

OCCUPATIONAL  
TOOLS AND EQUIPMENT LIST

**Instrumentation and Control Technician**



Government of Newfoundland Labrador  
Department of Immigration, Skills and Labour  
Apprenticeship and Trades Certification Division

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## **Preface**

This document is intended as a companion to the December 2011 Plan of Training for the Instrumentation and Control Technician 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**

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## **Note:**

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

## Tools and Equipment List Instrumentation and Control Technician

SECTION A: TOOLS AND EQUIPMENT REQUIRED BY STUDENT			
Item	Units for Individual Students	Required for Entry (E) Advanced (A) Both (B)	Comments
<b>Protective Clothing and Devices</b>			
Gloves	1	B	
Goggles/Safety Glasses	1	B	
Hard Hat	1	B	CSA Approved - Side Impact
Safety Boots	1	B	
<b>Hand Tools</b>			
Allen wrenches: Imperial and Metric	1	B	
Crescent Wrenches - 6"	1	B	
Diagonal Cutters	1	B	
Ignition Wrenches (1/8" – 5/15")	1	B	
Jewelers Screwdrivers (7 in each set)	1	B	
Measuring Tape	1	B	
Multi-head Screwdriver	1	B	
Needle-Nose Pliers	1	B	
Scientific Calculator	1	B	
Wire Crimpers / Strippers	1	B	

Note: If identifying sets, please include specific information.

<b>SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION</b>				
<b>Item</b>	<b>Units per 15 Students</b>	<b>Maximum Students per Unit</b>	<b>Required for Entry (E) Advanced (A) Both (B)</b>	<b>Comments</b>
<b>HAND TOOLS</b>				
Allen Wrenches: Imperial and Metric	3 sets	5 per set	B	
Ball Peen Hammer	2	8	B	
Calipers	1	15	B	For demonstration only
Centre Punch	2	8	B	
Crescent Wrenches - 6", 8", 12"	3 x 6" 1x8" 1x12'	5 per 6" 15 per 8" and 12"	B	
Diagonal Cutters	3	5	B	
Drill Bits (Set of 1/32" – 1/2")	3	5 per set	B	
Easy Outs	2 sets	8 per set	B	
Fixed Vice	2	8	B	
Flaring Tools	2	8	B	
Fuse Puller	1	15	B	
Gasket Cutters	1 set	15 per set	B	
Gauge Pointer Puller	3	5	B	
Hack Saw	2	8	B	
Hack Saw Blades	2 pkgs of 10	8 per pkg	B	
Hand Files (Fine, Medium and Course)	3 of each	5 per each	B	
Ignition Wrenches (1/8" – 5/15")	3 sets	5 per set	B	
Jewelers Screwdrivers (7 in each set)	3 sets	5 per set	B	
Locking Pliers - 12"	3	5	B	

**SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION**

<b>Item</b>	<b>Units per 15 Students</b>	<b>Maximum Students per Unit</b>	<b>Required for Entry (E) Advanced (A) Both (B)</b>	<b>Comments</b>
Linesman Pliers – 6"	2	8	B	
L-Square	3	5	B	
Measuring Tape	5	3	B	
Micrometer	1	15	B	For demonstration only
Needle-Nose Pliers	3	5	B	
Nut Drivers (1/8" – 1/2")	3 sets	5 per set	B	
Open-End Wrenches (Combination – 1/4" - 1")	3 sets	5 per set	B	
Packing Puller	2 sets	8 per set	B	
Pipe Wrenches (6" & 10")	2 of each	8 per each	B	
Punches	2 sets	8 per set	B	
Screwdrivers (Philips, Slot and Robinsons)	3 of each	5 per each	B	
Screw Extractors	2 sets	8 per set	B	
Screw Starters (Philips and Slot)	3 sets	5 per set	B	
Sockets (Imperial and Metric, 1/4", 3/8" and 1/2" Drive)	2 sets of each	8 per set	B	
Soft-Face Hammer	2	8	B	
Strap Wrenches	1	15	B	
Taps and Die Set (Imperial and Metric, up to 1/2")	1 each	15 per each	B	
Telescopic Magnet	2	8	B	
Telescopic Mirrors	2	8	B	
Torpedo Level	3	5	B	
Torque Wrench - 1/2" drive	12	15	B	For demonstration only

