

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

1.1 QUALITY ASSURANCE

- .1 Qualifications:
 - .1 Installer: company or person specializing in standpipe and hose assembly approved by manufacturer, with at least one documented project of similar scope and complexity. Installer must be approved by USask Engineering Department.

Part 2 Products

2.1 DESCRIPTION

- .1 Design system to NFPA 14 and following parameters:
 - .1 Stand alone: hydraulic.
 - .2 Combined with sprinkler systems: hydraulic.

2.2 PIPE, FITTINGS AND VALVES

- .1 Pipe:
 - .1 Ferrous: to NFPA 14, minimum schedule 40. Seamless or ERW to ASTM A-53 Grade B.
 - .2 Copper tube: not accepted.
 - .3 Plastic piping: not accepted.
- .2 Fittings and joints to NFPA 14:
 - .1 Ferrous: screwed, welded, flanged or roll grooved.
 - .1 Grooved joints designed with two ductile iron housing segments, pressure responsive gasket, and zinc-electroplated steel bolts and nuts. Cast with offsetting angle-pattern bolt pads for rigidity and visual pad-to-pad offset contact.
 - .2 One-piece reducing fittings of approved design shall be used wherever a change is made in pipe size.
 - .3 Approved system manufacturer: Victaulic.

- .2 Copper tube: not accepted.
- .3 Plastic piping: not accepted.
- .3 Valves:
 - .1 ULC listed for fire protection service.
 - .2 Up to NPS 2: bronze, screwed ends, grooved, OS&Y gate.
 - .3 NPS 2 1/2 and over: cast or ductile iron, flanged ends, indicating butterfly valve.
 - .4 Check valves: spring actuated swing type, composition disc or seal.
 - .5 All control, drain, test and alarm valves shall be provided with identification signs of standard design adopted by the automatic sprinkler industry.
 - .6 All valves shall be Jenkins, Crane, or approved equivalent and shall be 1033 kPa S.W.P.
- .4 Pipe hangers:
 - .1 ULC listed for fire protection services.
- .5 Drain valve: NPS 1, complete with hose end, cap and chain.
- .6 Inspector's test connections: NPS 1 gate valve.

2.3 CABINETS

- .1 To NFPA 14 and ULC listed: recessed, semi-recessed, or surface type as indicated, constructed of 1.6mm thick steel, 180 degrees opening door of 2.5mm thick steel with hinge same side as water supply and latching device.
- .2 Cabinets to maintain fire resistive rating of construction in which they occur.
- .3 Cabinet door: with 7mm glass viewing panel, 70% of door area.
- .4 Large enough to accommodate angle valve, hose rack, fire hose nozzle and spanner, 4.5kg fire extinguisher and NPS 2 1/2 fire department valve. Cabinet size shall be 750mm x 750mm x 200mm.
- .5 Provide wrench attached to interior of each cabinet with chain.

2.4 HOSE RACK

- .1 ULC listed, stationary-type rack with pins designed for 180 degrees movement. Locking device shall prevent flow of water into hose until last fold is removed from rack. Complete with hose, nozzle and angle valve.

2.5 FIRE HOSE AND NOZZLE

- .1 Hose: ULC listed, 38mm nominal diameter, 30m long, synthetic jacket, synthetic rubber lined.
- .2 Nozzle: ULC listed, 38mm nominal diameter, HN4-L plastic or Wonderfog forged brass adjustable combination fog-straight stream with shut-off.

2.6 ANGLE VALVES

- .1 ULC listed for fire service. NPS 1 1/2 cast or forged brass complete with hand wheel, open or drip connections, or hydrolator valve. Where water pressure exceeds 690 kPa, provide ULC listed pressure reducing device.

2.7 SWINGING HOSE REEL

- .1 ULC listed, designed so hose can be removed from reel when water is flowing, and with 38mm nominal diameter hose 30m long, and nozzle.

2.8 FIRE DEPARTMENT VALVE

- .1 ULC listed, NPS 2 1/2 forged or cast brass angle valve: with thread compatible with local fire department, complete with handwheel, cap and chain. Cap to be part of ULC listing for valve.

2.9 PUMPER CONNECTION

- .1 To NFPA 14, ULC listed, Siamese type, location as indicated. Threads to be compatible with local fire department complete with threaded metal caps and chains.
- .2 Equal to Wilson & Cousins 1E28 c/w straightway check valve and automatic drip.
- .3 Furnish plate imprinted with 'SPRINKLER'. All shall be chromium plated.

2.10 PRESSURE GAUGES

- .1 90mm diameter, to Section 23 05 19.13- Thermometers and Pressure Gauges - Piping Systems.
- .2 Provide on topmost cabinet of each standpipe. Provide shutoff cock.

2.11 FINISHES

- .1 Chrome plate valves, nozzles, fittings, hose rack and spanner.
- .2 Cabinets.
 - .1 Tub: prime coated.
 - .2 Door and frame: No. 4 satin finish stainless steel.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

3.2 INSTALLATION

- .1 Install and test to acceptance in accordance with NFPA 14.
- .2 Install pipework in accordance with Section 23 05 15- Common installation requirements for HVAC pipework, supplemented as specified.

- .3 Run inspectors test connections to sight glass.
- .4 Install drain pipes and valves to drain parts of systems and so arranged that any one standpipe riser can be drained without shutting down any other parts of systems.
- .5 Install 90mm diameter pressure gauge in accordance with Section 23 05 19.01- Thermometers and Pressure Gauges - Piping Systems at top of risers and in accordance with NFPA 14.
- .6 The source of the water supply shall be reliable and capable of providing the required supply for not less than 30 minutes.
- .7 Water supply for standpipe system:
 - .1 Per NFPA 14 requirements.

END OF SECTION