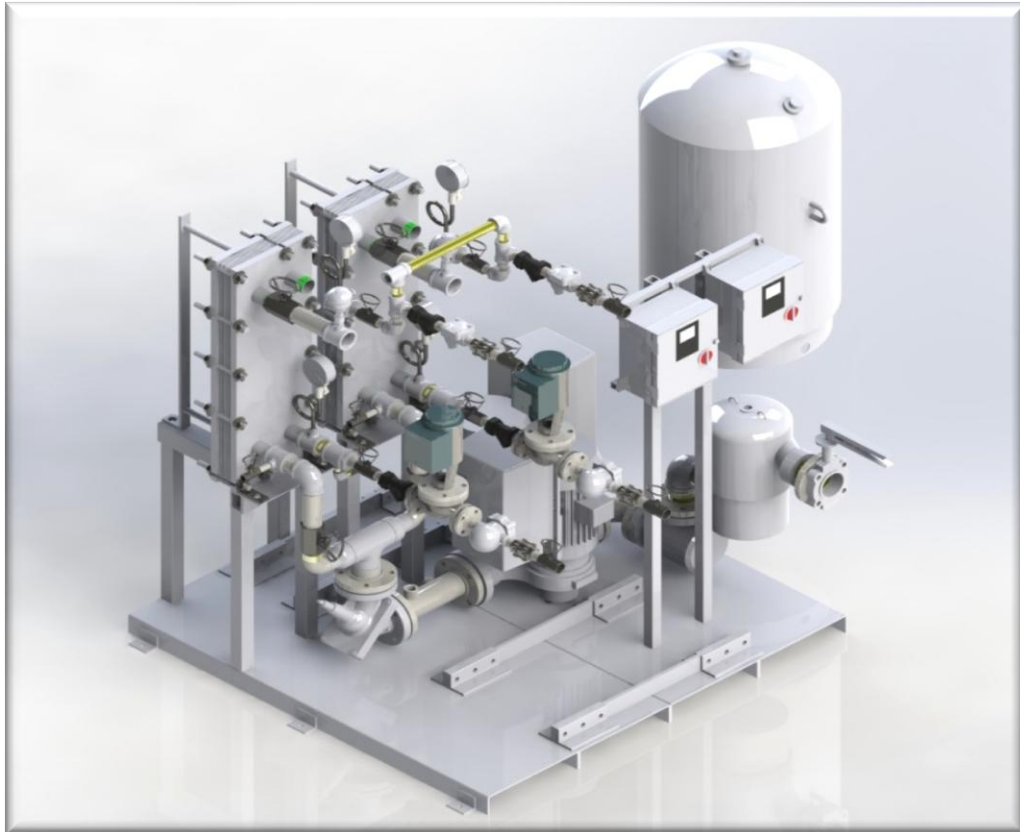


## **Building Heat using flooded plate and frame for Heritage Building**



### **Business Case Study**

Old mechanical rooms are changing more often than as usual. Many renovations in old building and revamping of hospital and university or commercial property mechanical room. These sites often face the challenge of tight space constraints. The designer wanted close temperature control, a fully integrated skid with hydronic equipment and integral VFD for circulation.

### **Application:**

Building operators are in the process of removing large hot water tanks and replacing them with small, compact and highly efficient instantaneous heating systems, to fight space constraints. The design

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philosophy was a flooded plate to ensure constant condensate temperature out to guarantee energy savings for the hospital.

### **Solution:**

Our solution is well engineered Plate& frame design heat exchanger packaged with all the controls and safety gear suitable for local registration code (Canada wide). We at Steam & Thermal Technologies have done many DHW and Building heat skids for instantaneous design. Designs available from 25 gpm to 1250 gpm on low pressure steam.

These designs feature single loop controllers also available with HMI, pneumatic or electric actuated valves and are fully designed with a pump trap assembly to avoid stall conditions.

All equipment is selected and sized for best turn downs knowing the peaks of building heat with variable temperature circuits using VFD pumps. . The package is complete with a well sized Expansion tank to absorb increase in volume of hot water.

### **Advantages:**

- Flooded design for maximum Thermal exchange efficiency and reduced waste heat
- Stainless steel plates 150 psig ASME VIII design
- Bacnet Modules on controllers to easily tie into Building Automation System
- low fouling design, the margin on the hex is closely controlled to prevent overshoot of temperature
- Single plate and frame design. Double wall available for DHW applications
- Gasket plate and frame design for easy maintenance on site. Can be back washed in line
- Preheating of supply water and sub-cooling of condensate option available