

SUMMER 2022

# Sheet Metal Journal

[www.sheetmetajournal.com](http://www.sheetmetajournal.com)

British Columbia

## PROFILE: WESTERN MECHANICAL SERVICES (1977) LTD.

Publications Mail  
Agreement # 40719512

*Also in this Issue:*

TONY PARIS TURNS 90

EMBRACING BIG DATA

USING FINANCIAL RATIOS



Official Journal of  
Record for SMACNA-BC



# PROMOTING GROWTH AND STABILITY IN OUR INDUSTRY

Formed in 1969, the British Columbia Sheet Metal Association (SMACNA-BC) was the first international chapter of the Sheet Metal & Air-conditioning Contractors National Association (SMACNA). Founded in 1934, SMACNA traces its history to the National Association of Sheet Metal Contractors established in 1910, and has 2,300 members worldwide.

SMACNA-BC is a member-driven association representing unionized sheet metal contractors in the Mainland of BC, and suppliers to our industry. It promotes the growth and stability of the members and industry.

## OUR MANDATE

- To improve the financial stability and business conditions of the sheet metal industry, and to develop and promote methods to improve managerial proficiency
- To improve quality, efficiency and productivity of this industry, and to implement high standards of work
- To establish and maintain high ethical standards of conduct between members of the Association, and between members and owners, architects, engineers, other contractors, and the public
- To promote harmony in labour relations
- To study and help in the development and enforcement of governmental codes and regulations, and such legislation as may be necessary for the best interest of the public and the sheet metal industry
- To exchange technical, professional, and educational information with other contractor associations in the sheet metal industry and its allied trades in Canada and other countries
- To affiliate as a Chapter with the Sheet Metal & Air-conditioning Contractors National Association, Inc.

BC Sheet Metal Association (SMACNA-BC) • Executive Director: Jeremy Hallman

705 - 9639 137A Street Surrey, BC V3T 0M1

Phone: (604) 585-4641 • E-mail: [smacnabc@smacna-bc.org](mailto:smacnabc@smacna-bc.org)

Learn more at

# [www.smacna-bc.org](http://www.smacna-bc.org)



**PUBLISHER / EDITOR**

Jessica Kirby  
jessica.kirby@pointonemedia.com

**CONTRIBUTORS**

Mark Breslin  
Natalie Bruckner  
Ronald Eager  
John Millen  
Paul Vaillencourt

**COVER PHOTO**

Courtesy of Western Mechanical Services (1977) Ltd.

**ADVERTISING SALES / DESIGN**

Lara Perraton  
877.755.2762  
lperraton@pointonemedia.com

**PUBLISHED QUARTERLY BY**

Point One Media Inc.

Sheet Metal Journal  
P.O. Box 11, Station A Nanaimo, BC V9R 5K4  
Toll-free: 877.755.2762  
www.sheetmetaljournal.com

While information contained in this publication has been compiled from sources deemed to be reliable, the publisher may not be held liable for omissions or errors.

Contents ©2022 by Point One Media Inc. All rights reserved. No part of this publication may be reproduced or duplicated without prior written permission from the publisher.

Printed in Canada.  
Postage paid at Coquitlam, BC.

Return postage guaranteed. Canada Post  
Canadian Publications Mail Sales Product  
Agreement #40719512.

Return undeliverable Canadian addresses to:  
Circulation Department

Sheet Metal Journal  
P.O. Box 11, Station A Nanaimo, BC V9R 5K4  
email: circulations@pointonemedia.com

Official Journal of Record for  
SMACNA - BC

Find *Sheet Metal Journal*  
on Twitter and Facebook



11

SUMMER 2022

## FEATURES

### 11 TONY PARIS TURNS 90

Tony Paris built Apollo Sheet Metal from the ground up with hard work and tenacity. This year, he celebrates his 90th birthday.

### 12 PROFILE: WESTERN MECHANICAL SERVICES (1977) LTD.

Western Mechanical has spent 60 years building its reputation for service, trust, and ingenuity.

### 16 EMBRACING BIG DATA

Data analytics and related technology are critical for the construction industry's survival: report.

### 18 USING FINANCIAL RATIOS

Using this commonly overlooked forecasting tool can help you understand your company's financial preparedness.

## DEPARTMENTS

4	EDITORIAL	10	INDUSTRY NEWS
5	GUEST EDITORIAL	20	CONTRACTOR ADVICE
7	SMACNA-BC NEWS	21	ENGINEER'S DESK
8	EVENTS	23	ADVERTISER INDEX

## SUMMER NUMBERS HOPEFUL

The summer, which only appeared in mid-July, is quickly racing past. We are cramming a summer's worth of events and adventures into six weeks before the air hints of autumn crispness and back-to-school specials (and SMACNA-BC Golf!)

Over the past several weeks, while we were fending off the rainstorms and dreaming of the beach, construction numbers in BC were growing. Construction was ranked the number one employer in the consumer goods sector, construction in BC was valued at \$135 billion (up 79% over the past five years), and 26,262 construction companies were operating in the province. At the same time, there were 172,000 construction trades workers in BC (down 5%) and the number of construction job openings was up 4% at 27,630. Experts predict that the number of construction jobs left to fill will be down 20% over the next five years, thanks in part to recruitment efforts and to successful initiatives that are bringing more women and ethnic minorities into trades.

This issue of *Sheet Metal Journal* looks at a number of initiatives SMACNA-BC and Local 280 have undertaken to increase visibility, provide value to members, and partner with other organizations—like ASHRAE—to present a strong and united front in the community. While often disguised as pure fun, these events are really the starting point for networking, recruitment, and growth. Check out page 8 for some examples.

Our cover story is a profile of Western Mechanical Services. The company has proven it has the technical proficiency to complete some of the city's most iconic projects and the commitment to trust, reliability, and ingenuity to keep its team running smoothly. See page 12 for more.

Anyone who has been to work over the past five years (or outside, for that matter) knows that technology in the trades is the future. Local 280's training centre is already implementing augmented and virtual reality, and names like Trimble and AutoCAD are household brands. But what about managing



By / Jessica Kirby, Editor, *Sheet Metal Journal*

data? Key trends in the technology sector say the next big shift for construction will be amalgamating, processing, and using data to fuel productivity and profitability. Will you be ready? See page 16 for more.

And we hear from John Millen, communications expert, who uses Will Smith's unfortunate run-in with Chris Rock to demonstrate the importance of finding freedom in the space between stimulus and reaction. Sound like jibberish? It isn't. Turn to page 5 to find out why.

Finally, we are on the lookout for project stories and individuals to highlight in upcoming issues. For projects, we are looking for interesting, creative in scope ICI projects that challenged your teams—think about interesting materials or techniques, unusual volume, creative logistics or labour requirements, or just about anything that made the project stand out.

In highlighting individuals, we are looking for people who have made an impression on others as a leader, a member of the workforce, as a labour-management cooperation superstar, a person who goes above and beyond, or someone who beat the odds to be in the trade. We are focusing on how people entered the trade, what they love about their work, and what they bring to the industry.

Please reach out to [jessica.kirby@pointonemedia.com](mailto:jessica.kirby@pointonemedia.com) if you have any suggestions.

See you in the fall! ■

## SMACNA NATIONAL CONVENTION

### September 11-14, 2022

The 2022 SMACNA National Annual Convention is being held in person September 11–14, 2022, in Colorado Springs, Colorado. This year will be different in many respects, yet we will find comfort in the high-quality networking and educational experience members have come to expect. Visit [smacna.org/learn/events/calendar/2022-smacna-annual-convention](https://smacna.org/learn/events/calendar/2022-smacna-annual-convention) for more information.

