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President's Message



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I hope this message finds you and yours well and in good health

I am concerned of what is happening in our industry. We as so many disciplines have a shortage of Building Operators. This leaves open who is it that is replacing them. The companies are finding in this “gig economy” short term people who look after our vacancies. What this leads to is people who are unfamiliar with the operations running the systems. There is a recipe for disaster here. Some procedures are simple and easily followed, but some are complicated and rely on intimate knowledge of the whole building knowing the cause and the effect.

The onus is on management of the building to have prepared clear instructions on the tasks and the safe procedures in the completion of those tasks. Including as to identifying what can go wrong with each of the steps and how to proceed from there. The “Safe Work Procedure” is a requirement **by Law** for any task that has a possibility of hurting a person or the public or equipment or a property. These safe work procedures must be made available for anyone performing these tasks to review and follow. More importantly, this requirement has been around for many years. After the last two years and the requirement of bringing in more new people the spotlight is now on by enforcement to see that this is being done.

Generic processes will not work for this. Each task must have named electrical disconnects, valve schedule names and locations, equipment numbers must be named on all SWP’s as well as where locks and tags shall be applied if required and who needs to be informed. If something was to happen and the investigation team is called in and is asking management to produce said documentation, it must be presented. Failure to produce them can result in hefty fine up to \$100,000.00 as well incarceration for up to a year.

It is important to keep in mind the law, but more importantly we need to look after the workers the public and the property.

BOMA has committed to putting on a 5th class course in the new year. Please call BOMA at 403 -237-0559 and register. ABSA has made it easier for people to enter into this discipline. A Certificate of Competency is issued once you have 6 months experience in a heating plant after passing the Government exam.

I hope you come to the next meeting December 13th, 2022

Wishing you all a happy and safe holiday season ahead!

Smiles))

With kind regards,

Les Anderson PE, RPA





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Are you equally adept at troubleshooting problems in the boardroom and the boiler room? As the resident facility guru, there's a lot riding on whether or not you know the difference between sounds control and a sound investment.

Try our monthly Operator IQ challenge...answers on page 24

1. **Electric heating can be divided into two general groups:**
 - a. floor and wall
 - b. direct and indirect
 - c. wall and baseboard
 - d. radiant panel and infrared
 - e. direct and infrared
2. **Gas-fired infrared heaters use the principle of:**
 - a. heating a gas
 - b. heating a solid surface
 - c. heating a liquid
 - d. heating a porous material
 - e. all of the above
3. **In an electric snow melting unit, a thermostat should be used to automatically shut the system down when the outdoor temperature is above:**
 - a. 0°C
 - b. 1°C
 - c. 2°C
 - d. 3°C
 - e. 4°C
4. **In an internally fired, gas fired infrared heater, the surface temperature is about:**
 - a. 300°C
 - b. 400°C
 - c. 500°C
 - d. 600°C
 - e. 700°C
5. **In an open wire type heating element the resistance wire is made of:**
 - a. tungsten
 - b. magnesium oxide
 - c. mica
 - d. Steel
 - e. nickel-chromium



Thermostatic Expansion Valve Working and Types

Thermostatic Expansion Valve

A thermal expansion valve or thermostatic expansion valve is a device which controls the amount of refrigerant released into the evaporator and is intended to maintain a steady value of the superheat of the refrigerant that flows out of the evaporator. It is often abbreviated as TEV, TXV, or TX valve) is an important component in vapour-compression refrigeration and air conditioning systems. This device isn't able to regulate the evaporator's temperature to a precise value, although often described as a "thermostatic" valve. The evaporator's temperature is dependent on the evaporating pressure, which is regulated through other means (such as by adjusting the compressor's capacity). The regulation of superheat is achieved with the help of a membrane present in the valve housing. The usage of this expansion device is most common in BHPE (Brazed Plate Heat Exchanger) evaporators.

