



# Careers in manufacturing: engineering mechanical

## Air conditioning and refrigeration

### Air conditioning and refrigeration mechanic

**Air conditioning and refrigeration mechanics assemble, install, fault-find, service and repair industrial, commercial and domestic air conditioning and refrigeration systems and equipment.**

Tasks include:

- establishing job requirements from drawings and specifications, and laying out installation reference points
- installing support brackets
- cutting, bending and threading piping
- installing and repairing components, such as compressors, motors, condensers, evaporators, switches and gauges, and copper lines for steam, gas, refrigerant, compressed air, oil and chilled water
- bolting, soldering, riveting, welding and brazing pipes to connect equipment, and checking alignment and accuracy of fit
- filling systems with gas or fluid to check for leaks
- test operating refrigeration systems, checking mechanisms and making adjustments
- removing test gas and fluid using vacuum pumps, and filling systems with refrigerant
- checking and overhauling refrigeration systems, diagnosing faults, and repairing and replacing defective components
- adjusting system controls and mechanisms and reassembling systems
- identifying malfunctions and planned corrective action.

Air conditioning and refrigeration mechanics may need associated skills in pipefitting, welding and electrical wiring.

Refrigeration and air conditioning is a licensed occupation, with a range of licenses required for various systems, electrical disconnection/reconnection and refrigerant handling.

#### **Specialisations:**

- Domestic heat pump and split system installer
- Automotive air conditioning specialist.

#### **Relevant qualification:**

- Certificate II in Engineering (for domestic heat pump and split system installation)
- Certificate III in Engineering - Mechanical
- Diploma of Engineering (Advanced Trade)
- Advanced Diploma of Engineering

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