## THE 90-SECOND RULE

Have you ever made an impulsive decision and then said or done something you later deeply regretted?

We all have, but not as publicly as Will Smith.

When he slapped Chris Rock at the Academy Awards, it was literally the slap heard around the world—with billions of people watching.

From his recent apology video, it's clear he didn't think about the far-reaching consequences at the time of his impulsive emotional reaction.

Will Smith could have benefited from learning the 90-second rule.

### Controlling emotions

Today, I'm breaking down this powerful brain rule. I'll give you the three steps you can take to help you control your emotions next time you're feeling angry, fearful, insulted, jealous, or any other strong emotional response.

When you were upset as a child you probably heard the advice to count to ten before you act—one thousand one, one thousand two, one thousand three...

And that was close to the 90-second rule but not quite.

The 90-second rule says that when an event happens and you feel that surge of adrenaline it only takes 90 seconds for your body to process and release those hormones.

This rule comes from Dr. Jill Taylor, a neurologist who studies brain and body function.

At 37 years old, she had a massive stroke. She lost language, movement, and her relationship with reality. She eventually healed herself and used her observations to inform her work as a brain scientist. She gave an awesome TED Talk about it in 2008 called "My Stroke of Insight".

### Rushing stress hormones

Dr. Taylor explains that when a stressful event occurs and we have an emotional reaction, a rush of hormones goes through our brains and bodies.

They're designed to give us the ability to escape danger. In modern life, there may not be a real danger but we still get stressed and those hormones race through our bodies.

Road rage is an incredibly powerful example of people allowing their emotions to get the best of them. They let themselves go crazy.

This is sad because Dr. Taylor says it only takes 90 seconds

for your body to process and release these stress hormones.

What happens after that, she says, is that we get our brains caught in a loop, locked into a cycle. And that's all caused by our thoughts. By controlling your thoughts you can break the cycle.

So given that, next time you have a major event or even a smaller event, like frustration with traffic, that triggers you, use the 90-second rule.

I discovered this rule during the start of covid in early 2020. It's been extremely helpful.

Here are three steps I follow that will help you control your emotional response to events. These are my words, based on Dr. Taylor's research.



By / John Millen,  
Communications Coach



**AIR SYSTEM SUPPLIES**

---

**AIR SYSTEM SUPPLIES IS NOW STOCKING MORE ITEMS THAN EVER AT OUR WAREHOUSE! AVOID LENGTHY LEAD TIMES BY CALLING (604)-294-8281 TO CHECK AVAILABILITY ON THE FOLLOWING ITEMS:**

- ACCESS DOORS ( STANDARD & FIRE-RATED)
- FLEXIBLE DUCTS (INSULATED /NON-INSULATED)
- GRILLES, DIFFUSERS, DAMPERS
- VIBRATION/SEISMIC RESTRAINT
- CONTROL DAMPERS
- DUCT HEATERS
- WHISPER GRILLES
- GAS DECTION
- FANS
- VAV's



**WE HAVE SEVERAL GRILLE SIZES AND QUANTITIES ON-HAND INCLUDING OVERFLOW ON SELECT ITEMS. ENQUIRE TODAY, WE MAY HAVE A SOLUTION TO HELP FINISH YOUR PROJECT!**

**3610 EAST 1ST AVENUE  
VANCOUVER, BC, V5M 1C3  
T: (604) 294-8281  
www.airsystemsupplies.com**

*good people.*

## 1. Feel the rush

When something happens that provokes you, I recommend you just stop and feel the chemical reaction in your body. Unless you're facing a real threat, don't instantly react or take any physical action.

Instead of focusing on the emotions you feel, just sit and feel the sensations in your body and the adrenaline running through you.

## 2. Wait for the release

After 90 seconds, you'll feel the hormones subside. If you stay focused, you can actually feel them releasing in your body. Just sit and wait for the tide to turn.

Then I recommend you focus on your breath. Your heart rate will be racing and your breathing will be shallow. Take a few slow, deep breaths.

Try it now. Take a deep breath.

Do you feel how that calms you? This is the best way to calm your body, your brain, and your nervous system.

## 3. Break the cycle

When you've settled your body and brain, you can patiently decide what comes next. At this point, with your mind starting to calm, you can make a more rational choice.

Then think about it: Here's how I'm feeling right now, here's the emotional response I wanted to give.

Is this response necessary? Will it achieve the best outcome?

It may feel good to yell at someone or say something nasty or sarcastic but will it help or hurt your relationship in the long term?

This is how you break the cycle.

This means that for 90 seconds you can watch the process happening, you can feel it happening, and then you can watch it go away.

## Trapped in an emotional loop

After that, if you continue to feel fear, anger, and so on, you need to look at your thoughts. They are re-stimulating your brain's circuitry. Dr. Taylor says that results in you having this physiological response over and over again. Being trapped in an emotional loop.

This is a valuable insight. If our bodies are capable of processing the emotional reaction in 90 seconds, we are the ones who continue to ruminate on the event, instead of processing it to resolution or letting it go.

This is the key: none of us has control over the events we face. The only thing we can control is our response to those events.

The person who said this best is Viktor Frankl. He survived the horrors of Nazi concentration camps and learned the power of controlling one's response. He said:

*Between stimulus and response there is a space.*

*In that space is our power to choose our response.*

*In our response lies our growth and our freedom.*

When you face a stressful event this week, instead of reacting emotionally try to be an observer of your body for 90 seconds—feel the emotions, the hormonal rush. Then experience your body processing these chemicals to relief.

At that point, your body has done its job. The next move is up to you. How you respond to emotional situations can make or break your relationships.

Don't have regrets like Will Smith.

In contrast, I commend Chris Rock. I suspect he knows the 90-second rule because he implemented it in three seconds, when he decided not to retaliate but to be a consummate professional and move on.

By using the 90-second rule you give yourself power over your emotions. This rule can change your life and the lives of people all around you. ■

*Reprinted with permission from the author. Read more from John Millen at [johnmillen.com/blog](http://johnmillen.com/blog) or check out his videos on communication techniques at [youtube.com/channel/UCg8DnSvJQfQ5x13sx3lVBTg](https://www.youtube.com/channel/UCg8DnSvJQfQ5x13sx3lVBTg)*



**Don't stay in the dark. Get noticed by advertising in *Sheet Metal Journal*. Call Lara at 877.755.2762 or email [sales@pointonmedia.com](mailto:sales@pointonmedia.com)**

## BRUCE SYCHUK SAYS GOODBYE AT FINAL JCB MEETING, JIM PAQUETTE IN ATTENDANCE



The SMACNA-BC-SMART Local 280 Joint Conference Board, with out-going SMACNA-BC executive director Bruce Sychuk and retired Business Manager Jim Paquette, centre.

On June 21, the Joint Conference Board met with SMACNA-BC's out-going executive director Bruce Sychuk for the last time. The group met at Paris Park behind Apollo Sheet Metal Ltd., where Sychuk was a long-time employee and from which his replacement—Jeremy Hallman—hails. The meeting was productive and was followed by BBQ'ed steaks and casual merriment. The group presented Sychuk with a gift card to buy a bottle of Caymus wine.

