



## **HVAC/R Technician**

**Classified Range: 42**

Board Approved: 11/18/21 P. 1|5

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job; however, any additional duties will be reasonably related to this class.*

### **SUMMARY DESCRIPTION**

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Performs a variety of skilled mechanical maintenance duties in the construction, diagnosis, repair, installation, and alteration of District heating, ventilation, air conditioning and refrigeration systems, and related equipment and facilities.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives limited direction from appropriate supervisor; refers only unusual decisions to supervisor. May provide technical and functional direction to assigned student workers.

### **REPRESENTATIVE DUTIES**

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*The following duties are typical for this classification.*

1. Performs repairs, routine servicing and operations of HVAC systems to ensure efficient operation; operates, programs, and maintains the energy management system in order to control room temperatures for District facilities.
2. Conducts regular preventive maintenance inspections, services and repairs of refrigeration units, isolated heating and ventilating and air-conditioning, units, fan-coil units, including gas, electric and pneumatic operated heating and air conditioning equipment and systems; performs necessary adjustments or repairs; and services and repairs evaporative coolers.
3. Programs, repairs, maintains, and operates HVAC control systems, HVAC system components and/or equipment, and Variable Air Volume (VAV) systems and related modules; utilizes desktop and hand-held computer to diagnose and program systems.
4. Diagnoses, programs, operates, schedules, monitors, and adjusts the Campus Building Automation Systems (BAS) for HVAC systems energy management systems, and other building or asset systems as needed.
5. Performs skilled electrical maintenance work in the connection, repair, installation, and alteration of HVAC equipment, components, timers, motors, and wiring systems as needed.
6. Troubleshoots gas and electric heating systems; installs natural gas lines and inspects for leaks; replaces heater circulation pumps, motors in boiler heating systems, and associated components, which do not require a certification.
7. Inspects, repairs, modifies, and installs HVAC equipment including refrigeration and air conditioning compressors, receivers, condensers, evaporators, forced air units, pumps, automatic and hand valves, expansion valves, and capillary tubes; performs minor troubleshooting and repairs to ancillary chiller and cooling tower equipment and associated components, which do not require a certification.
8. Tests and examines chilled water and water tower operations and boiler as necessary, observing meter and pressure gauges.
9. Installs, inspects, and repairs or replaces defective parts in HVAC units and equipment and their controls.



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10. Lubricates and packs heating, ventilation, refrigeration, and air conditioning motors, pumps, fans, bearings, and other equipment.
11. Installs and calibrates systems; installs copper tubing and repairs pipes and tubing as necessary; tests joints and insulates pipes of refrigeration and air conditioning systems.
12. Operates a variety of hand and power tools, solder /brazing equipment, vacuum pump, freon recovery equipment, and other test and repair equipment utilized in the trade and a motor vehicle; maintains equipment in effective and safe working condition.
13. Diagnoses HVAC/R mechanical and electrical problems; repairs or replaces defective or malfunctioning parts in units, equipment, and controls; installs, rebuilds, replaces, or repairs fans, motors, thermostats, fuses, filters, bearings, valves, controls, gaskets, and other equipment as necessary.
14. Researches and evaluates products for best sources; recommends the purchase of selected parts, materials, and equipment; assists in labor and material estimations for projects; prepares and maintains work orders, records, and reports related to work performed.
15. May perform general unskilled and or semi-skilled maintenance work and may assist in other trades as necessary.
16. Performs other duties related to the primary job duties.

### **MINIMUM QUALIFICATIONS**

*The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.*

#### **CORE COMPETENCIES:**

##### **Environmental Exposure Tolerance**

- Performing under physically demanding conditions
- Accepts and endures the necessity of working in unpleasant or physically demanding conditions
- Shows established adaptation and performance under unpleasant or physically demanding conditions

##### **Safety Focus**

- Showing vigilance and care in identifying and addressing health risks and safety hazards
- Maintains high level of conscientious safety practice

##### **General Physical Ability**

- Using strength, endurance, flexibility, balance and coordination
- Applying motor and perceptual abilities requiring no specific technique, training or conditioning

##### **Professional and Technical Expertise**

- Applying technical subject matter to the job \*\*
- Knows the rudimentary concepts of performing the essential technical operations



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### **Adaptability**

- Responding positively to change and modifying behavior as the situation requires\*\*
- Accept and adjust to changes and the unfamiliar

### **Innovation**

- Imagining and devising new and better ways of doing things\*\*
- Fix what is broken; find solutions and fixes with resources at hand
- Finds new approaches to performing familiar tasks
- Create and invent new ideas; envision the unexpected, unexplored, untried\*\*

### **Critical Thinking**

- Analytically and logically evaluates information to resolve problems
- Follow guide, SOP or other step by step procedures for locating the source of a problem and fixing it
- May detect ambiguous, incomplete, or conflicting information or instructions\*\*

### **Informing**

- Proactively obtaining and sharing information

### **Mechanical Insight**

- Chooses the right tool for the job
- Applies principles of mechanical advantage to get the work done
- Follows step-by-step assembly procedures, troubleshooting guides, and simple diagrams

### **Customer Focus**

- Attending to the needs and expectations of customer
- Seeks information about the immediate and longer term needs of the customer
- Anticipates what the customer may want or expect in a product or service
- Works across organizational boundaries to meet customer needs \*\*

### **Attention to Detail**

- Focusing on the details of work content
- Shows care and thoroughness in adhering to process and procedures that assure quality
- Applies knowledge and skill in recognizing and evaluating details of work\*\*
- Applies skilled final touches on products

### **Using Technology**

- Working with electronic hardware and software applications
- Using basic features and functions of software and hardware



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### Valuing Diversity

- Shows acceptance of individual differences
- Welcomes input and inclusion of others who may be different from oneself
- Shows understanding and empathy for the challenges of groups seeking inclusion or dealing with perceived discrimination

*\*\*Lead, Advanced or Senior Level Positions*

### Education and Experience Guidelines

#### **Education/Training:**

Equivalent to the completion of high school supplemented by specialized training in heating, ventilation, refrigeration, and air conditioning repair and maintenance,

#### **Experience:**

Three (3) years of journey-level operation, maintenance, and repair experience in the HVAC and refrigeration trade.

#### **License or Certificate:**

Possession of a valid driver's license.

Possession of, or ability to obtain a valid forklift certification.

Possession of a valid EPA Retrieval and Reclamation Certification issued by authorized agency.

#### **Desired Education/Experience:**

Possession of or ability to obtain Variable Air Volume (VAV) systems certification.

### **PHYSICAL DEMANDS AND WORKING ENVIRONMENT**

*The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.*

**Environment:** Work is performed primarily in indoor and outdoor environments; travel from site to site; exposure to noise, dust, grease, smoke, fumes, noxious odors, gases, electrical energy, and all types of weather and temperature conditions; work and/or walk on various types of surfaces including slippery or uneven surfaces and rough terrain; work at heights on scaffolding and ladders; exposure to electrical energy.

**Physical:** Primary functions require sufficient physical ability and mobility to walk, stand, and sit for prolonged periods of time; frequently stoop, bend, kneel, crouch, crawl, climb, reach, and twist; to frequently push, pull, lift, and/or carry moderate to heavy amounts of weight up to 50 pounds; to occasionally push, pull, lift, and/or carry heavier amounts of weight with or without assistance; requires a sense of touch, finger dexterity, gripping with fingers and hands; operate assigned equipment and vehicles; and verbally communicate to exchange information.

**Vision:** See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; and to repair, maintain, and operate assigned equipment.



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**Hearing:** Hear in the normal audio range with or without correction.