

OCCUPATIONAL
TOOLS AND EQUIPMENT LIST

Sprinkler System Installer



Government of Newfoundland Labrador
Department of Education
Institutional & Industrial Education Division

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Preface

This document is intended as a companion to the March 2010 Plan of Training for the **Sprinkler System Installer** occupation. It identifies the necessary tools and equipment required by apprentices and training institutions for the completion of apprenticeships.

Acknowledgements

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We offer you a sincere thank you.

Contact Information

Department of Education
Institutional and Industrial Training Section
Tel: 709-729-2729 / 1-877-771-3737
Email: app@gov.nl.ca
Web: www.gov.nl.ca/app

Note:

The numbers suggested in the following Tools and Equipment List represent the required minimum. Please verify this list with your selected training institution.

Tools and Equipment List Sprinkler System Installer

SECTION A: TOOLS AND EQUIPMENT REQUIRED BY STUDENT			
Item	Units for Individual Students	Required for Entry (E) Advanced (A) Both (B)	Comments
Safety Equipment			
Coveralls	1	B	
Hard Hat	1	B	CSA approved
Leather Gloves	1	B	
Safety Glasses	1	B	CSA approved with side shield protection
Safety Steel Toed Boots	1	B	Must meet CSA standards. 9" high recommended.
Safety Vest	1	B	
Hand Tools			
Calculator (Scientific)	1	B	
Drywall Saw	1	B	
Hacksaws (18 teeth per inch)	1	B	
Levels – 9" Torpedo	1	B	
Measuring Tapes - Standard/Metric (25')	1	B	
Philips Screwdriver – (#1, #2, #3)	1 Set	B	
Pipe Wrenches – 8"	1	B	
Pliers - Vice Grip (6")	1	B	
Robertson Screwdrivers – (#1, #2, #3)	1 Set	B	
Scale Ruler (Metric/Imperial)	1	B	

Note: If identifying sets, please include specific information.

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Safety Equipment				
Dust Mask	45	1	B	
Ear Plugs	1 box of 100	1	B	
Eye Wash Station	1	15	B	
Fire Blanket	1	15	B	
First Aid Station	1	15	B	
Full face shield	3	5	B	
Hard Hat	3	5	B	CSA approved
Lanyard – 6'	5	3	B	
Leather Gloves	3	5	B	
Retractable Lanyard – 10'	2	8	B	
Safety Glasses	3	5	B	CSA Approved with side shield protection
Safety Harness	5	3	B	
Safety Vest	3	5	B	
Hand Tools				
Adjustable (Crescent Style) Wrench	5 - 8"	3	B	
	5 - 10"	3		
	5 - 12"	3		
	2 - 15"	8		
Chisel – Cold (½" to 1")	1 set	15 per set	B	
Combination Wrench – Metric (8 mm to 32 mm)	2 sets	8 per set	B	
Combination Wrench – Standard (1/4" to 1 ¼")	2 sets	8 per set	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION

Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Contour Marker /Center Finder	1	15	B	
Drywall Saw	3	5	B	
File (12" Half Round Bastard Cut)	5	3	B	
Hacksaws (18 teeth per inch)	3	5	B	
Hammers - Ball Pein (24 oz)	5	3	B	
Level – 2'	2	8	B	
Level – 9" Torpedo	3	5	B	
Measuring Tapes - Standard/Metric (25')	3	5	B	
Philips Screwdriver – (#1, #2, #3)	2 sets	8 per set	B	
Pipe Tap and Die (1/4" to 2")	1 set	15 per set	B	
Pipe Wrench	3 - 8" 3 - 10" 3 - 12" 3 - 14" 8 - 18" 8 - 24" 2 - 36"	5 5 5 5 2 2 8	B	
Pipe Wrench - Compound Leverage (36" capacity)	1	15	B	
Pipe Wrench - Hex Valve Wrench (Up to 3 ½")	1	15	B	
Pliers – Channel Lock (12")	2	8	B	
Pliers – Linesman (9")	2	8	B	
Pliers – Needle Nose (6")	2	8	B	
Pliers - Vise Grip (6")	5	3	B	
Plumb Bob	3	5	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Pry Bar - Flange Alignment	1	15	B	
Robertson Screwdrivers – (#1, #2, #3)	2 sets	8 per set	B	
Slotted (flat) Screwdrivers - (1/4", 5/16", 3/8")	2 sets	8 per set	B	
Torx screwdrivers – (#10, #15, #20, #25)	2 sets	8 per set	B	
Torque Wrench	2	8	B	
Tube Cutter – Copper and Plastic (½" – 2")	5	3	B	
Tube Reamer/Cleaner - Copper and Plastic (½" – 2")	5	3	B	
Wire Brush	5	3	B	
Wrench - Hex Key (Metric) Set (1 mm to 15 mm)	1 set	15 per set	B	
Wrench - Hex Key (Standard) Set (1/16" to 9/16")	1 set	15 per set	B	
Specialty Hand Tools				
Backflow Test Kit	2 kits	8 per kit	A	
Flow Meter	2	8	B	
Removal Tool and Packing Tool (for Valve and Pump Packing)	1 set	15 per set	B	
Sprinkler Head Wrench	1 per each type of Specialty Sprinkler Head	15	B	Compatible with school supplied sprinkler head – each sprinkler head has its own specific type of wrench for installation
Victaulic Wrench (9/16" to 1 1/16")	3 sets	5 per set	B	
Power Tools				

