USask Master Specification Directions: The master specifications are intended to be incorporated into the Consultant's final, project specific specification package. The project specific specifications are expected to include any and all sections or portions of sections (Part 1, Part 2, Part 3) that are required to create a fully executable project specification. USask Master Specs only provide information that USask **requires** be a part of the final specification package. Components or sections not included in the Master USask Specifications may still be required for a complete, well-designed project. **It is the consultant's responsibility to ensure all specifications match USask requirements. Any deviations or revisions to any section included in the master specifications requires written consent from the USask Engineering department. The consultant is liable for any omissions, errors, or incorrect equipment or components supplied to site.**
The Master Specifications shall be used in conjunction with USask's Design Guidelines. Any conflicts shall be brought to the attention of USask Engineering staff for clarification.

Part 1 General

Part 2 Products

2.1 UNIT HEATERS

.1 Cabinet Unit Heaters: to UL 2021.

.2 Cabinet: type as indicated, 1.6 mm thick steel with rounded exposed corners and edges, removable panels, glass fibre insulation and integral air outlet and inlet.

.1 Insulation Materials: to ASTM C1071; ensure surfaces exposed to airstream have aluminum-foil facing to prevent erosion of glass fibres.

.1 Thickness: 25 mm.

.2 Thermal conductivity (k-Value): 0.037 W/m x K at 24 degrees C mean temperature.

.3 Fire-hazard classification flame-spread index of 25 maximum and smoke-developed index of 50 maximum to ASTM E 84.

.3 Finish with factory applied primer coat.

.4 Hydronic or Steam coils: hydrostatically tested to 1 MPa.

.1 Hot water coil: copper tube, mechanically bonded aluminum fins spaced 25 mm maximum rated 1378 kPa minimum working pressure and 104 degrees C maximum entering-water temperature. Include manual air vent and drain.

.2 Steam coil: copper distributing tube, with mechanically bonded aluminum fins spaced 25 mm, maximum rated 517 kPa minimum working pressure.

.5 Fans: centrifugal double width wheels, statically and dynamically balanced, direct driven, sleeve bearings, resilient mounted.

.6 Motor: multi-speed, tapped wound permanent split capacitor type with sleeve bearings, built-in thermal overload protection and resilient rubber isolation mounting.

.1 Include spark free non-ferrous fan construction and explosion proof motor construction in bracket.

.7 Filters: removable 25 mm thick fibrous glass throwaway type.

.8 Capacity: as indicated.

.9 Control: as indicated.

.10 Acceptable Manufacturers: Sigma, Engineered Air, Trane, Reznor.

Part 3 Execution

3.1 EXAMINATION

.1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for unit heaters installation in accordance with manufacturer's written instructions.

.1 Visually inspect substrate.

.2 Inform Consultant of unacceptable conditions immediately upon discovery.

.3 Proceed with installation only after unacceptable conditions have been remedied.

3.2 INSTALLATION

.1 Install in accordance with manufacturer's instructions.

.2 Include double swing pipe joints as indicated.

.3 Hot water units: for each unit, install isolation valve on inlet and calibrated balancing valve on outlet of each unit. Install drain valve at low point.

.1 Install manual air vent at high point.

.4 Steam units: for each unit, install gate valve on inlet, steam trap assembly as indicated on outlet.

.5 Clean finned tubes and comb straight.

.6 Provide supplementary suspension steel as required.

.7 Install thermostats in locations as indicated.

.8 Before acceptance, set discharge patterns and fan speeds to suit requirements.

3.3 CLEANING

.1 Progress Cleaning:

.1 Leave Work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

3.4 PROTECTION

.1 Protect installed products and components from damage during construction.

.2 Repair damage to adjacent materials caused by unit heaters installation.

END OF SECTION