Construction

1. Metallic diaphragm:

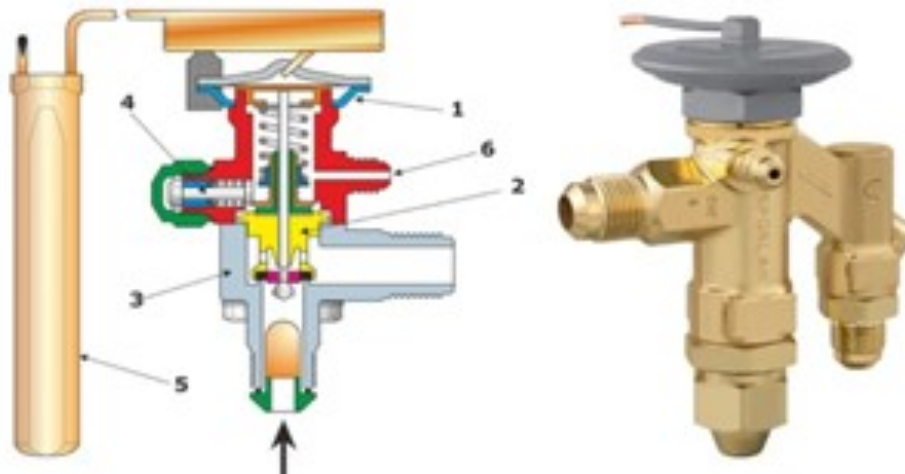
This is a flexible metallic plate that can expand because of the pressure of refrigerant inside the refrigeration or air conditioning plant.

2. Power element:

Power element is the upper portion of the thermostatic expansion valve which is filled with gas. In the case of the air conditioning system, the gas filled in element is the same as the gas filled in the air conditioning system, i.e., the refrigerant gas. For example, if the air conditioning system has R22 refrigerant, the gas filled in the power element is also R22. The power element and the feeler bulb are connected to each other through a thin tube or capillary tube and the same gas is filled in the tubing and the feeler bulb. Thus, the feeler bulb, the connecting tubing and the power element, together form a single flexible chamber. The feeler bulb is also connected to the evaporator and thus it senses the temperature

inside the evaporator of the refrigeration system. The volume of the gas inside the power element changes

according to the temperature sensed by the feeler bulb inside the evaporator. If the temperature inside the evaporator is high, then gas in the feeler bulb will expand and thus the gas in the power element will also expand and its pressure will increase. The expanded gas pressure inside



the power element tends to open the thermostatic expansion valve. There are three different types of feeler bulbs used in thermostatic expansion valves:

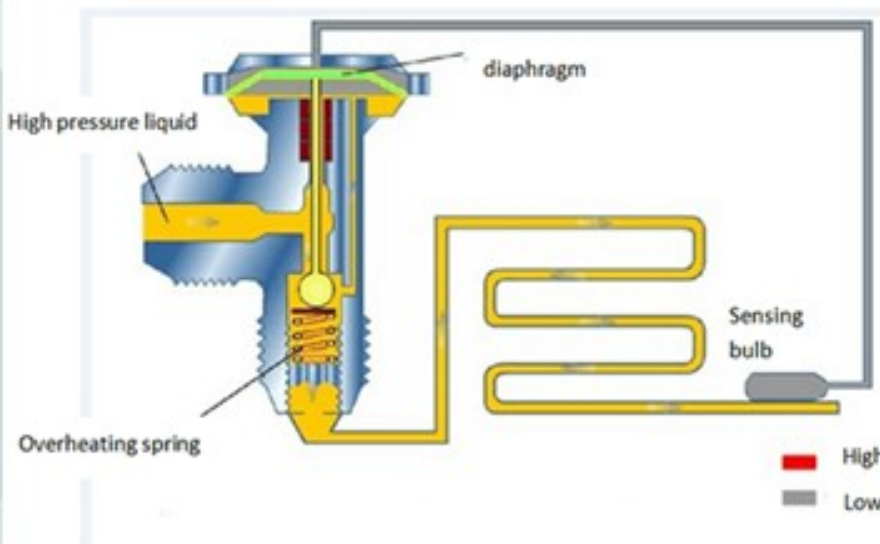
- **Liquid-charged bulbs:** Filled with a large quantity of refrigerant and contains the refrigerant in both liquid and gas state.
- **MOP (Maximum Operating Pressure) bulbs – also called gas-charged bulbs:** They are also known as gas charged bulbs and are filled with a very less quantity of refrigerant.
- **Adsorption-filled bulbs**

3. Valve seat and needle:

In the, the lower side of the thermostatic expansion valve, the valve seat and the needle are located. The metallic plate that provides passage for the flow of the refrigerant is called the valve seat. The needle

on the other hand, is connected to the lower part of the diaphragm. The needle moves inside the opening of the valve seat. Due to high pressure inside

the power element, the diaphragm moves down and thus the needle moves down as well, thereby opening the thermostatic expansion valve. When the needle moves up, the valve closes along with. An orifice is formed by the valve seat and the needle. This orifice allows the flow of refrigerant through it.



4. Spring:

The thermostatic expansion valve has a spring, located at the bottom of it. Under normal conditions, or say by default, the spring is compressed, and tends to move the needle of the valve in an upward direction in order to close the valve. Depending upon the degree of superheat in the evaporator, the pressure of the spring is adjusted by the manufacturer. The thermostatic expansion valve bought should be of required spring pressure. The spring is also fitted with a screw to adjust the spring pressure, but it's generally not advisable to use it.

