

2022 POST-SECONDARY PROVINCIAL SKILLS CANADA COMPETITION



INSPIRE.
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Contest Description

Edmonton Expo Centre, Edmonton
May 4 & May 5, 2022

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---------------|-------------|----------------|-------|-----------------|-------------|-----------------|-------|----------------|-------------|---------------|---|-------------|---------------|-------------|---------------|-------|---------------|-------------|----------------|-------|-----------------|-------------|----------------|
| EVENT: Refrigeration and Air Conditioning | LEVEL: Post-Secondary | | | | | | | | | | | | | | | | | | | | | | | | |
| WORLDSKILLS TRADE #: 38 | LOCATION: Hall A, Edmonton EXPO Centre, Edmonton | | | | | | | | | | | | | | | | | | | | | | | | |
| DURATION: 12 Hrs. (Two Days) | | | | | | | | | | | | | | | | | | | | | | | | | |
| COMPETITION SCHEDULE: | | | | | | | | | | | | | | | | | | | | | | | | | |
| May 4: | May 5: | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr><td>ORIENTATION</td><td>7:30AM-8:00AM</td></tr> <tr><td>COMPETITION</td><td>8:00AM-10:00AM</td></tr> <tr><td>BREAK</td><td>10:00AM-10:15AM</td></tr> <tr><td>COMPETITION</td><td>10:15AM-12:15PM</td></tr> <tr><td>LUNCH</td><td>12:15PM-1:00PM</td></tr> <tr><td>COMPETITION</td><td>1:00PM-3:00PM</td></tr> </table> | ORIENTATION | 7:30AM-8:00AM | COMPETITION | 8:00AM-10:00AM | BREAK | 10:00AM-10:15AM | COMPETITION | 10:15AM-12:15PM | LUNCH | 12:15PM-1:00PM | COMPETITION | 1:00PM-3:00PM | <table border="1"> <tr><td>ORIENTATION</td><td>7:00AM-7:30AM</td></tr> <tr><td>COMPETITION</td><td>7:30AM-9:30AM</td></tr> <tr><td>BREAK</td><td>9:30AM-9:45AM</td></tr> <tr><td>COMPETITION</td><td>9:45AM-11:45AM</td></tr> <tr><td>LUNCH</td><td>11:45AM-12:30PM</td></tr> <tr><td>COMPETITION</td><td>12:30PM-2:30PM</td></tr> </table> | ORIENTATION | 7:00AM-7:30AM | COMPETITION | 7:30AM-9:30AM | BREAK | 9:30AM-9:45AM | COMPETITION | 9:45AM-11:45AM | LUNCH | 11:45AM-12:30PM | COMPETITION | 12:30PM-2:30PM |
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Please Note: Due to the uncertainty caused by COVID 19, the PSCC could be subject to change at any time based on the public health context. This document is subject to change as competition information is updated. Competitors are responsible for staying up to date with the most recent information. Check the footer for last updated date. Changes will be highlighted in yellow.

CONTEST INTRODUCTION:

To assess the competitors ability to demonstrate theoretical and practical skills in performing Refrigeration and Air Conditioning system installation, start-up, maintenance/service, troubleshooting, and customer relations.

SKILLS AND KNOWLEDGE TO BE TESTED:

- Exemplify safety, use of PPE & Code of Practice
- Maintain neatness and cleanliness
- Effective planning and use of time

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BOSCH



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- Accurate application of wiring diagrams
- Troubleshooting and installation of wiring and controls
- Pipe measurement, cutting, connecting within tolerances
- Demonstrate efficient use of materials
- Demonstrate proper/safe use of trade specific tools & equipment
- Perform system pressure testing, evacuation, and charging
- Perform system commissioning
- Exhibit interpersonal ability

PROJECT DESCRIPTION

- Troubleshoot an HVAC system and Refrigeration system
- Low temperature refrigeration system installation project

