



Office of Human Resources  
HVAC Mechanic - CJ2539  
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### General Statement of Duties

Performs full performance skilled trades level work in the maintenance, repair, and installation of a variety of HVAC equipment requiring journey level certification in a skilled trades area such as heating and ventilating, air conditioning and refrigeration, stationary engineering, steam fitting, and/or steam and hot water.

### Distinguishing Characteristics

This class is responsible for maintaining the heating and cooling systems for buildings, theaters, and sports arenas, etc. This class is distinguished from Facility Maintenance Technician. Positions in the Facility Maintenance Technician class do not require trades licenses or certifications. It is also distinguished from Heating, Ventilating and Air Conditioning Supervisor, which has full supervisory responsibilities and duties.

This class is distinguished from Electrician and Plumber. Positions in these classes require journey level certification in those trade specialty areas. It is also distinguished from Master Trades Worker, which performs full performance licensed skilled trades maintenance, repair, and/or installation work in at least two distinctly different skilled trades areas, requiring multiple journey licenses and/or certifications, or pulls permits for an agency or department.

### Level of Supervision Exercised

By position performs lead work.

### Essential Duties

Inspects facilities and equipment to determine installation, alteration, maintenance, and repair needs as permitted by the appropriate HVAC certification.

Installs, maintains, and repairs equipment and machinery which may include some fabrication.

Operates, maintains, and repairs high/low pressure steam/hot water boilers, pumping units vacuum pumps, boiler feed pumps and auxiliary equipment.

Operates, maintains, replaces, and repairs commercial/industrial refrigeration and air conditioning systems, controls, and related equipment.

Installs, replaces, and repairs forced air heating and duct work.

Programs and updates automatic building system controls.

Prepares working sketches and works from blueprints.

Assists in the maintenance and repair work in a variety of other skilled trades areas.

Plans and coordinates installation, maintenance, and repair work with other trades areas.

Operates and maintains tools and equipment common to various skilled trades.

Performs general plant and building maintenance repair.

Maintains records and prepares reports; and, estimates materials, labor, and equipment costs.

Observes all common safety practices.

By position, participates in snow removal duties.

By position, may be required to be on-call to address emergent needs.

Performs other related duties as assigned or requested.

Any one position may not include all of the duties listed. However, the allocation of positions will be determined by the amount of time spent in performing the essential duties listed above.

## Competencies

**Mathematical Reasoning** – Understanding of basic math that will be used on the job including counting, adding, subtracting, and multiplying.

**Technical Competence** – Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

**Oral Communication** - Expresses information to individuals or groups effectively; taking into account the audience and nature of the information; makes clear and convincing oral presentations; listens to others, attends to nonverbal cues and responds appropriately.

**Reading** – Understands and interprets written material, including technical materials, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.

**Technical Problem Solving** – Troubleshoots, diagnoses, analyzes, and identifies systems malfunctions to determine the source and cause of the problem.

**Written Communication** – Composes, reviews, edits, and issues written materials for diverse audiences and communicates purpose in a succinct and organized manner that is appropriate for context, time, and place.

## Knowledge & Skills

Knowledge of engineering concepts, principles, and practices, and of equipment, tools, mechanical devices, and their uses to produce motion, light, power, technology, and other applications.

Knowledge of principles and methods for operating industrial equipment.

Knowledge of materials, methods, and the appropriate tools to construct objects, structures, and buildings.

Knowledge of machines and tools, including their designs, installation, uses, repair, and maintenance.

Knowledge of developing, producing, understanding, and using plans, blueprints, models, and maps, including the use of tools and instruments to produce precision technical drawings.

Knowledge of electronic theory, circuits, components, and material properties (excluding computers).

Knowledge of safety hazards and necessary safety precautions sufficient to be able to establish a safe work environment for self and others.

**Education Requirement**

Graduation from high school or the possession of a GED, HiSET or TASC Certificate.

**Experience Requirement**

Four (4) years field experience or 7,000 hours on-the-job training as required for certification by the City and County of Denver as a Heating and Ventilating Journeyman, Refrigeration Journeyman or Stationary Engineer.

**Education & Experience Equivalency**

None

**Licensure & Certification**

This job requires driving. Requires a valid Driver's License at the time of application.