<b>SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION</b>				
<b>Item</b>	<b>Units per 15 Students</b>	<b>Maximum Students per Unit</b>	<b>Required for Entry (E) Advanced (A) Both (B)</b>	<b>Comments</b>
Tube Benders - 1/4", 3/8" & 1/2"	8x 1/4" 1x 3/8" and 1/2"	2 per 1/4" 15 per 3/8" and 1/2"	B	
Tube Cutters	5 sets	3 per set	B	
Tubing Reamers	2	8	B	
Tweezers	2	8	B	
Vernier Calipers	1	15	B	For demonstration only
Vice Grips – 6", 8" & 10"	2 of each	8 per each	B	
Wire Brushes	2	8	B	
Wire Crimpers / Strippers	5	3	B	
<b>POWER TOOLS</b>				
Bench Grinder	1	15	B	
Concrete Drill Bits - (3/16" – 3/8")	1 set	15 per set	B	
Hammer Drill - 3/8"	1	15	B	
Jig Saw	1	15	B	
Portable Electric Drill – 3/8"	3	5	B	
Soldering Iron	5	3	B	
<b>TEST EQUIPMENT AND ACCESSORIES</b>				
Current Calibrator	5	3	B	
Deadweight Tester	2	8	B	
Decade Resistance Box	2	8	B	
Dew Point Tester	1	15	B	
Digital Multimeter	5	3	B	
Frequency Counter	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
Frequency Generator	1	15	B	
Grounding Mat	1	15	B	
Hand-Held Configurators	5	3	B	
Hand-Held Pyrometer	1	15	B	
Hydrometer	1	15	B	
Magmeter (Portable)	1	15	B	
Manometer and Standards	5	3	B	
Millivoltmeter Calibrator	5	3	B	
Modems (AMS)	8	2	B	
Oscilloscope	1	15	B	
Personal Computer (Shop)	8	2	B	
pH Simulator/Buffers	5 sets	3 per set	B	
Pneumatic Test Stand (with 24V DC power supply)	8	2	B	
Printers	1	15	B	
Regulators	8	2	B	
Signal Generators	1	15	B	For demonstration only
Strobotac	1	15	B	For demonstration only
Temperature Bath	4	4	B	
Test Gases (Oxygen, LEL)	3x1Liter btl of each	5 per each btl	B	
Test Gauges (Pressure Vacuum) 0-280" inwc 0-30" Hg vacuum 0-30 psi	5 of each	3 per each	B	

<b>SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION</b>				
<b>Item</b>	<b>Units per 15 Students</b>	<b>Maximum Students per Unit</b>	<b>Required for Entry (E) Advanced (A) Both (B)</b>	<b>Comments</b>
0-60 psi 0-100 psi 0-1000 psi				
Thermometer	5	3	B	
Vacuum Pumps	5	3	B	
Wrist Ground Strap	5	3	B	
<b>RELATED TOOLS AND EQUIPMENT</b>				
Come Along (1 ton)	2	8	B	
Drill Press	1	15	B	
Nylon Slings	2	8	B	
Rope – 100'	1 roll	15	B	
Shackles (1" – 3")	1 set	15 per set	B	
Step Ladders – 8'	1	15	B	
<b>PROTECTIVE CLOTHING AND DEVICES</b>				
Disposable Coveralls	15	1	B	
Disposable Dust Mask	15	1	B	
Ear Plugs	15	1	B	
Eye Wash Bottle	1	15	B	
Face Shield	2	8	B	
Fire Extinguishers	as required	Per class	B	
First Aid Kit	as required	Per class	B	
Geiger Counter	1	15	B	
Gloves	3	5	B	
Hard Hat (with replaceable liners)	3	5	B	



**SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION**

<b>Item</b>	<b>Units per 15 Students</b>	<b>Maximum Students per Unit</b>	<b>Required for Entry (E) Advanced (A) Both (B)</b>	<b>Comments</b>
Safety Glasses	5	3	B	
Splash Goggles	5	3	B	

Note: If identifying sets, please include specific information.