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## Ontario Dairy Barns

Contractor supports dairy farmers  
with durable REHAU mechanical  
and plumbing systems.

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## Ontario contractor relies on the REHAU PEXa plumbing system for installation speed and long-lasting toughness in dairy barn projects

Dairy farming is a way of life for many North American families. The work of dairy farmers is crucial in economically supporting rural communities and supplying nutrition to millions of households. With so much at stake, choosing durable materials for the building structures and systems in dairy barns is of utmost importance.

To ensure smooth day-to-day operations in dairy barn projects, WRC Purifying, a water treatment solutions company based in Ontario, trusts the REHAU PEXa plumbing system. REHAU RAUPEX UV shield crosslinked polyethylene (PEXa) pipe paired with the EVERLOC+ compression-sleeve fitting system has consistently provided the crew with quick installations backed by reliable performance. RAUPEX is typically installed within hot water systems in the dairy barns, feeding sinks throughout the space and providing water for systems that require cleansing cycles, such as milk tanks and robotic milking systems.

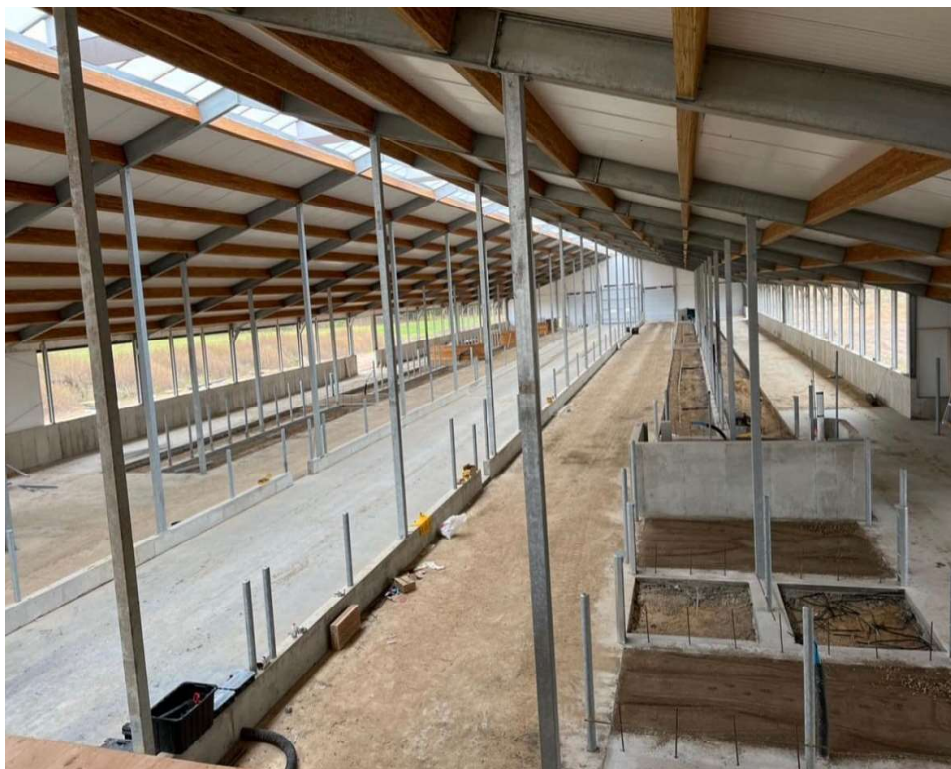
**"We use the REHAU plumbing system because it lasts, which is a huge consideration for agricultural projects because we don't want to go back and cause disruptions with rework," said Marty Buchanan, plumber at WRC for more than 13 years. "When we find something that lasts, we stick with it."**

Let's take a tour of three WRC dairy barn projects featuring REHAU PEXa plumbing systems.

### Troy, Ontario

For this 110-by-34 m (360-by-111 ft) dairy barn completed in 2022, RAUPEX pipe was selected specifically due to its ability to maintain hot water temperatures. Buchanan noted that 82.2°C (180°F) water is required for a comprehensive wash cycle within robotic milking systems. The hot and cold water plumbing feature 1 in. RAUPEX pipe. The hot water plumbing pipe runs from the indirect tank to the header, maintaining flow rates if multiple sinks are in use at the same time. For feeding sinks and wash controls, Buchanan installed 3/4 in. RAUPEX pipe.