5. Liquid Inlet Port and Outlet to Evaporator:

Thermostatic expansion valve has tubing coming from the condenser. Liquid inlet port is connected to that tubing. It is through this port that the refrigerant

enters the thermostatic expansion valve. There is an outlet leading to the evaporator.

The refrigerant passes through the orifice of the

valve seat and the needle and then enters the evaporator in a flashed condition.

Working of Thermostatic Expansion Valve:

As already mentioned earlier, the aim of this device is to maintain a stable superheat in the evaporator. It does so by adjusting the mass flow rate of the refrigerant.

So as we have seen above, there's a feeler bulb. The reason behind this name is that it is used to sense or feel the temperature of the evaporator. This bulb has two connections. It is connected to the output of the evaporator thermally. And it is also connected to the power element through a capillary tube. It is already mentioned that the bulb and the power element are filled with the refrigerant. But it can also be filled with some other fluid having the same thermodynamic property as the refrigerant. When there is a rise in temperature of the refrigerant in the evaporator, the fluid in the bulb and eventually the fluid in the power element expands. Thus the diaphragm (also referred to as membrane in some places) experiences a downward pressure against the spring and the needle moves downwards allowing the refrigerant to flow through the orifice. When the mass flow rate of refrigerant increases, the temperature in the outlet of the evaporator decreases too as now there will be more heat required for superheat. Thus some of the fluid in the bulb condenses, decreasing the pressure on the diaphragm. Thus the spring pushes against it and the needle moves upwards, decreasing the mass flow rate of refrigerant. Thus, eventually a balance is achieved.

Types of Thermostatic Expansion Valve:

Classification of thermal expansion valves is done on the basis of how the evaporator pressure affects the position of the needle, which controls the flow of the refrigerant. Thus, they are of two types: internally equalised and externally equalised.

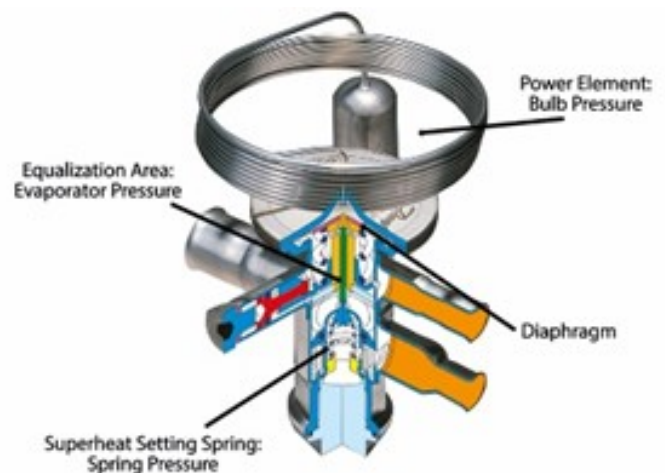
i) Internally equalised:

In these valves, the pressure in the inlet of the

evaporator is used internally to exert pressure on the diaphragm upward and thus close the valve, restricting the flow of refrigerant and equalising the pressure. This is ensured through an internal connection between the two. For these valves, there will be an increase in the superheat if the pressure in the evaporator drops. Single circuit evaporator coils use these kinds of valves. In general, they are used in the applications where the pressure drop is low.

ii) Externally equalised:

In these types of valves, the pressure at the outlet of the evaporator is used to exert an upward pressure on the diaphragm in order to close the valve, using an external equaliser tube. This type of valve is used for the applications in which a high-pressure drop is involved.



Note: These two kinds of thermostatic expansion valves can't substitute each other in their respective applications and can affect the system adversely, if interchanged. For example, if internally equalised valve is used in a high pressure drop system, it starves the coil. Thus, proper type of valve should be selected.

