



# Mechanical Contractors Association of Canada



## MECHANICAL CONTRACTING CAREERS

### BOILERMAKER

Could you work with heavy-duty machinery and solve heavy-duty problems? Do you like precise work? Are you good with your hands? Do you enjoy travel and working outdoors? Do you crave excitement and variety? Do you like working as part of a team? Then Boilermaker could be the career for you!

#### Also known as

- Boilermaker Apprentice
- Boiler Fitter
- Boiler Installer
- Construction Boilermaker
- Industrial Boilermaker
- Marine Boilermaker
- Pressure Vessel Fabricator

#### What the work is like

Boilermakers fabricate, assemble, install, test, maintain and repair boilers, vessels, tanks, towers, heat exchangers and other heavy-metal structures.

They are employed in building manufacturing and power generation plants, in shipbuilding and on other industrial projects.

Boilermakers work mostly in the Heavy Industrial, and Institutional and Commercial construction sectors.

#### Your duties

Boilermakers may specialize in rigging and hoisting, preparation and layout, or welding.

Depending on your speciality, your duties may include the following:

- building and installing boilers
- laying out plate or sheet steel and marking cuts, bends and welds
- fitting and welding metal sections together
- maintaining and repairing boilers
- directing crane operators during installation or repair of boilers
- reading and interpreting blueprints

## **Work conditions**

The standard work week for boilermakers is 40 hours (8 hours a day, 5 days a week). As with many careers in construction, there are peak periods that will require you to work overtime. The number of additional hours you work each week depends on the construction sector and region you work in, and will vary from one job to the next.

As a Boilermaker, you may work indoors or outdoors, usually on a construction site and with a team of other construction professionals. The job is physically demanding and often involves working with heavy machinery or power tools at heights.

As with all careers in the construction industry, safety is the top priority. Boilermakers are trained to work safely and wear special equipment to protect themselves from injury.

## **Essential Skills**

Human Resources and Skills Development Canada (HRSDC) has identified nine Essential Skills that are necessary to succeed in the workplace. These skills provide the foundation for learning all other skills and apply to most construction careers. Best of all, you can learn and improve on these skills in school, on the job and during your everyday life.

The most important Essential Skills for boilermakers are the following:

- Document Use – reading and interpreting documents to extract information
- Numeracy – working with numbers to perform calculations
- Oral Communication

[Click here](#) to see how these skills are applied on the job. You can also [click here](#) to learn more about Essential Skills.

## **Apprenticeship**

Apprenticeship is one way of starting out in the construction industry. It involves both classroom studies and on-the-job training under the supervision of a certified Boilermaker, called a journeyman.

As an apprentice, you earn while you learn and are paid by the hour while working on the job site. Wages start at about 60% of a journeyman's hourly rate and increase during your apprenticeship until you reach the full rate.

## **Entering an apprenticeship program**

Requirements for boilermaker apprenticeship programs vary across Canada. In most provinces and territories, you must be at least 18 years old and have a Grade 12 education or equivalent to enter the program. You may find it helpful to have courses in English and math.

Some provinces and territories offer secondary school apprenticeship programs that allow high school students to work towards a career as a Boilermaker.

For more information, check out the [Apprenticeship](#) section.

## Program length

Boilermaker apprenticeship programs vary across Canada, but generally involve three 12-month periods, including at least 4,500 hours of on-the-job training, four six-week blocks of technical training and a final certificate exam.

Related work experience or completion of a boilermaker program at a college or technical institute can reduce the time required to complete your apprenticeship.

## Certification

Certification is required in Alberta and Quebec, and is available but voluntary in all other provinces and territories. Even where certification is voluntary, it is still recommended. Certification tells employers and other workers that you are a skilled professional. It also helps you get jobs.

To be certified as a Boilermaker, you usually need to complete a three- to four-year apprenticeship program. Once you successfully complete the required on-the-job training, technical training and exams, you are awarded a journey person certificate.

You may be eligible for certification in some provinces and territories if you have more than four years of on-the-job experience and some high school, college or industry courses in boilermaking.

As a certified Boilermaker, you may attempt the Interprovincial Exam to qualify for the Interprovincial Standards' Red Seal. With a Red Seal, you can work as a Boilermaker anywhere in Canada.

To keep your skills current, you have to keep up with new technological developments by reading and talking with other boilermakers.

## Where to study in Canada

In addition to the Canadian schools listed below, many employer and labour organizations offer training.

### Alberta

[Northern Alberta Institute of Technology](#)

### Nova Scotia

[Nova Scotia Community College](#)

### British Columbia

[British Columbia Institute of Technology](#)

### Ontario

[Humber College](#)

### Manitoba

[Red River College](#)

### Quebec

[Centre de formation des métiers de l'acier](#)

### New Brunswick

[New Brunswick Community College](#)

## Specialty programs

In addition to the schools listed above, new Canadians, Aboriginal Canadians and women can enrol in one of the following specialty programs:

For new Canadians with experience as boilermakers, [NorQuest College](#) offers a program called Transitions to Technical and Trades Careers.

[Red River College](#) offers introductory programs specifically for women and Aboriginal Canadians interested in construction careers.

## Salary ranges

Boilermaker hourly wages vary depending on the contract, the company, collective agreements, and local and national economic conditions. Typical hourly wage ranges for boilermakers (based on national or regional averages) are as follows:

### Junior apprentices

Region	Typical hourly rate
National average	\$17-\$25
Atlantic Canada	\$16-\$19
Ontario and Quebec	\$21-\$25
Western Canada	\$21-\$26

Based on national averages, junior apprentices can earn annual salaries ranging from \$35,000 to \$52,000 per year, not including overtime.

### Journeypersons

Region	Typical hourly rate
National average	\$26-\$33
Atlantic Canada	\$24-\$30
Ontario and Quebec	\$28-\$33
Western Canada	\$30-\$49

Based on national averages, journeypersons can earn annual salaries ranging from \$54,000 to \$69,000 per year, not including overtime.

### Highly experienced journeypersons

Region	Typical hourly rate
National average	\$32-\$44
Atlantic Canada	\$32-\$44
Ontario and Quebec	\$37-\$43
Western Canada	\$39-\$52

Based on national averages, highly experienced journeypersons can earn annual salaries ranging from \$67,000 to \$92,000 per year, not including overtime.

Construction work can involve overtime, so your total annual salary will vary depending on the number of overtime hours you work. In addition to the hourly rate, many construction workers receive statutory holiday and vacation pay. Depending on the contract, you may also receive benefits such as group insurance for health, dental, and vision care, as well as retirement packages and training benefits up to 30% of your hourly rate. If you are self-employed, it is up to you to arrange your own benefits.

### Building your career

With experience and additional training, you can move into supervisory roles, including foreman or superintendent. As with most construction careers, your skills are portable. If you want to move, you can take your skills with you.