



CASE STUDY

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Project Profile

Location:
Vancouver, British Columbia

Venue:
Residential High Rise

System Type:
Plumbing Systems

Installer:
John Jacobsen
Phoenix Mechanical
Vancouver, British Columbia

Uponor products mentioned in this case study

[Wirsbo AQUAPEX™ Tubing](#)

[Uponor ProPEX™ Fitting System](#)

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RESIDENTIAL: Plumbing Systems

VANCOUVER RESIDENTIAL HIGH RISE

Uponor PEX Saves Time and Money for Residential High Rise

John Jacobsen of Phoenix Mechanical is so impressed with Wirsbo AQUAPEX, he won't use anything else.

Downloadable Resources: [Case Study \(.pdf\)](#) | [Text \(.txt\)](#)

Time is money — especially in the building industry. John Jacobsen of Phoenix Mechanical in Vancouver, B.C., reaffirmed this belief when he began using Uponor's crosslinked polyethylene (PEX) tubing for his plumbing systems.

Jacobsen switched to Uponor's PEX tubing, Wirsbo AQUAPEX®, after learning about its benefits over copper — flexibility, durability, reliable fittings, faster installations and a 30-year history of dependable service. Wirsbo AQUAPEX is also extremely resistant to corrosive water and soil that can eat away at copper pipe, and it comes with a 25-year limited warranty when installed by an Uponor-trained plumber.

Since installing Wirsbo AQUAPEX in all his projects, Jacobsen has realized great time savings, money savings and a more reliable plumbing system.

“The flexibility of Wirsbo AQUAPEX allows us to eliminate many of the fittings that were required with copper,” Jacobsen says. “This means our systems are installed faster and at a lower cost.”

Phoenix Mechanical works with one of Vancouver's largest developers, Concord Pacific, which has built 41 residential high- and low-rise buildings in the past few years. Three of their buildings, which contain over 300 units each, are plumbed with over 120,000 feet of Wirsbo AQUAPEX tubing.

In these buildings, Wirsbo AQUAPEX is tied to structural rebar in the concrete slab. Using flexible PEX tubing eliminates joints within the slab and cuts installation time by approximately 50% when compared with copper.



"I have used Wirsbo AQUAPEX since the day it was approved in Vancouver, and I think it is an absolutely wonderful product," Jacobsen says. "With Wirsbo AQUAPEX, the installation is fast and easy, and the tubing can be buried directly in concrete — something the codes won't allow us to do with copper. We put the tubing in a sleeve so it can easily be removed in case of construction damage."

Energy bylaws in Vancouver also require added insulation around copper tubing for hot-water distribution. Because Wirsbo AQUAPEX is a good insulator on its own, it is not subject to the insulation requirement, saving plumbers valuable time and money.

"The cost of Wirsbo AQUAPEX is similar to the cost of the insulation that would have been required for copper," Jacobsen says. "You can't beat savings like that."



Uponor manifolds supply hot and cold water to fixtures in over 300 units of a residential high rise.



The Uponor-exclusive ProPEX fitting provides a secure, reliable connection without torches, glues or gauges.

Another benefit of the Uponor plumbing system is the unique ProPEX® fitting system. The ProPEX fitting capitalizes on the shape memory of Wirsbo AQUAPEX tubing. An expander tool expands the tubing enough for the fitting to be inserted, and the tubing then shrinks around the fitting as it returns to its original shape. The result is a permanent connection that is consistent every time without the use of torches, glues or gauges.

"Wirsbo AQUAPEX offers us a complete system that is reliable and ideal for both the plumber and the homeowner," Jacobsen says. "Since I started using it, I won't use anything else."

Summary of Benefits

Fast Installation — Flexible Wirsbo AQUAPEX tubing requires fewer joints than rigid plumbing systems, saving money and time and reducing the risk of leaks. With Wirsbo AQUAPEX, two installers were able to plumb five units per day. With copper, two installers could only plumb two units per day.

Quiet — The residents of these luxurious high rises do not want noisy plumbing. Wirsbo AQUAPEX has excellent sound-dampening characteristics, eliminating the problem of water hammer and pinging pipes.

Healthy — Wirsbo AQUAPEX tubing is clean, healthy and non-toxic and does not emit any odor or taste into the potable water system.

Reliable Fittings — Uponor's exclusive ProPEX fittings use the shape memory of Uponor PEX tubing. This makes them unlike any other fitting system on the market because they are quick and simple to install and do not require glues, torches or gauges. Best of all, ProPEX fittings allow for visual inspection, ensuring a proper connection with no guesswork.

Proven — Uponor PEX tubing has been used in plumbing systems around the world for over 30 years — longer than any other flexible tubing product available. In fact, the tubing has endured

continuous high temperatures and pressures in independent lab tests for over three decades, proving its strength and durability.

Corrosion Resistant — Vancouver has very acidic water that can eat away at copper pipe over time. Wirsbo AQUAPEX resists aggressive water and soils, making it much more durable in Vancouver's plumbing systems.

Project Data

Size of Structure:	300,000 square feet
Type of Construction:	Steel stud
Floor Construction:	Concrete
Tubing Type:	½" and ¾" Wirsbo AQUAPEX
Fitting Style:	ProPEX® Fitting System
Number of Manifolds:	2 per suite, 8 suites per floor
Feet of Tubing:	68,000 feet of ½" tubing 10,000 feet of ¾" tubing

The design information in this case study is provided for illustrative purposes only. The actual requirements of similar projects will depend on regional climatic conditions, project-specific heat loss, owner expectations, applicable building codes, etc. Please contact your Uponor representative for assistance in designing your specific projects.

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For more information about the benefits of cross-linked polyethylene (PEX) tubing, contact a reputable manufacturer, such as Uponor North America (www.uponor-usa.com).

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