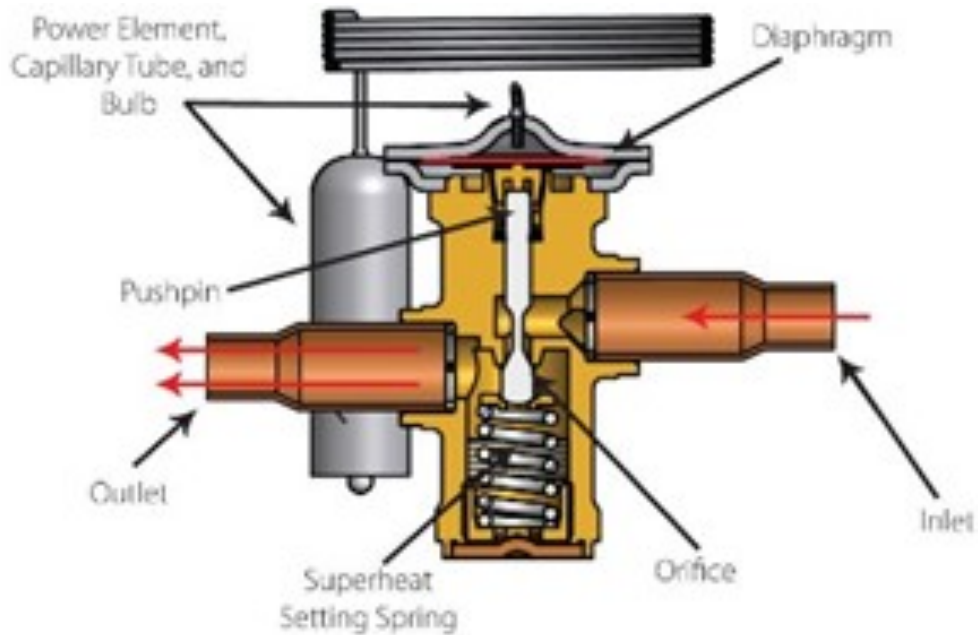
The external equalised port of a thermostatic

expansion valve should never be capped.

Besides this, thermostatic expansion valves can also be divided into two types on the basis of how they sense the temperature of refrigerant in the evaporator and regulate the flow. The two types are:

(A) Bulb/diaphragm type:

As the name says, it uses a bulb to sense the temperature of the refrigerant, and the diaphragm is used to push against the spring, moving the needle downward and increasing the refrigerant flow. They are used in most systems where the refrigerant superheat is required to be controlled.



(B) Electronic expansion valve:

In this type of valve, temperature and pressure sensors are used. It uses a stepper motor sealed inside the valve. This motor controls the motion of the needle using a screw mechanism and actuates the required motion as per the data from the

sensors. These valves are used in the larger systems or the systems with multiple evaporators. Electronic expansion valves offer greater control range

and flexibility as compared to the bulb/diaphragm valve. But they also increase the complexity of the system and increase the risk of failure due to usage of multiple sensors and an electronic circuit.



Safe Work Practices and Safe Job Procedures: What's the Difference?

By [Karoly Ban Matei](#)

KEY TAKEAWAYS

While they have very similar names, Safe Work Practices and Safe Work Procedures are distinct safety tools with unique functions.

Safe Work Practices (SWP) and Safe Work Procedures, or Safe Job Procedures (SJP), are familiar concepts among health and safety professionals. They are part of a comprehensive health and safety program and, when properly applied, both will help you identify and minimize risks.

But these two concepts sound so similar that non-safety professionals, including management and employees, are often confused about the distinction. Sometimes, it even puzzles the less seasoned safety professionals.

In this article, we'll define these two concepts and discuss the role they play in making workplaces safer.

To make them more easily distinguishable, we'll refer to Safe Work Procedures exclusively as Safe Job Procedures. There is no technical justification for the difference in name (Work vs. Job), so we'll opt for the one that will cause the least confusion.

Do You Need Both?

More often than not, companies will draft Safe Work Practices and Safe Job Procedures mostly for compliance reasons. Both are mandatory for Certificate of Recognition (COR) programs developed or promoted by certifying partners. These programs are generally industry-specific, such as construction or manufacturing, and in most Canadian provinces SWPs and SJPs are part of the program's audit tool. Like other elements of a safety program, the focus of these audits is on compliance



and the questions are generally quantitative, asking if you have them or enough of them, but with no direction on what a quality SWP or SJP should look like and what they should contain.

Given this focus on compliance, you might wonder if SWPs and SJPs should be an integral part of your health and safety management system. The short answer is yes. Both are tools created to make your employees aware of hazards and provide with direction on how to act in order to minimize risk. These tools should originate from and complement the hazard assessment process, providing additional information and serving as a checklist for employees to determine what they need to do to stay safe.

Safe Work Practices

Definition

Safe Work Practices are a set of written guidelines (“Do’s and Don’ts”) that describe, in simple terms, how to perform a specific task with minimum risk to people, equipment, materials, processes, and the environment.

SWPs are not very regimented. They are supposed to convey basic, non-technical, common sense information. The order of the steps in the form is irrelevant.

Scope

SWPs are fairly generic and should be developed for the most common tasks performed in an organization. For example, a roofing company will likely want to have SWPs for the following:

- Using ladders
- Working at heights

Using pneumatic tools

High-risk activities that are covered by an SWP will also require an SJP. Working at heights, for instance.