The SMACNA-BC and Local 280 JCB meets nine times a year, and each June the meeting is held at Paris Park. Because of COVID-19, Jim Paquette, former Business Manager of Local 280, was not able to attend the June JCB meeting in 2021—the last of his tenure. Instead, he attended this 2022 meeting, with a chance to say goodbye to his retiring counterpart. ■



Jim Paquette, retired Local 280 business manager; Richard Mangelsdorf, current Local 280 business manager; Jeremy Hallman, in-coming SMACNA-BC executive director; and Bruce Sychuk, out-going SMACNA-BC executive director.

## LOCAL 280 SPONSORS ECCO SUPPLY CUSTOMER APPRECIATION BBQ

ECCO Supply hosts approximately four Customer Appreciation BBQs each summer to celebrate the company's customers with refreshments and tasty food.

“These are a chance for us to express our gratitude for our customers’ on-going support,” says sales manager Norm Grusnick. “The BBQs are open to anyone who does business with us, and they are usually very well attended.”

This July, Local 280 jumped on board and sponsored one of ECCO’s customer appreciation BBQs as a way to connect with and thank its customers and to reach potential recruits.



“We thought it be a good way to connect with union and non-union contractors, workers, and other trades that purchase products from one of our suppliers,” says Steve Davis, Local 280 organizer. “It is important to let members and contractors know we are all part of the same team. Also, non-union workers have the chance to see what being union is all about.”

Throughout the day, around 150 people came and went, enjoying burgers and refreshments, including Local 280 SMART water.

“We wanted to thank our customers for purchasing from us over the past two years when times were particularly difficult,” Grusnick says. “With covid being just about over, this was a great opportunity to meet again face to face. These get-togethers are more important than every after more than two years of not seeing each other.”

“This event was extremely successful,” Davis says. “We were able to connect with several employees and employers. I felt that we were able to open the conversation with many workers and contractors with the possibility of being union members or contractors one day.”

Local 280 considers ECCO an important business partner as one of the largest suppliers in the province. “ECCO was

amazing for allowing us to hold such an event at the Burnaby location,” Davis says. “They were so accommodating throughout all aspects of the event.”



James Barry of VETS Sheets Metal won the door prize—a fabulous Napoleon TQ 285X portable BBQ.

Learn more about ECCO | [eccosupply.ca](http://eccosupply.ca)  
Discover Local 280 | [smw280.org](http://smw280.org) ■



## SMACNA-BC AND ASHRAE BC TEAM UP FOR OCTOBER DINNER MEETING AT CENTRAL CITY BREWING

On October 19, for the second time, SMACNA-BC and ASHRAE BC will be holding a joint dinner meeting at Central City Brewing. The building has involved many challenges over the years, and the owners have created a unique, environmentally-friendly building with many engineering highlights.

Gary Lohin, brew master, and his team will take the group through the process from Grain to Grass and explain all aspects of the beer-making process and how the HVAC&R industry assists in making great beer. This 65,000-square-foot facility opened in 2013 and is presently the largest craft brewery in Canada. It can produce more than three million litres of beer annually.



## SMACNA-BC TECHNICAL STANDARDS PROGRAM – SEPTEMBER 19, 2022

SMACNA-BC and ASHRAE BC members, architects, engineers/consultants, building officials, inspectors, specification writers, building owners, and fire marshals are invited to attend the SMACNA-BC Technical Standards Program this fall to advance their knowledge of the HVAC industry through the use of SMACNA Standards.

This intensive one-day program will provide technical information to learn the methods and concepts of SMACNA's Technical Standards, which will enhance participants' abilities to provide well-designed, well-constructed, and cost-effective projects for client. Topics covered will include information from SMACNA's technical manuals:

- HVAC Duct Construction Standards
- HVAC Air Duct Leakage
- HVAC Systems Duct Design
- Fire, Smoke, and Radiation Damper Installation Guide of HVAC

Presenters include Eli P. Howard, Executive Director, Technical Resources, SMACNA Inc.; Will Farrell, Engineering and Technical Resources, SMACNA Inc.

Location: Civic Hotel | 13475 Central Avenue, Surrey, BC  
Date: Monday, September 19, 2022  
Cost: \$65

### Schedule:

8:30 am: Registration  
9:00 am: Program commences  
11:45 am: Buffet Lunch Break  
12:30 pm: Program reconvenes  
3:00 pm: Program concludes

### Contact:

Michelle Rodford [smacnabc@smacna-bc.org](mailto:smacnabc@smacna-bc.org) ■



SMACNA-BC and ASHRAE-BC members at a previous event learn how their trades help Central City Brewing make great beer.

The Evening at Central City Brewing is much more than a building tour. It has been planned as a social event, and it will give members of both organizations the chance to enjoy a newer facility that many attendees have not visited—and enjoy lots of beer. ASHRAE BC and SMACNA-BC members are encouraged to bring clients or other guests. Please register early to ensure space availability.



Participants enjoying delicious Central City Brewing beer the last time ASHRAE BC and SMACNA-BC held a joint dinner meeting at the facility.

Please note that the meeting is a stand-up reception with hors d'oeuvres and not a sit-down dinner. Please also note on-site free parking is available.

Please register for the meeting through the SMACNA-BC office at [smacnabc@smacna-bc.org](mailto:smacnabc@smacna-bc.org)

All participants must pre-register. Walk-ins will not be accommodated.

Location: Central City Brewers | 11411 Bridgeview Drive, Surrey, BC  
Date: October 19, 2022  
Cost: \$60 per person

### Schedule:

5:30-7 pm – Registration & Social Hour  
7-7:30 pm – Stand-up Reception (hors d'oeuvres)  
7:30-9 pm – Presentation & Tour ■

Yeah, we're talking about you... Or we could be! Email your company news to [jessica.kirby@pointonemedia.com](mailto:jessica.kirby@pointonemedia.com) and have it listed in *Sheet Metal Journal's* Industry News section in print and online. Listings are free for SMACNA-BC members and industry partners.

Want to subscribe or read current and archived issues? We thought you'd never ask! Get over to [sheetmetaljournal.com](http://sheetmetaljournal.com) for the latest and greatest.

## TOP 10 MAJOR UPCOMING BRITISH COLUMBIA CONSTRUCTION PROJECTS

The accompanying table shows the top 10 major upcoming British Columbia construction projects in Canada. They are all in the planning stage and are mainly new projects, but may also involve additions and/or alterations.

Shopping centers, hotels, office buildings, medical buildings, educational buildings, government buildings, industrial projects, oil and gas projects, and electric power and telecommunications projects will all be covered on a rotating basis.

There are several reasons for highlighting upcoming large projects. Such jobs have often received a fair amount of media coverage. Therefore, people in the industry are on the lookout for when job-site work actually gets underway. And, as showcase

projects, they highlight geographically where major construction projects are proceeding.

Finally, total construction activity is comprised of many small- and medium-sized projects and a limited number of large developments. But the largest projects, simply by their nature, can dramatically affect total dollar volumes. In other words, the timing and size of these projects have an exaggerated influence on market forecasts.

