DIVISION 15 - MECHANICAL

Section 15680 - Packaged Liquid Chillers

Introduction

Air and water cooled chillers up to 100 tons – Discuss all proposed installations with UA Planning Design & Construction.

Part 1 - General

- Equipment room - design room within existing codes, EPA regulations and ASHRAE design standards, in particular ASHRAE 15 including the separation of refrigerant and combustion equipment and provision of alarms.

Part 2 - Products

- Acceptable manufacturers: Trane, Carrier, York, McQuay.
- Unit Description
    - Liquid chillers can be semi hermetic or scroll compression design. Separate refrigerant circuits shall include the following: liquid line solenoid valve, filter dryer, sight glass, thermostatic expansion valve and service valves.
    - Unit efficiency shall meet ASHRAE 90.1
- Evaporator
    - Shell and tube design manufactured in accordance with ASME standard, fully insulated and equipped with a drain connection.
- Condensers
    - Copper tube aluminum fin pressure tested to ASHRAE standards. Provide head pressure control.
- Electrical
    - All electric installations shall comply with the latest NEC standard. Include motor starters with equipment.
- Controls
    - All equipment shall be complete with leaving water control and unloading capability, low/high pressure switches, low ambient, freeze stat, flow switch and motor overload safeties, low oil pressure safety switches.
- Receivers
    - Shall be capable of entire refrigerant charge pumpdown.
- Head Pressure / Load Control
    - Shall be capable of running in low load and low ambient conditions. Provide compressor cylinder unloading where applicable.

- Refrigerant
    - Use HFC refrigerants. Do not use CFC or HCFC.

Part 3 - Execution

- Remote Interface - provide interface with building/campus energy management system for alarms, start/stop, status, water temperatures.
- All systems are to be dehydrated, leak tested charged and tested for proper control and operation.

End of Section 15680