Development and Content

SWPs originate from generic knowledge about your organization and industry. A good starting point for developing them are your formal job hazard assessments or information collected during the field hazards assessment process.

While it is intended to be prescriptive, an SWP should be designed for a fairly generic task and does not always need to be completed in the same way. It does not and should not offer a complete set of instructions for the task.

As mentioned above, SWPs cover the Do's and Don'ts associated with a task. However, since the goal is to provide your team with clarity about what they should do, it is better to focus more on the Do's and less on the Don'ts.

Consider, for example, the following instructions about lifting:

Always ask for help when lifting objects over 50 lbs

And

Don't lift objects heavier than 50 lbs

The first option gives precise instruction about what a worker should do. The second statement only tells them not to lift anything too heavy but leaves them to figure out what they should do instead. Leave the object alone? Push it across the floor? It's unclear.

Emphasizing the Do's is also the more practical option. There is a minimal set of instructions you'll want your employees to follow, while there is a

virtually unlimited number of things your employees should not do. Listing all the Don'ts would be impossible.

This is not to say that the Don'ts don't have their place. When properly worded, a negative statement can provide clear direction on how employees should behave. "Don't work from the top two rungs of a ladder" is a clear message that applies to all ladders, regardless of how many rungs they might have or the



task you might perform.

Safe Job Procedures

Definition

A Safe Job Procedure is a sequential series of precise steps that guide employees through a task, from start to finish and in chronological order.

Whereas SWPs are generic, SJPs are regimented and apply to specific tasks. They are more technical, and the correct succession of steps is crucial for carrying out the work safely.

Scope

SJPs should be developed for all high-risk activities within an organization. In other words, any activity where deviating from the procedure, missing a step, or reversing the order could lead to serious negative health and safety outcomes (death, injury, illness, or

serious material or environmental damage).

Development and Content

Most auditing tools will ask if a list of critical tasks has been developed for the activities conducted by the organization. The purpose of this question is to ensure that every critical task listed has a corresponding SJP that provides employees with clear direction on how to safely execute it.

SJPs can also originate from proactive (hazard assessments, inspections, etc) or reactive (accident reports) approaches outside of the critical task list. Unlike an SWP, the procedure outlined by the SJP is intended to be comprehensive. Not only must every step be followed, but they must be followed in the correct order.

SJPs are generally developed by management or safety departments with input from employees. It is crucial that the step sequence and the information in the SJP are correct and that there is no gap between the way management thinks the task ought to be done and the way the team executing the task does it.

Once developed, the SJP should be reviewed with the employees executing the task. It is a good practice for a safety professional, manager, or supervisor to observe the execution of the task against the SJP and adjust the SJP or the worker's

action to ensure that the work as imagined matches the work as it is done.

What SWPs and SJPs Have in Common

While very different in scope (covering generic tasks vs. specific tasks), Safe Work Practices and Safe Job Procedures share a lot in common. Both should be:

- Based on information provided by a risk assessment
- Developed collaboratively with different stakeholder groups (e.g., management, the health and safety, workers)
- Approved by management and reviewed at agreed intervals or when operational or equipment changes occur
- Communicated to employees through formal or informal training before they are expected to complete a task covered by these documents
- Concise and clear to ensure that workers of different comprehension or linguistic abilities can understand and follow them
- Available (either electronically or on paper) for employees to reference at the site where the task is being performed

Summary

Safe Work Practices and Safe Job Procedures have been integral parts of health and safety systems for a long time. Yet, there's a good chance your employees don't know the difference between the two.



To combat that, it's important not to treat them as compliance-only elements. When properly designed and communicated, SWPs and SJPs not only act as a new layer in the hazard assessment process but can be invaluable training tools, raising awareness about common practices and guiding your team through the safe execution of their tasks.

Article reprinted with permission



KenKen Puzzle

How to solve the KenKen puzzle:

(Answers on page 24)

- Fill in the numbers from 1 –6
- Do not repeat the number in any row or column
- The numbers in each heavily outlined set of squares, called cages, must combine (in any order) to produce the target number in the top corner using the mathematical operation indicated
- Cages with just one square should be filled in with the target number in the top corner
- A number can be repeated within a cage as long as it is in the same row or column



10 ×		3 –		20 +	
9 +		6 ×	2 –		
3 ÷				1 –	
	16 +		2 ÷		6 +
1 –				40 ×	
3 ÷		1 –			

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PPE is failing women at work, just 6 per cent say safety gear is designed for them: Report

By Todd Humber

Employers are failing the women in their ranks when it comes to personal protective equipment (PPE), according to a new report from the CSA Group.



to just buy smaller sizes of the same PPE because it doesn't necessarily fit."