### Ten of the largest upcoming British Columbia construction projects

Project title and owner/developer	Location	Current stage	Project Value in CDN\$
KSI LISIMS LNG PROJECT			
Nisga'a Lisims Government	Nisga'a BC	Pre-design	\$55,000,000,000
KITIMAT CLEAN REFINERY			
Kitimat Clean Ltd.	Kitimat, BC	Pre-design	\$22,000,000,000
PACIFIC FUTURE ENERGY REFINERY PROJECT			
Pacific Future Energy	Terrace, BC	Pre-design	\$10,000,000,000
PRINCE RUPERT NATURAL GAS TRANSMISSION PIPELINE			
TC Energy	Hudson's Hope, BC	Design Development	\$6,000,000,000
PRINCE GEORGE NGL RECOVERY PROJECT			
West Coast Olefins Ltd.	McLeod Lake, BC	Design Development	\$5,600,000,000
FRASER RIVER TUNNEL PROJECT			
BC Ministry of Transportation and Infrastructure – Construction	Delta, BC	Schematic Design	\$4,150,000,000
SURREY LANGLEY SKYTRAIN PROJECT			
TransLink (South Coast British Columbia Transportation Authority)	Surrey, BC	Pre-design	\$3,950,000,000
GARIBALDI AT SQUAMISH SKI RESORT			
Aquilini Development and Construction	Squamish, BC	Pre-design	\$3,500,000,000
ARBUTUS TO UBC SKYTRAIN – MILLENNIUM LINE UBC EXTENSION			
TransLink (South Coast British Columbia Transportation Authority)	Vancouver, BC	Schematic Design	\$3,300,000,000
CEDAR LNG MARINE JETTY PROJECT			
Cedar LNG	Kitimat, BC	Design Development	\$3,000,000,000

## BC MANDATORY TRADES CERTIFICATION 'PHASED IN' STARTING THIS YEAR

The BC government is moving ahead with mandatory trades certification over the next two years, as it deals with a growing skills shortage due to retirements.

The province decided last summer that certification would return for ten trades, and the province began consultation to implement this direction while keeping experienced but uncertified people on the job. The requirement will be phased in between now and 2024.

The BC government began the return to compulsory certification

in June 2021, for the estimated 100,000 people working in skilled trades, starting with electrical, automotive, and mechanical trades such as pipefitters and sheet metal workers. The Industry Training Authority, set up in 2003, is being renamed SkilledTradesBC.

Recommendations from the BC Federation of Labour spurred the move. The group made the case that decertifying trades was a shift to employers and their immediate skill needs, at the expense of completion of traditional trades.

continued on page 23

# Tony Paris Turns 90



Tony Paris' children—Enrica, Anna, and Angelo—and SMACNA-BC executive director Jeremy Hallman, joined Tony for his 90<sup>th</sup> birthday celebration May 25 in Paris Park, Coquitlam.

No introduction is needed for the Godfather of Sheet Metal.

Tony turned 90 years old on May 25, 2022. He celebrated his birthday at Tony Paris Park with family and friends.

A lot has changed since Tony started Apollo Sheet Metal in 1970. At that time, the company was operating out of a 2,500-square-foot plant in North Vancouver and employing five people. Today, Apollo operates out of two custom manufacturing plants in Coquitlam and employs 110 people.

Tony set the bar for producing high-quality standards for the sheet metal industry, and those standards are now being carried forward by his son, Angelo, and an amazing group of employees.

Apollo Sheet Metal is always striving to be a leader in the sheet metal industry. ■



# MEMBER PROFILE

# WESTERN MECHANICAL SERVICES (1977) LTD.

by Natalie Bruckner



Left to right: Kyle Nelson, Dennis St Hilaire, James Wahlen, partners at Western Mechanical Services | Photo: Western Mechanical Services

**Honesty and integrity** are by far the most important assets of any entrepreneur, as the three partners of Western Mechanical Services Ltd. (Kyle Nelson, Dennis St. Hilaire, and James Wahlen) well know and stand by. It's just a couple of the reasons the company has been in business for more than 60 years.

St. Hilaire, director/commissioning department manager, explains: "WMS started as a building maintenance company servicing office towers in downtown Vancouver. At one point more than 50 buildings had maintenance contracts with us. When consultants were having issues in finding qualified firms to undertake balancing, they approached WMS to see if it was something we would be interested in. As the previous owners stated, 'We blithely agreed,' not knowing what was in store for us! After a lot of hard work and research, the TAB business grew into the main focus of the company, eventually resulting in the reorganization."

Soon after, the company started working with consultants to develop what would soon become known as commissioning—this third-party independent review was somewhat of a new idea at the time. St. Hilaire says this resulted in a separate department being set up that would undertake commissioning on a variety of projects.

Fast forward to today, and WMS provides a range of services including testing and balancing, building system surveys, new building commissioning, retro commissioning of existing buildings, and commissioning of mechanical system upgrades. It also provides operating and maintenance manuals for mechanical systems, which is seeing a resurgence lately as building systems

become more complex and building operators need to understand how to maintain these systems.

Things have definitely changed for the company—but there's one thing that hasn't, and that's its commitment to honesty. "Being honest with our clients and the consultants is so important to us, even when systems may not be performing as intended," St. Hilaire says. "There are firms out there that will submit a 'clean' report for balancing or commissioning, even when they know systems are not operating as intended. But we have always been a big purveyor of the requirement to have independent



Rogers Place in Edmonton | Photo: Western Mechanical Services

## SMART Local 280 / SMACNA-BC Partnership



Left: Jud Martell, Local Union No. 280 President.  
Right: Phil McDonald, Summit Sheet Metal Ltd., SMACNA-BC President.



### Labour & Management “Embracing the Challenge”

- B. Flaherty, Cornell University, Syracuse, N.Y.

testing, balancing, and commissioning services to provide an impartial evaluation of these systems. In the end, the owner has paid for a product and us not doing our job with integrity and professionalism cheapens every trade’s efforts involved to install the systems up to that point.”

Maintaining this high-level reputation is important to the entire WMS team, and Nelson is proud of the philosophy and expertise that has been nurtured within. Mentorship is strong at WMS, and new apprentices are often paired with senior technicians who oversee their work on site. Nelson, who joined WMS back in 2005, also trained this way. “We share centuries of combined industry practices and knowledge that many companies simply do not have,” he says. “This knowledge includes best practices and troubleshooting that cannot be taught by any book or classroom.”

WMS’s expertise means they are capable of handling projects of all sizes and complexities. One recent example was the University of Lethbridge Destination Project where WMS undertook testing and balancing services. This \$280-million sciences building is targeting LEED gold. The building includes spaces for biological sciences, chemistry and biochemistry, neuroscience, physics, and astronomy. It has multiple designated spaces including wet and dry laboratories, greenhouse, herbarium, and a vivarium.

“The project has many technologically advanced systems to optimize energy efficiency in the HVAC systems and had an aggressive timeframe that required a detailed plan of attack from us,” says St. Hilaire. “We were able to successfully complete the work on time with less manpower than anticipated, through diligent project management and a great construction team.”

Other stand-out projects that WMS has been involved with include many marquee residential towers, such as 1335 Howe Street, The Butterfly, Cambie Gardens, The Paramount, and Vancouver House.

Like the journey of any business, it hasn’t all been plain sailing, but being able to pivot and roll with the punches has kept them riding the wave.

“Over the past two years, for example, we have had to reevaluate how we manage everything in relation to our people: from working hours to wages to how we communicate,” says St. Hilaire. “We have been supporting work from home and flexible hours where possible. We also rolled out an online HR system that allows everyone to track their time off digitally.”

