

23 60 00 Central Cooling Equipment

Revision 01/04/2019

Purpose:

The Architect and/or Engineer shall incorporate the Rice specific requirements indicated in this standard's section into their design. The Architect and/or Engineer shall further produce project specifications in line with industry standards that are updated to reflect these Rice specific requirements.

1. General requirements

- a. The University's first preference is to cool buildings utilizing the Central chilled water distribution system. If location is impractical then individual building chillers may be used. This shall be approved by the Rice Project Manager prior to the start of system design.
- b. Outdoor design temperature shall be most recent edition of ASHRAE weather data for Hobby Airport with 99% heating and 1% cooling categories used.

2. Central Utility Plant

- a. Chillers
 - i. Chillers shall use R134A. (R123 not permitted)
 - ii. Use electrically driven centrifugal chillers with variable frequency drives with bypass.
 - iii. 4160V motors
 - iv. High efficiency units
 - v. Design Temps

	CHWS	CHWR	CWS	CWR
Central Plant	42	56	96	106
South Plant	42	56	96	106

3. Individual building

- a. Air Cooled chillers
 - i. Overall redundancy quantity of equipment and/or sub-components (refrigerant circuits) to be approved by Rice Project Manager during design development.
 - ii. Scroll compressors
 - iii. Condenser fins shall have vendor upgrade corrosion coating
 - iv. Low noise unit
 - v. If mounted on top of buildings, entire unit shall be mounted on spring vibration isolators.

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vi. Design Temps

	CHWS	CHWR
Air Cooled Chiller	42	56

b. Modular Chillers

- i. Modular chillers have not been used at Rice. If the Architect/Engineer would like to utilize this design, it must be approved by the Rice Project Manager prior to the start of design work.