

# DESERT COMMUNITY COLLEGE DISTRICT

## SENIOR HVAC & REFRIGERATION MECHANIC

### BASIC FUNCTION

Under the direction of the Assistant Director, Facilities Services, perform skilled work in the installation, repair, maintenance and service of heating, air conditioning and refrigeration systems of various types.

### DISTINGUISHING CHARACTERISTICS

The Senior HVAC & Refrigeration Mechanic performs advanced technical work related to the monitoring, controlling and evaluation of heating, air conditioning and refrigeration systems performance and retrieval of data utilizing electronic computerized systems.

### REPRESENTATIVE DUTIES

1. Perform a variety of journey-level functions related to maintaining and controlling the District's energy management system. *E*
2. Maintain and repair heating, air conditioning and refrigeration systems and equipment. *E*
3. Evaluate heating, air conditioning and refrigeration system performance, recommend and make modifications and/or additions to existing systems for more efficient service. *E*
4. Analyze data and troubleshoot electronic computerized systems and electronic problems related to heating, air conditioning and refrigeration systems. *E*
5. Repair or replace electrical components in air conditioning and refrigeration systems, such as boilers, forced air convertor units, water conditioning compressor units, forced air heating units, and heat pumps; troubleshoot electrical control circuits. *E*
6. Inspect, replace or repair compressors, pneumatic controllers and air handling units in air conditioning and heating systems. *E*
7. Inspect, repair or replace electrical motors; replace valves, fans, motors, gaskets, filters and belts; check and add oil, water and refrigerants. *E*
8. Use various testing devices to locate inoperative parts; repair, adjust and install various electric, electronic and pneumatic switches, gauges, thermostats and valves in micro switches, and other parts as necessary. *E*
9. Make pipe connections; install air conditioning and heating duct work; modify and fabricate ducts and attach to new systems; perform arc and acetylene welding and sil floss or silver solder. *E*
10. Inspect boilers, furnaces and pumps for compliance with codes, regulations and safety orders. *E*
11. Conduct water analysis and maintain appropriate chemical levels of condensing water and both hot and chilled water systems. *E*
12. Maintain, plan and lay out assigned tasks. *E*
13. Operate refrigerant and recovery and recycle equipment according to established EPA laws, rules and regulations.
14. Work from verbal instructions, technical manuals, sketches and work orders; maintain time, labor and material records; order parts and supplies according to established guidelines. *E*
15. Perform preventive maintenance; communicate with vendors, contractors and consultants to obtain current and accurate information regarding application, maintenance and repair; report repair needs for warrantee service and unsafe conditions. *E*
16. Oversee the work of outside contractors pertaining to heating, air conditioning and refrigeration system projects. *E*
17. Assist in other maintenance areas by performing skilled, semi-skilled and unskilled duties; may direct the work of helpers.

18. Attend training activities for the purpose of maintaining skills and ensuring compliance with District, local, state and federal requirements.
19. Perform related duties as assigned.

**KNOWLEDGE AND ABILITIES**

**Knowledge of:** Computerized energy management systems and the related control and maintenance of such systems and components. Standard practices, materials and methods of the refrigeration and heating trade; methods, materials and equipment used in the maintenance and repair of air conditioners, refrigeration and heating systems; applicable codes, regulations and safety orders; hand and power tools used in the trade; chemicals and methods used in the treatment of water for use in boilers and air conditioning; appropriate safety precautions and procedures; proper methods of storing equipment, materials and supplies; technical aspects of the building maintenance trades.

**Ability to:** Perform skilled work in the installation, repair, maintenance and service of heating, air conditioning and refrigeration systems of various types; operate a variety of equipment and tools used in the heating, air conditioning and refrigeration trade; work from wiring diagrams, electrical blueprints, plans and specifications; plan and lay out work including estimating labor and material costs; read and interpret technical manuals related to repair and installation of refrigeration and heating systems; operate a variety of tools and equipment utilized in the assigned trade; maintain routine records; operate a truck; perform shop math; understand and follow oral and written instructions; perform heavy physical labor; perform work over rough or uneven surfaces; climb ladders and work from heights; bend at the waist, kneel or crouch; stand for extended periods of time; communicate effectively both orally and in writing; work cooperatively with others; work independently with little direction; meet schedules and time lines; monitor and retrieve data on electronic computerized systems; observe health and safety regulations; and establish and maintain effective and productive working relationships with administrators, staff and students of diverse backgrounds; to respond to emergency situations; to perform heavy physical labor and lift and maneuver objects weighing 50 pounds unassisted and occasionally up to 100 pounds with assistance; work off-hours as necessary; pushing and pulling; bend at waist, crawl, kneel or crouch; reach overhead, above the shoulders and horizontally; ascend and descend ladders and stairs; work from heights; walk over rough or uneven surfaces.

**LICENSES AND OTHER REQUIREMENTS**

Valid California driver’s license and must have an acceptable driving record and qualify for insurability by the District’s insurance carrier. Refrigeration Certification as required by EPA.

**EDUCATION AND EXPERIENCE**

Any combination equivalent to: graduation from high school and successful completion of an apprenticeship program or a certificate for the specific trade from an accredited institution, and five years of journey-level experience as a heating, ventilation, air conditioning and refrigeration systems mechanic including three years experience with computer automated HVAC/Energy Management systems and operating central plant hot water, chilled water, and cooling tower systems.

**WORKING CONDITIONS**

**Environment:** Indoor and outdoor work environment in all weather conditions. Driving a vehicle to conduct work. Respond to emergency situations as required.

**Hazards:** Working around and with machinery having moving parts. Exposure to electrical power supply and high voltage, chemicals solvents, cleaning solutions, refrigerants, and oils. Working at heights.

**EMPLOYMENT STATUS**

Classified Bargaining Unit

E=Essential Functions