

Sheet Metal Worker

Sheet metal workers design, fabricate, assemble, install, and repair the sheet metal products required in a wide variety of industries and settings.

Sheet metal workers use many types of metal including black and galvanized steel, copper, brass, nickel, stainless steel, aluminum and tin plate to make products such as:

- Pollution control systems, dust collecting and control systems, air-slide, grain spouting, material blowing, air-veyor and other air systems
- Heating, ventilating and air conditioning systems
- Solar heating and cooling systems and all integral equipment
- Metal showcases, display neon and metal sign equipment
- Metal cabinets, custom built tables, counters and fixtures for hospitals, kitchen equipment and items for the food service and beverage industry
- Electrical panels and related equipment
- Dairy, brewery and laboratory equipment
- Metal shelving, lockers, window frames, metal doors and frames, toilet partitions
- Flashing, coping, troughing and roof drainage systems
- Custom or small run fabrication of a variety of sheet metal items

On occasion, sheet metal workers substitute fibreglass or plastic for metals.

In general, sheet metal workers:

- Lay out, measure and mark dimensions and reference lines on sheet metal according to drawings or templates
- Use laser or plasma cutting equipment, numerically-controlled or computerized equipment, hand and power shears and snips and light metal-working equipment to cut, drill or punch, bend and shape sheet metal
- Fasten with bolts, screws, cement, rivets, adhesives, solder or by welding
- Install and repair sheet metal products and ensure installations conform to specifications and building codes
- Do metal cladding of insulated piping and equipment on industrial sites
- Manufacture and install flashing, coping for roofing applications
- Supply, install, service and repair air handling equipment, furnaces, fans and air terminal devices



Working Conditions

Sheet metal workers work from verbal instructions or blueprints, or design small jobs themselves. They make some products in a shop and install them at construction sites, but other products such as roofing and siding have to be measured and cut at the construction site. A 40-hour week is normal, but overtime may be required to meet construction deadlines. Sheet metal workers work indoors and outdoors in all types of weather. Considerable bending, reaching, working at heights or in cramped spaces may be required.

Skills and Abilities

The work is most rewarding for people who enjoy developing special skills and putting them to use in a variety of ways.

To be successful, sheet metal workers need:

- To be in good physical condition
- A mechanical aptitude
- The ability to lift in excess of 25 kilograms
- Eye-hand coordination, spatial and form perception, good eyesight and manual dexterity
- The ability to visualize a finished product from a drawing
- A good background in practical mathematics, geometry and blueprint reading
- The ability to stand for long periods, do some moderately heavy lifting and carrying, and work in high, awkward and noisy places
- Patience, dependability and accuracy
- The ability to work in a construction or shop environment

Employment and Advancement

Most sheet metal workers are employed by sheet metal, air-conditioning and heating contractors involved in residential, commercial and industrial construction. A few are self-employed or work in shops with related trades. Some are employed by roofing contractors to install flashing and coping. Since most sheet metal workers employed in Alberta work in the construction industry, employment prospects change with changing economic conditions.

Journeyman wage rates vary, but generally range from **\$25 to \$40 an hour plus benefits**.



Experienced sheet metal workers may become specialists in design and layout work or in estimating the cost of installations. They may advance to supervisory positions or go into business for themselves.

Working in Alberta

To work as a Sheet Metal Worker in Alberta, a person must be a registered apprentice, an Alberta-certified journeyperson, or hold a valid recognized credential.

Sheet metal workers learn their skills by registering with Alberta Apprenticeship and Industry Training to participate in apprenticeship training. Upon successful completion, they are awarded the Alberta Journeyman Certificate.

A sheet metal worker who holds a valid trade certificate from Alberta or from another Canadian province or territory may apply to write the Interprovincial Exam and, if successful, be granted a Red Seal under the Interprovincial Standards Red Seal Program. The Red Seal is recognized throughout most of Canada.

A sheet metal worker who holds a valid recognized credential that does not have a Red Seal may apply for:

- an Alberta trade certificate under the Qualification Certificate Program
- an Alberta Equivalency document under the Equivalency Program

Sheet metal workers who:

- Hold a credential that is not recognized or is no longer valid in an Alberta-designated trade, OR
- Can demonstrate their experience, skills and knowledge in an Alberta-designated trade, and meet the standards and requirements established by the Alberta Apprenticeship and Industry Training Board may be eligible to apply for trade certification under the Qualification Certificate Program

Individuals possessing a valid Alberta Journeyman Certificate, an Alberta Qualification Certificate, an Alberta Occupational Certificate, or a valid recognized credential are eligible to receive a Blue Seal business credential after completing the necessary requirements.

Apprenticeship Training

The term of apprenticeship for a sheet metal worker is 4 years (four 12-month periods) including a minimum of 1425 hours of on-the-job training and 10 weeks of technical training each year.



