New Mexico State Personnel Office

2600 Cerrillos Road
Santa Fe, New Mexico 87505-0127

Classification Description

HEATING, AIR CONDITIONING, AND REFRIGERATION MECHANICS AND INSTALLERS

Class Title	Class Code	Pay Band	Alt Pay Band*
Heating, Air Conditioning, & Refrig-B	**U9021B**	**40**	**45**
Heating, Air Conditioning, & Refrig-O	**U9021O**	**45**	**50**
Heating, Air Conditioning, & Refrig-A	**U9021A**	**50**	**55**

**In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.*

Occupation Description

Install or repair heating, central air conditioning, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves.

Nature of Work

Heating, air-conditioning, and refrigeration mechanics and installers; install, maintain, and repair such systems. Because heating, ventilation, air-conditioning, and refrigeration systems often are referred to as HVACR systems.

Heating, air-conditioning, and refrigeration systems consist of many mechanical, electrical, and electronic components, such as motors, compressors, pumps, fans, ducts, pipes, thermostats, and switches. In central forced air heating systems, for example, a furnace heats air, which is then distributed through a system of metal or fiberglass ducts. They maintain, diagnose, and correct problems throughout the entire system. To do this, they adjust system controls to recommended settings and test the performance of the system using special tools and test equipment.

Refrigeration mechanics install, service, and repair industrial and commercial refrigerating systems and a variety of refrigeration equipment. They follow blueprints, design specifications, and manufacturers' instructions to install motors, compressors, condensing units, evaporators, piping, and other components. They connect this equipment to the ductwork, refrigerant lines, and electrical power source. After making the connections, refrigerator mechanics charge the system with refrigerant; check it for proper operation and leaks, and program control systems.
When air-conditioning and refrigeration technicians service equipment, they must use care to conserve, recover, and recycle the refrigerants used in air-conditioning and refrigeration systems. The release of these refrigerants can be harmful to the environment.

Heating, air-conditioning, and refrigeration mechanics and installers are adept at using a variety of tools to work with refrigerant lines and air ducts, including hammers, wrenches, metal snips, electric drills, pipe cutters and benders, measurement gauges, and acetylene torches. They use voltmeters, thermometers, pressure gauges, manometers, and other testing devices to check airflow, refrigerant pressure, electrical circuits, burners, and other components.

Distinguishing Characteristics of Levels

Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

Basic

- Employees in this Role assist in inspecting and repairing refrigeration and heating systems.
- Employees report potential problems to superiors; assist in the installation of refrigeration and heating systems; inspect solar systems; perform minor welding or soldering; keep records; read blueprints and sketches.

Recommended Education and Experience for Full Performance*

High School Diploma or GED and one (1) year experience in heating, air conditioning, ventilation and refrigeration maintenance and/or installing and repairing refrigeration and heating systems.

Minimum Qualifications

High School Diploma or GED and three (3) months experience in heating, air conditioning, ventilation and refrigeration maintenance and/or installing and repairing refrigeration and heating systems.

Operational

- Employees in this Role install, service, and provide maintenance of various heating and cooling systems.
- Employees diagnosis problems in heating, cooling, and ventilation systems; perform preventative maintenance on electrical generators, condensers, heat pumps, etc.

Recommended Education and Experience for Full Performance*

High School Diploma or GED and one and a half (1.5) years experience in heating, air conditioning, ventilation and refrigeration maintenance and/or installing and repairing refrigeration and heating systems.

Minimum Qualifications

High School Diploma or GED and six (6) months experience in heating, air conditioning, ventilation and refrigeration maintenance and/or installing and repairing refrigeration and heating systems

Advanced

- Employees in this Role perform the most complex repairs and provide training to less experienced staff co-workers in the installation, servicing, and maintenance of heating, cooling, and installation systems.
- Employees recommend and implement changes in operation and scheduling to enable work to flow smoothly.
- Employees are responsible for record keeping and budgets and work on projects of a large scope or high complexity.

Recommended Education and Experience for Full Performance

High School Diploma or GED and two (2) years experience in heating, air conditioning, ventilation and refrigeration maintenance and/or installing and repairing refrigeration and heating systems.

Minimum Qualifications

High School Diploma or GED and one (1) year experience in heating, air conditioning, ventilation and refrigeration maintenance and/or installing and repairing refrigeration and heating systems.

Knowledge and Skills

*Note: This information has been produced by compiling information and documentation provided by O*NET. O*NET™ is a trademark of the U.S. Department of Labor, Employment and Training Administration.*

Knowledge

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

Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.

Public Safety and Security — Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.

Education and Training — Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Physics — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes.

Skills

Installation — Installing equipment, machines, wiring, or programs to meet specifications.

Troubleshooting — Determining causes of operating errors and deciding what to do about it.

Repairing — Repairing machines or systems using the needed tools.

Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.

Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.

Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Operation and Control — Controlling operations of equipment or systems.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one

Statutory Requirements: Applicants must be licensed in accordance with NMSA 1978, Section 60-13-33, 36, 38 and 39 and NMSA 1978, Sections 60-13-9., B, and K.

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization*, *essential functions*, and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Non-Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/07/2001 **Revised:** 09/20/2011

**Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.*

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.