A 'frustrating' experience

The stats tell a troubling story: More than one-third of respondents said

Many women are struggling to find gear that fits, using things like duct tape to get through the day, said Jennifer Teague, vice-president of standards, research and planning at CSA Group.

They're modifying harnesses, designed for their male counterparts, to avoid creating pressure points on their torso, she said.

"That becomes a real concern to employers," said Teague. "All PPE is certified to a standard. And when that PPE is modified, you're now compromising the certification of that product."

The issue is so rampant that just six per cent of Canadian women say the PPE they wear is designed for them, according to *Canadian Women's Experiences with Personal Protective Equipment in the Workplace*. The report from CSA Group was released this morning.

The low number didn't shock Teague, but she was pleasantly surprised by the willingness of women to speak up about the issue, as the report surveyed nearly 3,000 respondents.

"Women are not just scaled-down versions of men," said Teague. "It's not necessarily acceptable

the PPE they use is designed for men, and 85 per cent said they have been hampered at work as a result. About half said they need to adjust the gear every time they put it on, or at least once per shift.

"It affects a lot of women, women who are really passionate about the way their PPE fits," she said. "The way they feel when they wear it, how safe they feel when they wear it. How frustrating it can be when you're trying to do a job and it doesn't fit properly."

The report found women:

- use PPE that is the wrong size at least some of the time (58 per cent)
- don't wear all the required PPE at work because of fit issues (28 per cent)

use a workaround to make their PPE fit (38 per cent).

Women paying for PPE

Women are also paying for their own gear, out of pocket, to remain comfortable and feel safe in the workplace, the research found. (See infographic below.)

"That creates an equity issue, if you have women

saying ‘OK, I want PPE that fits me better and so I’d rather just go by it myself than use the one that my employer is providing’” said Teague. “You shouldn’t have one sector of your workforce having to go out and buy their own because what you’re giving them doesn’t fit.”

Advice for organizations, safety professionals

The first step was to define the problem, said Teague. Now that the scope of the problem is known, steps need to be taken to address it. It starts with asking questions, said Teague.

“If you’re a workplace, and you’re purchasing PPE for your employees, then think as you’re sourcing those products you need,” she said. “Ask those manufacturers if they have PPE designed specifically for women, not just smaller sizes.”

She also suggested asking manufacturers for data about their products, and how they were specifically designed for women, to help address the issue.

Labour shortages

With so many sectors in Canada having trouble finding workers, any barrier an organization can take down is going to help with both recruitment and retention. While the research didn’t focus on HR issues, if an organization can eliminate the frustration caused by poorly fitting PPE it’s not a stretch to think it could reduce turnover.

“In an era where we are seeing women leaving many different professions from health care to trades, having a more deliberate and inclusive approach to something as fundamental as PPE

seems like an absolute necessity,” said Mary Cianchetti, president, standards at CSA Group, in a press release.

Teague echoed her remarks.

“We have women who are available to work, who are really good at what they do, and should have equal opportunity to have access to PPE, the same access that men do,” said Teague. “In terms of fit, in terms of performance.”

Teague gave another example of a pain point: A female, wearing coveralls, where the inseam is coming all the way to her knees.

“When you’re climbing a ladder, you have to constantly hike the leg,” she said. “Or the shoulder seams on your shirt is so long that it’s coming down to your elbows and so, when you’re doing overhead work, you’re constantly hiking it up.”

It’s a recipe for distraction and frustration, she said, which is never a good mix for workplace safety.

A role for everyone

Solving this issue will require serious teamwork from every stakeholder: Government, manufacturers, regulators, employers and workers.

The starting point is data — ensuring there is current and reliable data on the population and on women specifically, she said.

She called on government to put a “greater effort” into funding large studies to ensure the information is accurate.

There is also a need for consistent PPE regulation across Canada that intentionally addresses the needs of women.

And standards needs to be reviewed and updated to ensure they are gender inclusive, said Teague.

“Our latest standard on face filtering respirators — that’s Z94.4.1 — is a more recent publication that does include data that represents both men and women,” she said. “We need to do some work now to look at our other PPE standards and, where there are gaps,



find that data and improve those standards.”

That was the entire purpose of this project and research, she said.

CSA Group said it is working in “lockstep with the standards development community to increase the representation of women in standardization and to strive towards reflecting the diverse needs of Canadians.”.

