

PART 1: GENERAL

1.01 Requirements:

A. Metering:

1. Building utilities are required to be metered including but not limited to: chilled water, hot water, domestic water and electricity. Building BTU metering shall also be provided in accordance with SHSU Standards and construction details. Locate hydronic metering equipment inside a machine room. Provide isolation valves and/or bypasses to accommodate meter service.
2. For buildings with mixed occupancy (E&G and non-E&G), provide sub- metering to properly allocate utility costs between organizations. Coordinate sub-metering requirements with the University.

B. Valves:

1. Provide valves with extended stems to be accessible on outside of insulation. Valve body and stem shall be insulated.
2. Provide means of access where valves are not exposed.
3. Provide valve vaults or boxes, as conditions demand, to provide access to valves installed below grade. CONNECT DRAIN TO STORM SEWER
4. Hydronic equipment connections shall be provided with shutoff valves and pressure relief valves on supply and return piping.
5. Shut off valves shall be provided at each floor, AHU, and FCU
6. All hydronic isolation valves shall be integral gasketed butterfly valves.
7. Flow control valves for ATU & AHU 1-1/4" or smaller shall be ball valves, greater than 1-1/4 shall be globe valves.
8. GATE VALVES ARE NOT ALLOWED

C. Hangers and Supports:

1. NO ROOF TOP UNITS for Residence Life Buildings without prior approval

D. Vibration and Sound Control:

1. All pumps shall be floor mounted

E. Mechanical Identification:

1. Hydronic Piping: Mark all piping with plastic pipe markers. Color and letter coding Standard is ANSI A13.1, "Scheme for Identification of Piping Systems."

F. Testing, Adjusting, and Balancing:

1. TAB work shall be done by a University approved, independent contractor.

PART 2: PRODUCTS

2.01 Motors:

- A. Motors shall be high efficiency - speed drive: ABB Speed Drives Only.

2.02 Valves:

- A. Section Valves 2" and smaller shall be full port ball type, 2½" and larger shall be butterfly type.
- B. Shutoff Valves 2" and smaller shall be full port ball type, 2½" and larger shall be butterfly type.
- C. Drain Valves 2" and smaller shall be full port ball type, 2½" and larger shall be butterfly type.
- D. Check Valves shall be spring-loaded silent type.
- E. Ball valves shall be full-port, bronze valve, with Teflon seat. Watts or Nibco valves preferred.
- F. Pratt or Keystone butterfly valves preferred.

2.03 Piping:

- A. All piping and fittings shall be DOMESTIC MANUFACTURED

END OF STANDARD