

230040-H: SUPPLEMENTAL HYDRONIC SYSTEMS AND SPECIALTIES (15515-H)

Related Sections

Basis Guideline: [230040](#) – “Hydronic Systems and Specialties”

For an explanation of the use of these guidelines, see “[Design Guidelines for UMHHC Facilities](#)”

Included as part of this UMHHC guideline section are the details described within the following UM Master Specification sections:

[MS221113](#) – “Basic Piping Materials and Methods”

[MS230040](#) – “Hydronic Systems and Specialties”

The UM Master Specifications may be used as a reference and/or basis, but the A/E is completely responsible for contract specifications (meeting the intent of the UMHHC Guidelines and Preferred Manufacturers List) that are used in UMHHC projects.

UMH Standard Details:

[D 15515 002](#) “Automatic Water System Air Vent Detail”

Design Requirements

Hydronic balancing shall be accomplished thru the use of manual balancing valves. The use of automatic balancing valves has not proven reliable and is discouraged. The use of automatic balancing valves shall be considered only upon approval from the UMH Mechanical Engineer on a project-by-project basis.

Cooling Tower (Condenser Water) Systems

Specify the use of a side-stream coalescing type separator (i.e. Spirotherm) for filtration of all condenser water systems.

Snowmelt Systems

Snowmelt systems shall utilize existing central energy sources (ie steam or heating hot water), when available, in conjunction with heat exchangers to provide closed loop snow melting.

All components used in the snowmelt system (HX, piping, valves, pumps, etc.) shall conform to UMH standards and manufacturers.

Base snowmelt loop on 45% propylene glycol solution.

Snowmelt main distribution shall utilize soldered/ brazed copper piping or screwed/ welded black steel piping, similar to heating hot water requirements. Snowmelt hose shall be Watts “Onix” heater hose with manufacturer recommended connections to the main. Provide abrasion protection at all locations where hose comes in contact with metal edges.

All snowmelt controls shall either be provided by the Mechanical Systems Controls Contractor or be fully integrated into the BMS.