Challenges, of course, still lay ahead. That’s the nature of the industry. The biggest, as St. Hilaire sees it, will be the balance of wages for tradespeople versus affordable living. “Wages for trades in BC were suppressed compared to other markets, which caused a drain of skilled workers,” he says. “Now, with a construction boom pushed by higher residential demand and

Renos are underway  
at our new Training  
Facility to open this fall



**SHEET METAL INDUSTRY TRAINING BOARD**  
**SHEET METAL WORKERS TRAINING CENTRE SOCIETY**

www.smwtdcs.ca 604.882.7680





Vancouver House | Photo: Western Mechanical Services

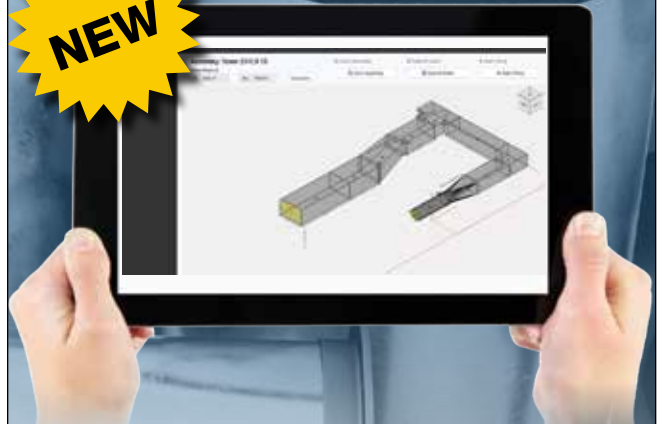
energy efficiency-based retrofits, combined with a high cost of living, many employers are playing catch up with wages that allow skilled workers to maintain the quality of lifestyle they deserve.”

While he acknowledges it’s not unique to Vancouver or BC, he does say that construction companies have a hard time reacting quickly to sudden market changes due to pricing that was established sometimes three years prior when projects are tendered.

While WMS continues to evolve, it remains true to its philosophy to always learn and grow with the technology in the industry, while providing honest accurate reports and information to the clients and owners.

“Building technology, from controls systems to HVAC equipment, is always improving and changing, therefore the methodology, instrumentation, and execution needs to adapt as well to be successful,” he says. “It’s not easy to stay on top of all relevant changes, but it does make for a better product at the end of the day and we believe this is what makes us better than the rest.” ■

# INTRODUCING THE BUILDCENTRIX ASSEMBLY BUILDER



## KEY FEATURES:

- Allows site foremen to create mechanical systems in 3D
- Empowers foremen to use as-built content
- Generates a cost and price for material and labor, plus budgeted fabrication time
- Provides foremen working on major and special projects to send fabrication-ready models to the shop for fabrication and assembly
- Configurable fabrication standards and recommendations are built in
- Easy to implement being cloud native



Taking Fabrication and Estimation to a Whole New Level

See it for yourself. For a free trial, call us toll-free at 1-855-932-3828 or email [support@buildcentrix.com](mailto:support@buildcentrix.com).

Visit [www.buildcentrix.com](http://www.buildcentrix.com) to schedule an online demo today.



# Embracing technology critical for construction industry's survival: report

Construction companies must embrace change and leverage new technologies and tools such as big data collection and analysis, machine learning and trend analysis, and digital twin modelling if they hope to remain competitive, says Jordan Thomson, a professional engineer and senior manager at KPMG.

By / Grant Cameron | Journal of Commerce

“We feel the move to digital and the broad array of technologies and approaches that it unlocks holds enormous benefit to all members of the project team,” Thomson explains. “As we’ve seen in the manufacturing industry, digital transformation promises to bring new levels of efficiency and performance. Contractors and designers that embrace these new technologies will be able to increase efficiently, develop more innovative solutions, improve safety outcomes, and provide better value to owners.

“While some construction companies have started this transformation, we feel there is a real risk that companies that don’t embrace these technologies will get left behind.”

Thomson, along with Kathleen Boyd, a manager at KPMG, who both work within the firm’s Global Infrastructure Advisory practice, recently provided their perspective on the issues in an insight report produced by the Canadian Construction Association (CCA) that looked at innovation and R&D in construction.

The report notes that, given the construction industry accounts for six per cent of global GDP, the adoption of new technologies and ways of working could have significant economic and social impacts across Canada and around the world.

Thomson says the shift is not just about delivering projects more cost effectively. It will also enable the industry to take on more projects and more complex challenges to deliver on the demand for infrastructure.

“This is not to say that the industry is not adopting new technologies,” he says. “We see leaders in the industry making significant investment in new technologies and even naming chief information officers to prioritize pushing these types of initiatives forward. Even small- and medium-scale players across the industry are exploring how these technologies can improve their businesses; however, these efforts are often piecemeal and siloed.”



Projects and the industry more broadly need a unified approach to how technologies will be implemented and how data will be collected, managed, and shared across the project team in order to encourage investment and avoid duplication, he says.

“The key to driving this technological shift will be owners. Ultimately, a lot of the upside of these new technologies reside with the owners, so they need to be the ones championing the technologies.”

For example, says Thomson, the concept of big data and the active collection, management, and analysis of project data offers huge opportunities to owners, contractors, and designers alike, and is the central building block that more advanced technologies like predictive analytics and digital twins are based around.

The CCA report notes major projects are amazing generators of big data, yet 96 per cent of all the data captured by the construction industry never gets analyzed or leveraged.

“In our experience, even simple data analytics, using widely available software tools, can help identify cost and schedule drivers and provide important insights that enable project teams to develop tailored strategies to improve performance,” says Thomson.

While project teams are becoming more aware of the value of data analytics, there are often issues with the quality and trustworthiness of data, he notes, and, as such, the first step is ensuring project data is collected in an accurate, timely, and auditable manner that provides confidence to decision-makers.

Predictive analytics—the use of statistics and modelling to determine future performance—is also touted by Thomson as a way to help contractors improve scheduling and cost-estimating accuracy, and optimize work planning by looking at past projects and factoring in weather and other project-specific variables.

“Predictive analytics moves beyond what your data is telling you about your current performance by using machine-learning and trend analysis to forecast performance going forward and automatically flag potential risks before they have the chance to materialize,” he says. “We’ve seen real-world applications of this technology with predicting the risk of injuries on construction sites based on a wide array of project and environmental inputs, which allows the contractor to proactively resequence work to minimize the risk of lost-time injuries.”

Digital twin technology, meanwhile, can build upon the capabilities of BIM by leveraging IoT sensors and data analytics to provide important insights on building and equipment performance through a project life cycle, says Thomson, with a particular focus on modelling and optimizing operations. A digital twin is a real-time virtual model designed to accurately reflect a physical object.

The CCA report notes developing a digital twin early on in the life cycle of a project can unlock value and critical insights into the vast pools of design and construction data, allowing for more informed decision-making.

According to the report, a digital twin can drive innovation by allowing designers and constructors to collaborate and test their ideas through virtual simulations. It can also improve cost and schedule performance by automating workflows and business processes.

“We see important applications for digital twin through construction, acting as a central repository for project data that would be accessible to all team members to help expedite and potentially partially automate parts of design, review, and construction management activities,” says Thomson.