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Chop Saw – (for metal cutting) - 12" - 14" blade	1	15	B	
Chop Saw Blade	1 box of 10	15 per box	B	
Drill Bits – (for concrete) – ¼" to ¾"	1 set	15 per set	B	
Drill Bits – (for steel) – 1/8" to ½"	1 set	15 per set	B	
Drill – Electric (1/2")	1	15	B	
Drill – Hammer	1	15	B	
Grinder – Electric (4 ½" or 5" angle)	1	15	B	
Hole Saw – (for bimetal) – ¾" to 4"	1 set	15 per set	B	
Knife Groover – 1" to 2"	1	15	B	
Pipe Roll Groover – Lever (2" to 4")	1	15	B	
Reciprocating Saw	1	15	B	
Reciprocating Saw Blades – (bimetal) 3" – 9"	1 set	15 per set	B	
Shop Equipment				
All units must have complete safety equipment, safety controls and associated parts to make them fully functional for training applications.				
Drill Press - Floor Mounted	1	15	B	
Hydrostatic Test Pump	1	15	B	
Pipe Stand (Up to 6" capacity)	4	4	B	
Portable Pipe Vise – Trist and Chain Vise	4	4	B	
Pipe Threading Equipment				
Bolt Threading Die (¼" to ¾")	1 set	15 per set	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Carriage with handle (for cutter /reamer/die head)	1	15	B	
Drop Head Die (1/8 to 2")	2 sets	8 per set	B	
Foot Operated Deadman Switch	1	15	B	
Jam Proof Ratchet Threading Die Head Set (1" to 2" capacity)	1 set	15 per set	B	
Nipple Chuck (Up to 2" capacity)	2 sets	8 per set	B	
Pipe Cutter - Single Wheel	5 – 1/8" to 2" 1 – 2" to 4" 1 – 4" to 6"	3 15 15	B	
Pipe Reamer - Spiral	3	5	B	
Portable Threading Machine with Oiler	2	8	B	
Power Threading Machine	1	15	B	**Rigid 300 or equivalent
Rigging Equipment				
Chain Hoist - Chainfall (1/2 ton minimum)	4	4	B	
Chain Puller – Come Along (1/2 ton minimum)	4	4	B	
Kevlar Slings	4	4	B	
Poly Synthetic Sling	4	4	B	
Shackles (1" - 2")	8	2	B	
Synthetic Rope – (5/8")	1 - 200' roll	15 per roll	B	
Wire Rope Sling	4	4	B	
Ladders and Scaffolding				
Extension Ladder – 20'	1	15	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Scaffolding Sections (Braces, Decking, Toe Boards, Castors, Ends, and Outriggers)	4 Complete Sections	4 per Section	B	
Step Ladder – 6', 8' and 10'	2 of each	8 per each	B	
Blueprint Interpretation				
Calculator (Scientific)	3	5	B	
Drafting Set (45/45/90 - 30/60/90 triangles, straight edge, pencils, T-squares, compass, protractor)	15 sets	1 per set	B	
Scale Ruler (Metric/Imperial)	3	5	B	
Sprinkler Specialty Equipment				
All valves and systems to be complete with adequate water supply for use, and all of the safety and alarm devices required for proper operation of the Sprinkler Valves and pumps				
Dry Sprinkler Valve Assembly	1	15	B	
Fire Alarm Control Panel	1	15	B	
Fire Pump with Controller	1	15	B	
Jockey Pump with Controller	1	15	B	
Manometer	1	15	B	
Pitot Tubes	2	8	B	
Play Pipes	4	4	B	
Preaction Sprinkler Valve Assembly	1	15	B	
Pressure Gauge Kit	1	15	B	
Refractometer	1	15	B	
Sprinkler Head Box (for spare sprinkler heads)	1	15	B	
Tachometer	1	15	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Wet Sprinkler Valve Assembly	1	15	B	
Equipment				
Broom	4	4	B	
Extension Cord (20' - 25')	8	2	B	Recommended to be industrial quality 12 gauge cords with GFCI built in or added on
Garbage Container	4	4	B	
Hand Cleaner	2 litres	8	B	
Shop Cloths	2 boxes	8 per box	B	

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