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5th Class Power Engineering Course

The Online BOMA 5th Class Power Engineering Course:

- Will begin on Feb 2, 2023 and will take place every Tuesday and Thursday evenings from 5-8pm.
- The course will be held online only using Zoom.
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please note this does not include the ABSA exam
- **No prerequisites are required for the course**

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UNDERSTANDING POWER LIMITATIONS WHEN INSTALLING A LEVEL II CHARGER AT HOME



If you are someone who likes to set the whole system up by yourself, there are a few things you'll need to consider. To help you do this, we will discuss finding power limitations when installing a level II charger at home.

Home-based charging equipment offers two distinct levels of power that ultimately determine the speed you're able to charge. Most plug-in cars, both pure electric and plug-in hybrids, need a Level 1 charging station. This allows users to charge their vehicles using conventional home outlets of 15 or 20 Amperes at 120 volts; This is all you will ever need if your car is a plug-in hybrid with a limited electric range; **The same goes if you don't plan on driving it every day.** If you, however, want to be able to top off an electric vehicle that has a large capacity battery, you will need a **Level II charging** which can use 50

Amp outlets between 208 and 240 volts, while the Level II charger is also a slow charger in few hours it can provide enough range for your daily commute.

WHAT IS A HOME CHARGING STATION?

A home charging station, charger or technically an "electric vehicle supply equipment" EVSE does not technically charge your vehicle; it is mostly a dispenser, Your vehicle includes an inbuilt charger that converts alternating electricity from the power grid to direct current (DC). The electricity in its new form is then stored in the batteries. As **EVs are becoming more and more popular**, the whole process is becoming much more streamlined and straightforward.

WHAT ARE YOUR CHARGING REQUIREMENTS?

Before installing a level II charger at home, you

must first figure out precisely what your charging needs are in terms of your maximum daily commute. The time to charge is equivalent to a specific range of autonomy, commuting distance and the rated efficiency of your specific vehicle. Here is a table (updated on January) that lists the [EPA efficiency ratings of the EVs available in North America](#) and the ranges acquired with different types of EV Chargers. Depending on the efficiency rating of the car, each electric vehicle type charge at different rates and different capacities (distance or autonomy range).



Then you need to figure out the right size of EV Charger, just because you buy a charger that can convert more power, it doesn't mean it will charge faster. In most cases, you will be limited to the maximum charge speed your vehicle can take. Or you may end up with a charger that fills your battery in short, a short period of time and remains idle the rest of the time. This is why you need to make sure you choose a charging device that can balance your needs and those of your electric car.

There are, however, ways to increase the charging speed for your vehicle. Fast Chargers or Level III chargers, which are ideal for public parking spots, on the road and highway rest and refuelling stations. It is always advisable reading

the fine print of your new vehicle to [maximize the longevity of your EV](#), charging your EV on fast chargers, or charging the EV Battery always at the 100% [State of Charge](#) (full level) may affect the longevity of your vehicle.

SELECT A LOCATION FOR YOUR EV CHARGER

When you know the what and the why, it is time to figure out the where. When deciding where to place your charger, there are a few factors to consider. **The two most popular options for charger placement are floors and walls;** The choice is based on the amount of available space you have. According to [Number 1 Movers Canada](#), a moving company that uses several electric vehicles in their fleet, for most homes, wall chargers are the most common option for charging. This is because they are less expensive to install and take up less space than floor-mounted chargers. It is the best choice if you have a wall near where you park.

Floor-mounted or Pedestal type chargers are better option for a large parking lots they are a lot more expensive and time-consuming to install.

THE POWER REQUIREMENTS

Here is where the buck usually stops. According to a study by [Pecan Street](#), identifies that most homes in the United States lack the Electrical Panel Capacity for adding a charger. In particular Level-II chargers that require 208 to 240 Volts and at least 30 Amperes.

However in the study they find that most homes, have appliances, and equipment that uses this voltage and similar current

requirements, which allows for the use of a **Smart Splitter**.



The principle of this smart device, is that the home may already have the capacity in the current infrastructure, except that it cannot be used at the same time.

For instance, they may have the capacity for the kitchen range, the clothes dryer and other equipment. And when everyone is at home, with the lights on, then the available capacity is used. However, at night, the period when the EV is parked, most people sleep, the TV is off, lights are off, nobody is cooking or doing laundry; with all these loads off, there is now capacity to charge the EV.

The “Smart Splitter” uses current transformers to monitor the main service feeder, to ensure that the maximum allowable consumption is never exceeded. The measuring system inside the **automatic load management system** can determine when the consumption drops below a safety point when it is fine to connect the EV Charger.

