

TRADE PROFILE

Sprinkler Fitter



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TRADE PROFILE

SPRINKLER FITTER



STRUCTURE OF THE TRADE PROFILE

This profile has two sections that provide a snapshot of the trade's description, and all trade activities as they are organized in the Red Seal Occupational Standard:

Description of the Sprinkler Fitter trade: an overview of the trade's duties, work environment, job requirements, similar occupations and career progression

Task Matrix: a chart which outlines graphically the major work activities, tasks and sub-tasks of this trade

Major Work Activity (MWA): the largest division within the standard that is comprised of a distinct set of trade activities

Task: distinct actions that describe the activities within a major work activity

Sub-task: distinct actions that describe the activities within a task

A complete version of the occupational standard, which provides additional detail for the trade activities, skills and knowledge can be found at www.red-seal.ca

DESCRIPTION OF THE SPRINKLER FITTER TRADE

“Sprinkler Fitter” is this trade’s official Red Seal occupational title approved by the CCDA. This analysis covers tasks performed by sprinkler fitters whose occupational title has been identified by some provinces and territories of Canada under the following names:

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
Pipefitter - Fire Protection Mechanic Specialty (Construction)					✓								
Sprinkler and Fire Protection Installer						✓							
Sprinkler System Fitter	✓	✓	✓	✓			✓	✓		✓	✓	✓	✓
Sprinkler Systems Fitter									✓				

Sprinkler fitters lay out, install, repair, maintain, modify, inspect and test fire protection systems in a variety of buildings and settings. They work on fire protection systems such as wet, dry, water mist, preaction, foam, deluge, standpipe, clean agent, carbon dioxide, hybrid, antifreeze, and wet and dry chemical fire suppression system. Their duties include reading and interpreting engineered drawings, installing hangers and clamps to support the piping system, preparing the pipe, joining pipe using a variety of methods, installing associated equipment including cross-connection control, as well as maintaining, inspecting and testing all types of fire protection systems.

Sprinkler fitters usually, but not exclusively, work on industrial, institutional, commercial and residential sites such as office buildings, plants, factories, hospitals, hotels, houses, apartment buildings, airports and personal care homes. They may work for trade contractors, maintenance departments of factories, and servicing companies. They may also be self-employed. Sprinkler fitters may specialize in installation, maintenance, testing or inspection.

Sprinkler fitters use tools and equipment such as hand tools, portable and stationary power tools, measuring and testing equipment, access equipment, and rigging, hoisting and lifting equipment.

Sprinkler fitters work primarily indoors, often in unheated or temporarily heated spaces. They may also be required to install outdoor systems both above and below ground. The installation of sprinkler equipment takes place throughout all phases of construction, typically in the mid-to later stages of new construction or in situations where renovation of existing structures is undertaken or upgrading is legislated. Sprinkler fitters frequently work on the same site more than once and routinely perform a variety of tasks covering all aspects of the trade. They are frequently required to work in confined spaces and at heights. They may occasionally experience physical discomfort due to extensive lifting of various weights overhead, repetitive motion, temperature changes, noise and dust.

Key attributes for persons entering this trade are mechanical and mathematical aptitude, manual dexterity, good communication and problem solving skills and the ability to pay close attention to detail. Physical strength and stamina, and the ability to work at a considerable height are also assets in this trade.

This standard recognizes similarities or overlaps with the work of plumbers and steamfitter-pipefitters.

Experienced sprinkler fitters may advance to positions such as foreman, estimators, contractors, inspection personnel and instructors. They also act as mentors and trainers of apprentices in the trade.