“This communal singular source of truth will be increasingly important with the shift towards more collaborative contracting approaches where information sharing is critical to fostering innovation and building a one-team mentality.” ■

*Reprinted with permission from Journal of Commerce. Read more at | [canada.constructconnect.com](http://canada.constructconnect.com)*



## Modern Tool (B.C.) Ltd.

Peter Baldry  
[peter@moderntoolbc.com](mailto:peter@moderntoolbc.com)  
cell: 604-250-3976

**Offering an extensive line-up of new and used machine tools and fabricating, sheet metal, and production machinery.**

**Feature Products:**



Laser and Plasma Sheet Metal Cutting Solutions



1385 Kingsway Avenue Port Coquitlam, BC  
604-472-1444 • 1-800-717-1440  
[www.moderntoolbc.com](http://www.moderntoolbc.com) 

**We are 100% Owned and Operated in Canada**



# Using Financial Ratios to Plan a Confident Future

Using this commonly overlooked forecasting tool can help you understand your company's financial preparedness.

By / Ronald Eager

Not much about the last two years has been predictable. The uncertainty caused by deteriorating backlogs, ultra-competitive bidding fields, rising costs, and supply chain issues has plagued contractors and made it difficult to set realistic goals and develop plans to reach them.

However, one thing that remains certain is the power of data to understand business performance and plan confidently for the future. From cash flow projections to key performance indicators (KPIs), analyzing the numbers coming out of your construction company is essential to your success in this economic environment.

An effective but commonly overlooked financial analysis tool is the use of financial ratios. Calculating ratios from your financial statement data and comparing them to industry averages and past performance can help you gauge your company's condition in many key areas and raise red flags for where new financial strategies may be needed in an ever-changing competitive marketplace.

## Liquidity

Liquidity ratios measure a company's ability to repay their short- and long-term financial obligations. Examples include:

Current ratio = Current assets divided by current liabilities. A current ratio of 1.0 or higher indicates that current assets are equal or more than current liabilities.

Quick ratio = Cash, cash equivalents, short-term investments, and receivables (net) divided by current liabilities. This ratio assesses the extent to which more liquid assets can satisfy current liabilities. A ratio of 1.0 is generally considered a liquid position.

Days of cash = Cash and cash equivalents multiplied by 360 and then divided by Revenue. Use this ratio to determine how many days of revenue your cash-on-hand could cover. Generally, seven days or more is considered adequate.

## Profitability

Profitability ratios measure your company's ability to generate income based on factors such as revenue, assets, operating costs, and equity. The return on assets ratio, for example, is calculated by dividing net earnings by total assets, which will indicate how much profit is generated by total assets employed. The higher the ratio, the more effectively you are employing company assets.

Return on equity is another profitability ratio and is calculated

as a percentage, this ratio indicates the profit generated by the net assets employed and reflects the stockholders' return on investment. A high ratio can mean that the company is either very profitable or undercapitalized.

### Leverage

Leverage ratios are used to evaluate your company's debt levels compared to other financial aspects of the business. Companies with higher debt levels will have a tougher time in down markets. Common examples include:

Debt to equity ratio = Total liabilities divided by total net worth. Generally, a ratio of 3 or lower is considered acceptable.

Revenue to equity ratio = Revenue divided by total net worth. This ratio will show you how much revenue is being supported by equity. Generally, a ratio of 15 or less is considered acceptable.

Underbillings to equity ratio = The total of unbilled work and cost in excess, divided by total net worth. This calculation indicates the level of unbilled contract volume being financed by stakeholders. A ratio of 30% or less is generally considered acceptable.

### Efficiency

Efficiency ratios assess how well your company is utilizing its assets and resources. For example, the Backlog to Working Capital ratio indicates the relationship between signed or committed work and working capital. It is calculated by dividing backlog by the difference between current assets and current liabilities (Backlog/Current assets minus current liabilities). A higher ratio may indicate a need for an increase in permanent working capital.

These are just a few of the financial ratios that can help you determine and improve your construction company's position. And while your surety and banks similarly compare your results to industry averages, financial ratios are equally useful for your company to benchmark your business and evaluate its competitiveness. The full value of this tool lies in comparing your company's own individual ratios over time. A change in a ratio over a two-year period would indicate your business is getting farther or closer to its financial goals. Tracking these ratios is equally important in good times as in down times.

Your company's financial statement is more than an annual compliance obligation. It is a wealth of valuable information that can be used to chart a course for a confident future. For more information on how to calculate and analyze financial ratios, email Ronald Eager at [reagar@grassicpas.com](mailto:reagar@grassicpas.com). ■

Reprinted with permission from May/June SMACNews | [smacna.org](http://smacna.org)



### British Columbia Sheet Metal Association (SMACNA-BC)

Providing products and information related to the Sheet Metal Industry, including technical manuals and guidelines.

The unmatched technical and managerial expertise of SMACNA-BC Contractors is enhanced by the talent and skills of the workforce they employ. SMACNA-BC Contractors employ only Red Seal Certified Sheet Metal Journeymen and Registered Apprentices.

### CONTRACTOR MEMBERS

- |                                  |   |
|----------------------------------|---|
| Admiral Roofing Ltd.             | J Grunau Metal Works Ltd.               |
| Airflow Mechanical Ltd.          | KD Engineering Co.                      |
| Alliance Metal Fabricators Ltd.  | Modern Niagara Vancouver Inc.           |
| Allied Blower & Sheet Metal Ltd. | M&T Air Conditioning Ltd.               |
| Ames Metal Fabricators 82 Ltd.   | Northern Sheet Metal Ltd.               |
| Apex Pneumatics Ltd              | Northwest Sheet Metal Ltd.              |
| Apollo Sheet Metal Ltd.          | Novagreen                               |
| Austin Metal Fabricators L.P.    | Pacific Rim Industrial Insulation Ltd.  |
| Boston Sheet Metal Ltd.          | Piedmont Sheet Metal (1997) Ltd.        |
| Bry-Mac Mechanical Ltd.          | Quest Metal Works Ltd.                  |
| CC Industries (2021) Ltd.        | R.H. Jones & Son Mechanical Ltd.        |
| Cascade Metal Design Ltd.        | Ridge Sheet Metal Co.                   |
| Century Plumbing & Heating Ltd.  | Samson Metals Ltd.                      |
| C.I.M.S. Limited Partnership     | Smith Sheet Metal Works Ltd.            |
| City Sheet Metal Ltd.            | Spectrum Sheet Metal Ltd.               |
| Crosstown Metal Industries Ltd.  | Summit Sheet Metal Ltd.                 |
| Downtown Custom Metal Works Ltd. | Tin Tech Incorporated                   |
| Duncan's Ltd.                    | Tri-Metal Fabricators                   |
| ECCO Supply                      | VETS Sheet Metal Ltd.                   |
| Equity Plumbing & Heating Ltd.   | Viaduct Sheet Metal Ltd.                |
| Harbourview Sheet Metal Ltd.     | Western Mechanical Services (1977) Ltd. |
| Horizon Cladding Ltd.            | York Sheet Metal Ltd.                   |
| Horizon Metal Systems Inc.       |   |

### ASSOCIATE MEMBERS

- |                               |                                  |
|-------------------------------|----------------------------------|
| Aarc West HVAC Solutions Inc. | HVAC Systems and Solutions Ltd.  |
| Access Metal Products Ltd.    | Intercon Insurance Services Ltd. |
| Air System Supplies           | Manson Insulation                |
| AIRPLUS Industrial Corp       | Maxam Metal Products             |
| All Therm Services Inc.       | Modern Tool (BC) Ltd.            |
| Canadian Western Bank         | Nu-West Construction Products    |
| Crossroads C&I                | Pacaire HVAC Supplies Ltd.       |
| EH Price Vancouver            | Power Suction Services           |
| EMCO (HVAC Division)          | Progressive Air Products Ltd.    |
| EMCO HVAC - Burnaby           | Raven Hydronic Supply Ltd.       |
| Engineered Air                | Samuel, Son & Co., Ltd.          |
| Envirotech Air Inc.           | SPI - Burnaby Insulation         |
| Flo-Matrix Air Ventilation    | Wm. P. Somerville 1996 Ltd.      |

### BC Sheet Metal Association (SMACNA-BC)

Executive Director: Jeremy Hallman  
705 - 9639 137A Street Surrey, BC V3T 0M1  
Phone: (604) 585-4641  
E-mail: [smacnabc@smacna-bc.org](mailto:smacnabc@smacna-bc.org)

## HOW TO SELECT APPRENTICESHIP CANDIDATES IN A CHANGING MARKET

It is always hard to know how many apprentices to bring into the industry in changing market conditions. How many do we need? Will there be jobs for them for the next four years? How many might we lose in a market downturn? Job openings in the construction industry remain extremely high. Construction workers are still retiring and shifting to other industries. Unfilled job openings continue to impact contractors' and unions' ability to build critical infrastructure.