- An applicant who previously completed courses of study or work experience related to the Sheet Metal Worker trade or holds a related journeyperson certificate and has the employer's recommendation, may qualify for credit that could reduce the term of apprenticeship.
- A person who has previous training or work experience in the trade and wants to determine their level of skill and knowledge for entry or advanced standing in an apprenticeship program may apply for a Prior Learning Assessment.
- A high school student can become an apprentice and gain credits toward apprenticeship training and a high school diploma at the same time under the Registered Apprenticeship Program (RAP)

To learn the skills required of a Sheet Metal Worker in Alberta and be issued an Alberta Journeyman Certificate, a person must:

- Satisfy the entrance requirements or pass the entrance exam (see Entrance Level Competencies, Exam Counselling Sheet, Entrance Exam Study Guide, and Entrance Exam Support Materials List)
- Find a suitable employer who is willing to hire and train an apprentice

Most employers prefer to hire high school graduates and may select apprentices from among their current employees.

- With their employer, complete the Apprenticeship Application and Contract and submit it to an Apprenticeship and Industry Training Office
- Pay the non-refundable application fee as identified on the application noted above
- Complete the required on-the-job training
- During on-the-job training, apprentice sheet metal workers earn at least 50 percent of the journeyperson wage rate in their place of employment in the first year, 65 percent in the second, 75 percent in the third, and 85 percent in the fourth year.
- Complete the required technical training each year (see Course Outline)
- Enroll in technical training (see Technical Training Centre)
- Select an educational institution that offers training for Sheet Metal Worker apprentices, and a time to attend training
- Determine requirements for enrolling at the selected institution, and forward completed enrollment form to the selected institution
- Review books and materials required for training (see Textbook and Resource List)
- Successfully complete all required exams (see Exam Counselling Sheets)



Review the Apprenticeship and Industry Training Policy on Cheating

- Apprentices may attempt the Interprovincial Exam in the final period of their apprenticeship training and, if successful, be granted a Red Seal.
- review the Apprenticeship and Industry Training Policy on Cheating

When apprentices attend technical training, they are required to pay the applicable tuition fee and purchase course supplies.

Grants, scholarships and other financial assistance may be available. For more information see Financial Assistance or contact an Apprenticeship and Industry Training Office.

Interprovincial Standards Red Seal Program

To qualify for a Red Seal, a person must:

- Hold a valid trade certificate in a trade that participates in the Interprovincial Standards Red Seal Program:
 - an Alberta trade certificate or completion of apprenticeship certificate, OR
 - a journeyperson or completion of apprenticeship certificate issued by another Canadian province or territory
- For applications based on Alberta certificates
 - complete the Interprovincial (Red Seal) Examination Application - Alberta Certified (no application fee is required)
 - submit the application to an Apprenticeship and Industry Training Office
- For applications based on non-Alberta certificates
 - complete the Qualification Certificate – Recognized Credential Application
 - submit the application to an Apprenticeship and Industry Training Office
 - pay the non-refundable application fee as identified on the application form
- Prepare for the exam
 - review the Apprenticeship and Industry Training Policy on Cheating
 - review available resource materials (see Resource Materials - Sheet Metal Worker)
- Successfully complete the required exam



Equivalency Program

To qualify for an Equivalency document *based on a recognized credential*, a person must:

- Have a valid recognized credential that does not have an Interprovincial Standards Red Seal
- Complete the Equivalency Application and deliver it in person to an Apprenticeship and Industry Training Office. Government issued photo identification is required.
- Pay the non-refundable application fee as identified on the application noted above

A person who holds a valid recognized credential, as described above, does not require an Alberta Equivalency document to work in the trade in Alberta. However, some employers may require Alberta documentation as proof that the holder is allowed to work in the trade or that the holder's credential is recognized.

Qualification Certificate Program

To qualify for a Qualification Certificate *based on a recognized credential*, a person must:

- hold a valid recognized credential that does not have an Interprovincial Standards Red Seal
- complete the Qualification Certificate – Recognized Credential Application and submit it to an Apprenticeship and Industry Training Office.
- pay the non-refundable application fee as identified on the application noted above
- prepare for the exam(s) (see Exam Counselling Sheets)
 - review the Apprenticeship and Industry Training Policy on Cheating
 - review available resource materials (see Resource Materials - Sheet Metal Worker)
- successfully complete the required exam(s)

To qualify for an Alberta Qualification Certificate *based on work experience*, a person must:

- Have at least 8,550 hours and 72 months of 'hands-on' work experience as a sheet metal worker

Time spent on supervisory or foreman duties, counter work, heading the tool crib, or on a training course is NOT counted as 'hands-on' work experience.



- Complete the Qualification Certificate - Work Experience Application (and review the Application Guide) and submit it to an Apprenticeship and Industry Training Office
- Pay the non-refundable fees as identified on the application noted above

This application fee covers the review of the application, the assessment and confirmation of the applicant's work experience hours/months, the administration of the applicant's demonstration of competency, and one attempt at the Qualification Certificate theory examination. The Qualification Certificate practical examination requires a separate fee as identified on the application noted above.

- Prepare for the exam(s)
 - review the Apprenticeship and Industry Training Policy on Cheating
 - review available resource materials
- Successfully complete the required exam(s)