SPRINKLER FITTER

TASK MATRIX

A - PERFORMS COMMON OCCUPATIONAL SKILLS

Task A-1 Performs safety-related functions	A-1.01 Maintains safe work environment	A-1.02 Uses personal protective equipment (PPE) and safety equipment	A-1.03 Performs lock-out and tag-out procedures
	A-1.04 Performs work in confined space		
Task A-2 Uses and maintains tools and equipment	A-2.01 Uses hand tools	A-2.02 Uses portable and stationary power tools	A-2.03 Uses measuring and testing equipment
	A-2.04 Uses access equipment	A-2.05 Uses rigging, hoisting and lifting equipment	A-2.06 Uses soldering and brazing equipment
Task A-3 Organizes work	A-3.01 Interprets codes, standards, regulations and procedures	A-3.02 Uses drawings and specifications	3.03 Uses documentation and reference material
	A-3.04 Plans job tasks and procedures	A-3.05 Prepares work site	A-3.06 Performs layout of systems
Task A-4 Commission systems	A-4.01 Commissions water supply systems	A-4.02 Commissions fire protection systems	
Task A-5 Uses communication and mentoring techniques	A-5.01 Uses communication techniques	A-5.02 Uses mentoring techniques	

B - INSTALLS WATER SUPPLY

Task B-6 Installs underground water supplies	B-6.01 Supervises trenching and backfilling (NOT COMMON CORE)	B-6.02 Installs underground piping and components (NOT COMMON CORE)	B-6.03 Flushes underground system
Task B-7 Installs fire pump units	B-7.01 Determines location of pumps, drivers, controllers and components	B-7.02 Installs pumps, drivers, controllers and components	
Task B-8 Installs fire department connections	B-8.01 Determines location, size and type of fire department connections	B-8.02 Installs fire department connection piping and components	
Task B-9 Installs private water supply systems	B-9.01 Installs water tanks	B-9.02 Installs related equipment	

C - INSTALLS PIPING

Task C-10 Prepares pipe, tube and fittings for installation	C-10.01 Cuts pipe and tube	C-10.02 Bends pipe and tube	C-10.03 Threads pipe
	C-10.04 Grooves pipe	C-10.05 Drills pipe and tube	C-10.06 Grinds pipe
	C-10.07 Prepares fittings		
Task C-11 Installs pipe, tube and fittings	C-11.01 Installs steel pipe, tube and fittings	C-11.02 Installs plastic pipe, tube and fittings	C-11.03 Installs copper pipe, tube and fittings
	C-11.04 Paints and labels pipe and tube		

Task C-12
Installs piping components

C-12.01 Selects sprinklers

C-12.02 Installs sprinklers and nozzles

C-12.03 Installs sleeves

C-12.04 Installs supports and hangers

C-12.05 Installs seismic-protection

C-12.06 Installs cross-connection control assemblies

C-12.07 Installs system drainage

D - INSTALLS AND LAYS OUT FIRE PROTECTION SYSTEMS AND DEVICES

Task D-13
Installs water-based systems

D-13.01 Installs wet pipe systems

D-13.02 Installs dry pipe systems

D-13.03 Installs antifreeze systems

D-13.04 Installs preaction/deluge systems

D-13.05 Installs foam systems

D-13.06 Installs standpipe systems

D-13.07 Installs water mist and hybrid systems

Task D-14
Installs specialty fire suppression systems

D-14.01 Installs dry and wet chemical, clean agent and carbon dioxide systems

D-14.02 Installs portable extinguishers

Task D-15
Installs detection devices

D-15.01 Installs wet and dry pilot lines

D-15.02 Installs heat-actuated devices (HADs) (NOT COMMON CORE)

D-15.03 Installs spark detection systems (NOT COMMON CORE)

D-15.04 Installs air sampling systems (NOT COMMON CORE)

D-15.05 Installs electrical detection systems (NOT COMMON CORE)

Task D-16
Installs signal-initiating devices

D-16.01 Installs alarm-initiating devices

D-16.02 Installs supervisory-initiating devices

E - INSPECTS, TESTS AND MAINTAINS (ITM) FIRE PROTECTION SYSTEMS

Task E-17 Maintains and repairs fire protection systems	E -17.01 Troubleshoots fire protection systems	E -17.02 Repairs deficiencies	E -17.03 Performs scheduled maintenance
Task E -18 Inspects and tests fire protection systems	E -18.01 Performs scheduled tests	E -18.02 Performs scheduled inspections	E -18.03 Inspects portable fire extinguishers