Now is the time to get rid of the outdated apprentice selection and hiring habits we acquired during the past decades before they sink the union construction industry. We need to seriously reconsider recruitment and talent selection.

The key area for improvement is how we bring in apprentices. A huge effort is underway to get young people interested in our industry. Great. But we need to be more interested in getting the right young people, because every new apprentice we accept will become a part of our industry family for the next 25 to 30 years. We need to take selection much more seriously. To the extent we have standards for choosing apprenticeship candidates, they are often too informal.

The failure of unions and contractors to address this problem is a staggering head scratcher, especially when you consider the following:

1. In most cases, unions and employers will spend anywhere from \$40,000 to \$100,000 over the course of four or five years to train a single apprentice.
2. Anywhere from 10% to 40% of accepted apprentice candidates end up washing out. That amounts to millions of dollars wasted on failing candidates every year.
3. The threshold for acceptance into a fully paid apprenticeship program is low. There might be a math test or a short interview at some point, but that's about it. In other words, we commit to spend several years (and six figures) training someone we know hardly anything about. Contrast this with how most colleges recruit students. Every candidate must take the SAT or ACT and write an essay explaining why they deserve the opportunity to attend school—and if they're accepted, they (or, more likely, their parents) are on the hook for tuition.
4. Contractors are usually not overly involved in selecting apprentices—the men and women they will end up hiring for the next 25 years. They sub out this crucial task to the union professionals who need their support.
5. Union wages and fringes combined are often 15% to 25%+ more than non-union compensation. Given this sizeable delta, doesn't it make sense to select only "Top-Gun" candidates for high-quality, cost-free apprenticeship by



By Mark Breslin  
Apprentice Performance Solutions

testing, evaluating, interviewing, and screening them to the extreme?

Before I give a few recommendations on how to improve recruitment, I would like to provide a case study in best practices. Here is a stark example of what it takes to succeed in today's high-stakes business world.

My daughter's fiancé is a nerd—a really, really smart one. He is currently working for Google. His application process at Google included 12 interviews and countless hard-ass problem-solving exercises. When he finally reached what they call the "hiring committee" stage, Google execs grinded through the "best of the best" to decide who was hired. That's how it's done. That's the discipline and requirement to be a world-class organization. Google owns the world's intellectual capital market, and it doesn't settle on just "good" candidates. Ever. And neither should we.

My suggestions are short and sweet. This temporary moment of industry contraction gives us a perfect opportunity to redesign recruitment from scratch. Let's start by doing the following:

1. Every candidate entering a union apprentice program should undergo extensive, fair, and ranked testing and evaluation. If it's good enough for colleges in the United States, it's good enough for us.
2. Our evaluation process should be similar to ones used by police and fire departments. Each candidate should be interviewed for at least half an hour by a team of professionals—including union contractors.
3. Apprentices who quit the program (not removed for cause) should be interviewed to find out what persuaded them to drop out. This information can be used to improve training and implement changes where necessary, ultimately saving hundreds of millions of dollars over the next decade.

The union construction industry can't afford average candidates to become our foundation of talent. Not everyone deserves the "free ride" treatment that our world-class training programs provide. We need to take a more proactive approach and get contractors much more involved in the evaluation process. In today's job seekers' labour market, compromising on talent is still flat-out unacceptable. It's all up to us to commit to a new path forward. ■

## INTRODUCTION ON AIR TO WATER HEAT PUMPS

It's no secret that heat pumps are making a come back in a big way and they are here to stay.

Driven by environmental concerns, policy, and government rebates—not to mention the ability to provide cooling—this fast-growing market trend is making a big impact in the HVAC industry and is now expanding to include hydronic heating systems.

Heat pump technology has advanced tremendously in the past decade, allowing the units to offer much higher performance at lower outdoor temperatures, even as low as -30 degrees C for some models. This was unheard of just a decade ago.

When it comes to hydronic systems, there are several options available to take the place of fossil fuel boilers. They can be classified in three distinct categories: monobloc, split system, and heat pump boiler. The heat pumps can be further classified as conventional, inverter, or cold climate heat pumps (CCHP). The selection for the type of heat pump that will be used can be dependent on a mechanical contractor's ability to support the product they install, their level of comfort with the system, and the application.

Let's talk about the advantages and disadvantages for each type of system.

### Monobloc Heat Pump

#### Advantages:

These air-to-water heat pumps are totally self-contained and only require water lines to be connected from the outdoor unit to the indoor buffer tank. They are typically equipped with inverter driven compressors that make them quiet and efficient. Some models include the circulator built into the appliance, and they usually include a small electric heater (usually 3Kw or less) to help supplement the unit's capacity during colder weather. These units are installer friendly since there are no refrigeration field connections to make.



#### Disadvantages:

Monobloc systems require freeze protection throughout the entire hydronic system unless a heat exchanger is installed downstream of the buffer tank. The cost for a heat exchanger, circulator, and other components may often exceed the cost of anti-freeze for the entire system. Propylene glycol should be the anti-freeze of choice.

- Technical expertise is required to service or repair the units. The skills required include refrigeration, controls and hydronics.
- A secondary source of energy should be included in the system design in the event of a unit failure.



By Paul Vaillancourt  
North American HVAC Products Ltd.

### Split System Air-to-Water Heat Pumps

#### Advantages:

This type of system uses an indoor module where a refrigerant-to-water heat exchanger is installed. Like a Monobloc but separated into two components (indoor and outdoor), the split system does not require anti-freeze in the system since there are only refrigerant lines between the indoor and outdoor units.



[www.electromn.com](http://www.electromn.com)
[www.nahvac.com](http://www.nahvac.com)

Our NorAire inventory is available now in our ECCO Supply™ Metro Vancouver locations!

## GET INTO THE WARMFLO

**WITH NORAIRES AIR-TO-WATER HEAT PUMP SYSTEM**

NorAire's Heat Pump Boiler Series utilizes its patented **WarmFlo technology** to control the temperature, and monitor the BTU needs of the home. With WarmFlo at work, you'll always have the ideal indoor temperature, whether it's for multi-family housing, single-family homes, patio homes, net zero homes, or even a greenhouse.