EQUIPMENT & MATERIALS

Equipment and Materials Competitors Must Supply:

| | | |
|---|---------------------------------|--|
| Common screwdrivers (Phillips, Robertson, slot, terminal) | Electrical side cutters | Swaging tool kit |
| Common nut drivers ¼" – ½" | Hammer | Inspection mirror, flashlight & spare batteries |
| Set of combination wrenches | File set | Pens, pencils, erasers, rulers, notepads & calculator |
| 6", 10", 12" adjustable wrenches | Set of imperial allen keys | Tape measure |
| Linesman, needle nose, slip joint and water pump pliers | Valve wrenches | Tubing cutter ¼" – ¾" |
| Pressure Temperature Chart | Refrigeration gauge manifold | Utility knife |
| Separate or combination wire strippers and crimpers | Flaring block and yoke | CSA approved safety glasses |
| CSA approved safety steel toed footwear | CSA approved hearing protection | Task specific gloves for brazing, refrigerant charging, mechanical work, delicate dexterity, and cutting |

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Equipment and Materials Supplied by the Committee:

| | | |
|------------------------------|--------------------------------------|--|
| Charging scale and equipment | Refrigerant | Leak Detector |
| Vacuum pump and equipment | Torches and Brazing materials | Nitrogen Cylinder and Regulator |
| Micron gauge | Tube benders (competitor can supply) | Purging flow meters |
| Electrical meters | Parts and fittings | Probe style, and pipe clamp thermometers |
| Cord Caps and Padlocks | | |

JUDGING CRITERIA

- Controls/wiring
- Piping
- Refrigerant Handling
- Safety
- Functionality/Commissioning
- Trade Knowledge
- Effective Communication

*Points will be awarded or deducted as evaluated by the judges. Competitors will be ranked by total accumulated points.

TIE BREAKING PROCESS

In the event of a tie for any ranking, total refrigeration project time will be the tie breaker.

SAFETY

The health, safety and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

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CLOTHING REQUIREMENT

Appropriate clothing (preferably natural fibers or fire retardant), free of rips or tears must be worn to compete. All clothing including boots and PPE must be in good repair, neat, clean and free of rips tears or anything that may compromise the integrity of the protection it offers (i.e. worn toes on work boots, holes in gloves). Casual wear such as shorts will not be permitted. No loose clothing or jewelry allowed for your safety. Long sleeve shirts must be worn while brazing.

ADDITIONAL INFORMATION

Skills Canada Alberta Regional and Provincial Rules and Regulations

[Regional and Provincial Rules and Regulations](#)

Competitors must be prepared to adhere to all public health measures in place at the time of the PSCC.

Lunch

Lunch for competitors will be provided by Skills Canada Alberta.

Parking & Venue Maps

<http://edmontonexpocentre.com/attend/parking/>

Competitor Registration

Competitor Registration for the PSCC will take place on Tuesday May 3, 2022 from 9:00am-6:00pm outside Hall B of the Edmonton EXPO Centre. Please note you will be required to present your COVID-19 proof of vaccination.

Virtual Awards Ceremony

The Virtual Awards Ceremony will take place **Friday, May 6th at 6:30pm**. A link will be made available on the website with additional information prior to the ceremonies.

Team Alberta Information

Team Alberta (Post-Secondary) will be selected at the PSCC happening on May 4 - May 5, 2022. Top eligible medalists will compete at the Skills Canada National Competition (SCNC) May 24-28, 2022 in

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Vancouver, BC. It is recommended that competitors review the SCNC contest description to be familiar with the national contest description and project at <http://www.skillscanada.com/>.

If a competitor is not able to attend the SCNC, competitors MUST notify Victoria Anderson Victoriaa@skillsalberta.com prior to the start of competition. If a gold medalist is not able to attend the SCNC, the next top-ranking individual will be asked to participate.

Test Project change at the Competition

Where the Test Project has been circulated to Competitors in advance, PTC can change a maximum of 30% of the work content.

Questions?

Please contact Mike Sury Mikes@skillsalberta.com if you have any questions regarding the Contest Description.

COMMITTEE MEMBERS

| | |
|--------------------------|--------------------|
| Justin Evernden – NAIT | Tyson Frank – SAIT |
| Paul Fleischhauer - SAIT | |
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