Article 625 of the NEC governs electric vehicle charging. A key provision in this section is Article 625.42 which states: “Where an automatic load management system is used, the maximum equipment load on a service and feeder shall be the maximum load permitted by the automatic load management system.” This means that your Smart Splitter is allowed by the code.

This will help prevent damage to your electrical equipment, it will not overload the Main Service Feeder or Panel and will save you time and money by avoiding a costly service upgrade.

DON'T DO IT ALONE

Finding power limitations when installing a level II charger at home can be difficult. Given the technical intricacy and danger of electrical DIY installations. We will always recommend hiring a professional, a licensed electrician, to install your charging station; Having it inspected by your local inspector and having the certificate of inspection, will also keep you in line with your home insurance provider.

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The 'call for abstracts' is live for the National Conference on Building and Facility Operations' June 2023 building conference. building owners and operators are being targeted as well as consultants who are involved in making buildings more energy efficient. A list of anticipated topics to have presented at the conference is included and speakers are being sought.

Please click on the link for further information:

<https://ncbfo.ca/western/events/ncbfo-2023/>

Kenken Puzzle Answer

^{10x} 5	2	³⁻ 1	4	²⁰⁺ 6	3
⁹⁺ 4	5	^{6x} 2	²⁻ 3	1	6
^{3÷} 6	1	3	5	¹⁻ 2	4
2	¹⁶⁺ 6	4	^{2÷} 1	3	⁶⁺ 5
¹⁻ 3	4	6	2	^{40x} 5	1
^{3÷} 1	3	¹⁻ 5	6	4	2

TEST YOUR OPERATOR IQ ANSWERS

Answers: 1) b 2) b 3) c 4) b 5) a

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JOIN US:
TUESDAY DECEMBER 13, 2022 AT 5PM FOR
OUR IN-PERSON MONTHLY MEETING

Presenters: George Niksic & Josh Hogan
Aqua Air

Title: Air Curtains

Summary:

When your Doors are open Air curtains:
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Control Insects
Keeps fumes & airborne particles out.

Topics:

Air curtain applications
Air curtain types
Available options



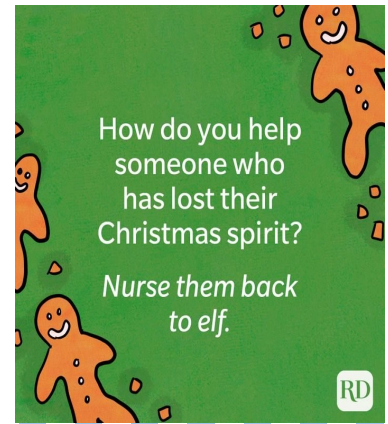
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on

Tuesday December 13, 2022.



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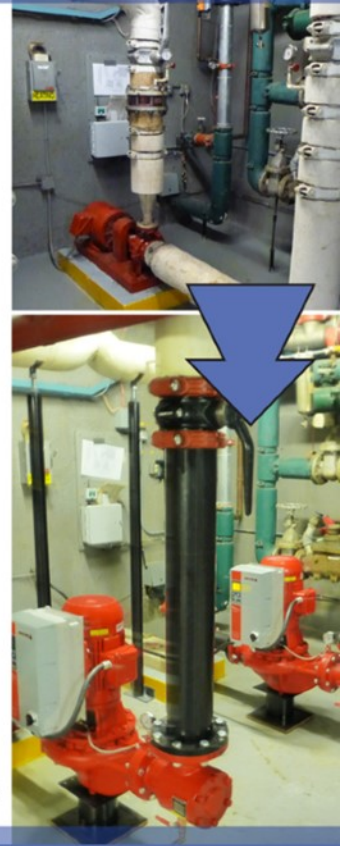
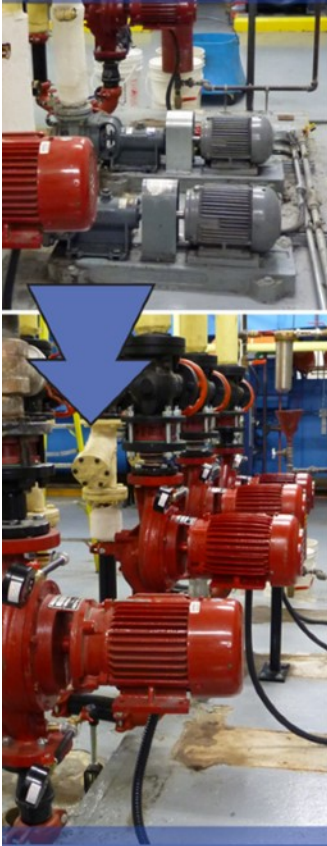
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