[www.eccosupply.ca](http://www.eccosupply.ca)

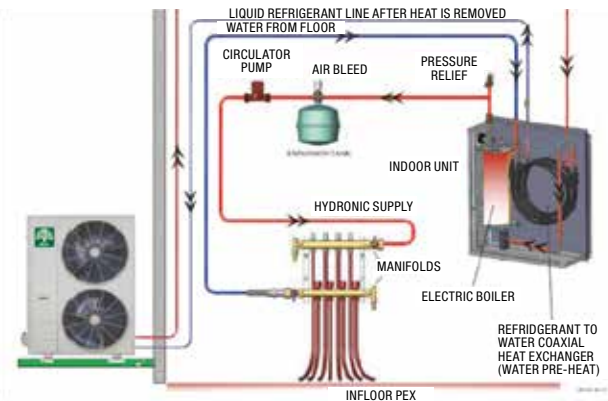
Contact us at your local ECCO Supply™ Branch for participating models and availability

## Disadvantages:

Like monobloc units, the split system indoor units may include a small electric heater and a circulator. The system design should include a back-up system in the event of a unit failure. Split system units require the same skill level as Monobloc systems with the addition of the skills and tools required to install a line set, charge a system, and proper commissioning.

## Heat Pump Boiler Systems

The heat pump boiler system has many advantages since it offers great technology in its simplest form. It is an electric boiler equipped with a refrigerant-to-water heat exchanger. The electric boiler can be operated independently from the heat pump, in combination with the heat pump, or as a heat



pump only system. This type of system allows the designer to use the heat pump for radiant floor systems and use the boiler for high temperature loads, such as domestic hot water through an indirect water heater. The boiler can produce 180 degrees F water for this application. Heat pump boilers are typically available with up to 20Kw of electric heat.

## Advantages:

- Quick and simple installation
- 100% back-up built in
- Boiler can be operated stand-alone with heat pump installed at a later date
- No anti-freeze required
- Quiet and efficient
- Extremely reliable due to simplicity in design
- Can be used with indirect tank for 100% domestic hot water
- Designed to connect with inverter heat pumps for maximum efficiency

## Disadvantages:

- Requires a refrigeration technician for line set, charging, and commissioning of the heat pump system.

## All Systems

While there is mention in this article about systems that may not require anti-freeze, this may not be the case where extremely cold temperatures would require that the indoor portions of a system be glycolized for burst protection. It is also good practice to use propylene glycol for systems producing chilled water for cooling. ■

*Paul has been in the HVAC industry for over 40 years with his roots in working for the family business in the Ottawa area in the 1970s. His thirst for knowledge over the years, and always wanting to find a better way, has afforded him a high level of expertise in many areas of the HVAC industry. He is the National Sales Manager / Technical Trainer for North American HVAC Products Ltd. He can be reached at [paul.v@nahvac.com](mailto:paul.v@nahvac.com)*



<b>Business Manager &amp; F.S.T.</b>	<b>Richard Mangelsdorf</b>
<b>Assistant Business Manager</b>	<b>Troy Clutchey</b>
<b>Business Representative</b>	<b>Jeff Lind</b>
<b>Business Representative</b>	<b>Owin Baxter</b>
<b>Organizer</b>	<b>Steve Davis</b>

**6188 Kingsway, Burnaby, BC V5J 1H5**  
**Phone 604-430-3388 or 1-800-242-8645**  
**Fax: 604-431-1864**  
**Email: [agents@smw280.org](mailto:agents@smw280.org)**

## Caught you looking!

Got news or a great idea for a column? Email your ideas to [jessica.kirby@pointonemedia.com](mailto:jessica.kirby@pointonemedia.com) and share your wow with your industry peers today.



INDUSTRY NEWS

continued from page 10

Certification requirement was removed in 2003 under former premier Gordon Campbell, and the Crown corporation Industry Training Authority was set up to manage apprentices.

The first ten trades that required certification are gasfitter Class A and B, steamfitter and pipefitter, refrigeration and air conditioning mechanic, sheet metal worker, powerline technician, industrial electrician and electrician (construction), heavy-duty equipment technician, automotive service technician, and autobody and collision technician.

Learn more at [itabc.ca](http://itabc.ca) ■

**BUILDING HOPE: MEN IN THE TRADES AND SUBSTANCE USE**

*Building Hope: Men in the Trades and Substance Use*, a video series raising awareness about the opioid overdose crisis and the impact of the toxic drug supply on people in the trades, has launched. The primary video, nine minutes in length, features four men with experience in the construction industry and trades, as well as lived experience with substance use. The men speak to their fellow tradespeople about their experiences using substances and offer information on how to stay safer in the drug-poisoning era. There are also four one-minute spotlight videos featuring each of the men: Trevor Botkin, Kale Moth, Daniel Snyder, and Rob Tournour.

The goal of the video series *Building Hope: Men in the Trades and Substance Use* is to raise awareness about the drug poisoning crisis, reduce the stigma toward people who use substances, and promote help-seeking among men in the trades and construction and inform workers about the employers ‘duty to accommodate’. Ultimately, the intention is to save lives. Men account for 80% of overdose deaths in Canada, which has become a leading cause of death across the country. Men in the trades are at particular

risk of experiencing substance use-related harms, including overdose. Several factors contribute to these trends, including chronic pain, toxic masculinity and stigma, and workplace drug policies which can contribute to men being less likely to speak openly about their substance use and mental health.

*Building Hope: Men in the Trades and Substance Use* videos have been produced for The Tides of Change South Surrey, Whiterock Overdose Prevention and Response Community Action Team in British Columbia. Producers George Passmore, Matthew Huot, and Lorna Thomas worked with Base Two Media and a consulting team to develop the videos with the assistance of Health Canada, CAI Community Action Initiative, City of Whiterock, Sources Community Resource Center Community Resources Society.

Watch the series at [youtu.be/0BFiCM1Qlmk](https://youtu.be/0BFiCM1Qlmk) ■

**SAVE THE DATE: 2023 SMACNA ANNUAL CONVENTION PHOENIX, AZ | OCT 15, 2023 - OCT 18, 2023**

The dates for the 2023 SMACNA Annual Convention have been set to October 15-18 in beautiful Phoenix, Arizona. Keep an eye on [smacna.org/learn/events/calendar/2023-smacna-annual-convention](http://smacna.org/learn/events/calendar/2023-smacna-annual-convention) for details and information as the program evolves. ■



**advertiser index**

advertiser	page	phone	website
Air System Supplies	5	604.294.8281	<a href="http://www.airsystemsupplies.com">www.airsystemsupplies.com</a>
BuildCentrix	15	855.932.3828	<a href="http://www.buildcentrix.com">www.buildcentrix.com</a>
ECCO Supply	21	604.530.9755	<a href="http://www.eccosupply.ca">www.eccosupply.ca</a>
Modern Tool (B.C.) Ltd.	17	604.472.1444	<a href="http://www.moderntoolbc.com">www.moderntoolbc.com</a>
SMART Union Local No. 280	14, 22	604.430.3388	<a href="http://www.smw280.org">www.smw280.org</a>
Sheet Metal Workers Training Centre Society	14	604.882.7680	<a href="http://www.smwtc.ca">www.smwtc.ca</a>
SMACNA-BC	IFC, 14, 19	604.585.4641	<a href="http://www.smacna-bc.org">www.smacna-bc.org</a>
Cover Sponsors	OBC		



**ALL THERM SERVICES INC.**

LEADERSHIP THROUGH ENERGY CONSERVATION



[www.airsystemsups.com](http://www.airsystemsups.com)



**apollo sheet metal ltd.**