After using PVC and other brands of PEXa pipe in place of copper, Buchanan found that REHAU RAUPEX delivers the toughness needed to withstand challenging environments. "In agricultural plumbing, it's good to use plastic piping over copper," he explained. "Older barns that lack good ventilation tend to have a buildup of ammonia in the air from animal manure or urine, which can affect the equipment in the barn and cause copper piping to fail. These barns are also county properties using well water, so the quality of water can lead copper to become brittle or get pin holes over time. REHAU RAUPEX was the only piping that could handle the hot water temperatures and harsh conditions."



Made in America, RAUPEX pipe undergoes a series of rigorous testing before it is used in the field. RAUPEX doesn't just pass tests in laboratories; it is built to hold up over time. Uniform crosslinking offers optimal strength, making RAUPEX an ideal piping choice for systems that must withstand tough environments.

The REHAU PEXa plumbing system takes durability a step further with the leak-free reliability of the EVERLOC+ compression-sleeve fitting technology. EVERLOC+ provides secure connections with its multiple sealing edges and textured compression sleeve. "EVERLOC+ is a solid system," said Buchanan. "You know it'll be a good joint every time and you won't have to worry about leaks."

### **Belmont, Ontario**

Completed in 2022, this 85.3-by-30.5 m (280-by-100 ft) addition to a Belmont dairy barn used 3/4 in. RAUPEX pipe for hot and cold water plumbing.

With farmers eager to keep their business running, a quick dairy barn plumbing installation is a priority. Compared to copper, RAUPEX PEXa piping boasts a higher level of flexibility to speed up installations without compromising durability.

"RAUPEX is a lot quicker to install compared to copper and galvanized pipe, and farmers don't have to worry about buildup," explained Buchanan. "All our guys can install RAUPEX, but copper needs to be soldered. It's easy to make connections with the REHAU EVERLOC+ tool too."

The proprietary EVERLOC+ fitting system contributes to speedy installations with its configurable battery-powered tools and consistent installation technique. Plus, EVERLOC+ allows for immediate pressure testing, regardless of the pipe diameter or temperatures during cold Canadian winters. "With other products, we have to wait for our glue to dry which could take longer in the cold weather, whereas EVERLOC+ is instant," said Buchanan. "EVERLOC+ allows us to fire up the plumbing system as soon as we've made our connections. This maintains all through the year – cold conditions don't slow us down."



### **Dunneville, Ontario**

This 103.3-by-41.8 m (339-by-137 ft) Dunneville dairy barn was completed in 2023, notably featuring both REHAU plumbing and mechanical systems. The hot water plumbing system required 3/4 in. RAUPEX pipe to feed sinks and wash controls, with 1 in. pipe connecting to the boiler system to supply 82.2°C (180°F) water for cleaning cycles.



According to Buchanan, this project was unique given the scarcity of water in Dunneville. A synthetic pond collects rainwater to feed the plumbing system, which is further treated to ensure safe drinking water for the cows.

Another unique aspect of this project was the inclusion of a REHAU radiant heating system for comfortable, efficient heating in the barn. Radiant heating circulates warm water through a network of RAUPEX O<sub>2</sub> barrier piping, which can be installed in floors, ceilings or walls. This method of heating is an ideal choice for large commercial areas to help address high-performance goals and maintain even heat throughout a space.

The radiant heating system required 137 m (450 ft) of 1/2 in. RAUPEX O<sub>2</sub> barrier pipe, paired with REHAU PRO-BALANCE manifolds. RAUPEX O<sub>2</sub> barrier pipe provides an extra layer of protection with its co-extruded ethylene-vinyl alcohol (EVOH) oxygen diffusion barrier, which limits oxygen permeability. Similar to RAUPEX UV shield pipe for plumbing, RAUPEX O<sub>2</sub> barrier pipe is durable and flexible, offering enhanced temperature capabilities and long-term strength in radiant heating systems.

*"On every radiant heating job, we use REHAU manifolds and manifold-to-pipe adapters," said Buchanan. "We have a great supply of REHAU fittings and pipe at our shop so we never run out. We go through a lot on the dairy barns!"*



WRC continues to support Ontario dairy farmers with several projects lined up that include REHAU PEXa plumbing and radiant heating systems. "You know the stuff you get from REHAU is high quality," Buchanan concluded. "REHAU is a good name, backed by good products."

**Project:** Ontario Dairy Barns | Troy, Belmont and Dunneville, ON

**Construction type:** Agricultural, built in 2022 and 2023

**Plumbing contractor:** WRC Purifying

**REHAU systems used:** PEXa plumbing system (RAUPEX® UV shield pipe, EVERLOC+® compression-sleeve fitting system) and radiant heating system (RAUPEX® O<sub>2</sub> barrier pipe, PRO-BALANCE® manifold)

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