

**AIR CONDITIONING-VENTILATING, HEATING AND
REFRIGERATION MECHANIC**

Non-Competitive

(Adopted: August 18, 1982)
(Revised: November 29, 2007)

DISTINGUISHING FEATURES OF THE CLASS: This is a highly skilled, technical position involving responsibility for installation, repair, maintenance and operation of air conditioning, ventilating, heating and refrigeration systems and apparatus, as well as plumbing and electrical systems. The work involves minor and major repairs, installations and maintenance projects both inside and outside the buildings. The work is performed under general supervision with leeway allowed for exercise of independent judgment in carrying out technical details of the work. Supervision may be exercised over the work of maintenance personnel and contractors as assigned. The incumbent does related work as required.

TYPICAL WORK ACTIVITIES: (Illustrative only)

- Installs, maintains, repairs, replaces, troubleshoots and/or operates refrigeration systems and equipment, including walk-in coolers, refrigerators, chillers, water coolers and other associated equipment;
- Installs, maintains, repairs, replaces, troubleshoots and/or operates air conditioning-ventilating and heating systems and equipment to include boilers (gas fired, oil fired or electric), pumps, variable air volume systems, ventilation systems, ductwork, heat exchangers, air compressors, motors, control systems (pneumatic and direct digital control), computer hardware for control systems, generators, heaters, pipelines, drains, valves, traps and other associated equipment;
- Installs, maintains, repairs, replaces and troubleshoots plumbing systems including storm water, sanitary drainage, water supply and natural gas piping systems, plumbing fixtures, automatic sprinkler systems, backflow prevention devices and other associated systems;
- Installs, maintains, repairs, replaces and troubleshoots a variety of electrical wiring systems, electrical fixtures and equipment including generators, motors, DC and AC drives, switchboard, panel boards, circuit boards, disconnects, signal and alarm equipment, transfer switches, program clocks and bells, storage battery systems, lighting circuits, lighting fixtures and associated equipment;
- Conducts periodic inspections of the condition of HVAC systems and auxiliary equipment, refrigeration systems and equipment, plumbing systems and equipment, electrical systems and equipment and all machinery and equipment to ascertain maintenance needs, replace worn or broken parts and make recommendations for capital improvement projects and/or major repair, replacement or renovation projects;
- Assists in planning, coordinating or supervising the work of maintenance personnel, mechanical or plumbing contractors or other trades when required in the completion of projects under the employee's charge;
- Assists in preparation of work schedules and estimates of cost, material, equipment and resources for minor and major installation, maintenance and repair projects under the employee's charge;
- Cleans, lubricates and otherwise services pumps, compressors and refrigeration systems;
- Plans and executes a preventative maintenance program for all systems and auxiliary equipment by lubricating, changing oil, filters, belts, bearings, couplings, etc., evacuating and recharging refrigerant, testing and treating water used in air conditioning and boiler systems in order to prevent growth of fungi and bacteria and control corrosion, unclogging sinks, toilets, floor drains, roof vents and piping, repairing wiring, switches and controls, etc.;
- Calibrates and adjusts electric and electronic controls and thermostats, pump controls, sensors, damper motors, actuators, energy management panels, belts and motors to adequately regulate system operations and maintain building comfort levels and maximum efficiency throughout the

heating and cooling seasons;
Estimates and requisitions materials needed for maintenance and repairs;
Maintains appropriate records, reports, logs and documents for all mechanical, plumbing and controls equipment and systems under the employee's charge and may prepare and revise operating manuals;
Interprets mechanical and electrical schematics as needed;
May assist in the preparation of the annual budget for maintenance activities related to mechanical, plumbing and control systems;
May assist in a variety of related building maintenance repairs as needed.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL

CHARACTERISTICS: Thorough knowledge of the installation, operation, maintenance and repair of refrigeration systems and equipment; thorough knowledge of the installation, operation, maintenance and repair of building heating, air conditioning and ventilation systems; thorough knowledge of the installation, maintenance and repair of plumbing systems and electrical systems; thorough knowledge of the principles, practices, terminology and safety precautions used in the operation and maintenance of complex heating, ventilating, air conditioning and refrigeration systems and plumbing and electrical systems; good knowledge of the principles, procedures, tools and safety precautions pertinent to the work; good knowledge of the methods, materials and diagnostic tools and equipment used in the operation, maintenance and testing of complex heating, ventilating, air conditioning and refrigeration systems and plumbing and electrical systems, auxiliary equipment and controls; good knowledge of the availability and costs of tools, parts and materials necessary to the trade; working knowledge of electrical wiring and electronic circuitry as they relate to heating, refrigeration, air conditioning and ventilation systems; ability to repair and maintain heating, refrigeration, air conditioning, ventilation, plumbing and electrical systems; ability to develop and implement a preventative maintenance program; ability to plan, coordinate and supervise the work of others; ability to read and interpret plans, schematics, blueprints and specifications; ability to maintain accurate records and reports; ability to work under adverse conditions; mechanical aptitude; physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS: Graduation from high school or possession of a high school equivalency diploma and either:

- (a) Graduation from a regionally accredited or New York State registered college or university with an Associate's Degree or certificate in air conditioning, heating and refrigeration technology or closely related field and three (3) years of experience in the installation, repair, maintenance and operation of air conditioning, ventilating, heating and refrigeration systems, which shall have included plumbing and electrical experience; or
- (b) Five (5) years of experience as described in (a) above; or
- (c) An equivalent combination of training and experience equal to or greater than defined by the limits of (a) and (b) above.

SPECIAL REQUIRMENTS FOR ACCEPTANCE OF APPLICATIONS: Eligibility for an appropriate level New York State driver's license at time of application; possession of license at time of appointment.