Possession of Heating and Ventilating Journeyman, Refrigeration Journeyman or Stationary Engineer.

By Position Requires CDL "B" with appropriate endorsement by the end of probationary period.

By position, may require more than one certification.

Licenses and certifications must be kept current as a condition of employment.

**Working Environment**

Potential exposure to extreme temperature changes.

Noise: sufficient noise to cause distraction or possible hearing loss

Potential exposure to hazardous conditions where there is danger to life, body, and/or health.

Potential exposure to a variety of electro-mechanical hazards.

Potential exposure to hazards from electro/mechanical/power equipment.

Subject to burns and cuts.

Potential exposure to hazards from electrical/mechanical/power equipment

Subject to varying and unpredictable situations.

Atmospheric Conditions: conditions that affect the skin, eyes or respiratory system

Potential exposure to dust.

Potential exposure to cold temperatures, cold enough to cause bodily discomfort

Potential exposure to heat temperatures, hot enough to cause bodily discomfort

Potential exposure to hazardous conditions where there is danger to life, body, and/or health

Potential exposure to hazards of steam and heat

Potential exposure to humid conditions with high moisture content to cause bodily reactions

Potential exposure to housekeeping/cleaning agents/chemicals

Potential exposure to temperature changes: variations in temperature from hot to cold

Potential exposure to toxic chemicals.

Potential exposure to soil, plants, and insects

Handles emergency or crisis situations

Occasional pressure due to multiple calls and inquiries

Personal Safety: aware of surroundings, people, and events

Subject to burns and cuts

Subject to hazards of flammable or explosive gases

Subject to injury from moving parts of equipment or vehicles

Subject to long, irregular hours

Subject to pressure for multiple calls, inquiries, and interruptions

Works in confined, uncomfortable or awkward locations.  
 Subject to precarious or high locations  
 Subject to: vibrations and strain on the body to cause bodily harm if endured daily  
 Temperature Changes: Variations in temperature from hot to cold when works in the field.  
 Wet: frequent contact with water, liquid, chemicals, or sanitary sewage.

### Level of Physical Demand

3-Medium (20-50 lbs.)

### Physical Demands

(Physical Demands are a general guide and specific positions will vary based on working conditions, locations, and agency/department needs.):

Standing: remaining on one's feet in an upright position.  
 Walking: moving about on foot on uneven surfaces  
 Sitting: remaining in the normal seated position.  
 Carrying: transporting an object, usually by hand, arm, or shoulder.  
 Pushing: exerting force upon an object so that the object is moving away from the person.  
 Pulling: exerting force upon an object so that the object is moving toward the person.  
 Balancing: maintaining body equilibrium to prevent falling over.  
 Stooping: bending the body by bending spine at the waist.  
 Fingering: picking, pinching, or otherwise working with the fingers.  
 Talking: expressing or exchanging ideas by means of spoken words.  
 Hearing: perceiving the nature of sounds by the ear.  
 Repetitive Motions: making frequent movements with a part of the body.  
 Eye/Hand/Foot Coordination: performing work through the use of two or more.  
 Vision Far acuity: ability to see clearly at 20 feet or more  
 Vision Near acuity: ability to see clearly at 20 inches or less.  
 Depth Perception: ability to judge distance and space relationships.  
 Field of Vision: ability to see peripherally.  
 Field of Vision: ability to adjust vision to bring objects into focus  
 Color Vision: ability to distinguish and identify different colors.  
 Lifting: raising or lowering objects weighing no more than 50 pounds, from one level to another.  
 Depth Perception: ability to judge distances and space relationships  
 Mental Demands: mathematical reasoning, memorization, oral comprehension, spatial orientation, and written comprehension  
 Neck Flexion: Moving neck upward/downward  
 Physical Strength: exerts maximum muscle force to lift, push, pull, or carry objects and performs moderately laboring work.  
 Agility: bends, stretches, twists, or reaches out with the body, arms, or legs.

### Background Check Requirement

Criminal Check  
 Employment Verification  
 Motor Vehicle Record  
 Licensure/Certification

### Assessment Requirement

None

**Probation Period**

Six (6) months.

**Class Detail**

**Pay Grade:** J-619

**FLSA Code:** N

**Established Date:** 9/21/2018

**Established By:** LS

**Revised Date:**

**Revised By:**

**Class History:**