

# CASE STUDY

## HILTON GARDEN INN CLEVELAND EAST HOTEL BENEFITS FROM A COMBO CPVC/PEX PIPING SYSTEM FROM FBC™ BUILDING SOLUTIONS

**M. W. Mielke, Inc.**  
Medina, Ohio  
Established: 1984

### M. W. Mielke Converts Project from Metallic Specs to Corrosion-Resistant, Labor-Saving Solution

Few people understand the importance of completing a commercial construction project quickly better than Dave Mielke. As president of M. W. Mielke, Inc., a mid-sized mechanical contracting firm in Medina, Ohio (just south of Cleveland), Mielke has been responsible for the timely completion of hundreds of commercial, institutional and heavy industrial projects. The firm, which was founded by his grandfather in 1984, has a solid reputation for producing not only award-winning design/build work, but also for completing quality projects on time.

"Time is always a factor in this business," said Mielke. "Everyone wants to push their projects along so they can get them up and running quickly."

So when Mielke heard of the FlowGuard® MultiPort Commercial System - a new hybrid plumbing system that not only offered a more reliable, corrosion-resistant alternative to copper, but also resulted in a more cost-effective, significantly faster installation - he was definitely interested in putting it to work to benefit the new Hilton Garden Inn project in Cleveland.

The innovative hybrid concept was developed by FBC™ Building Solutions of The Lubrizol Corporation. Mielke and his team were already very familiar with a BlazeMaster® fire sprinkler system, the most specified non-metallic fire sprinkler system in the world and another FBC Building Solutions product. He had been successfully installing the corrosion-resistant, lightweight, easy-to-install CPVC fire sprinkler system in a wide array of commercial applications for more than ten years and was a huge fan of its cost- and labor-saving benefits, as well as its reliable performance. So there was a realistic expectation that the plumbing product would deliver the same quality and performance benefits.

The new FlowGuard MultiPort Commercial System combined the benefits of CPVC and PEX by transitioning the combination of Corzan® and FlowGuard Gold® CPVC pipe and fittings to FlowGuard™ Flex PEX pipe via the patent-pending FlowGuard® MultiPort manifold.



Unlike any other manifold on the market, the FlowGuard MultiPort has been recognized for its superior versatility. In fact, it was recently named as one of the "Top 100 Products" by *Buildings* magazine, one of the "50 Most Innovative Products" by *Professional Remodeler* and one of the "10 Most Innovative Products" by *Supply House Times*. Not only does it allow for any number of ports during installation while easily accommodating future expansion, but it can also be used to connect with CPVC or PEX pipe, minimizing joints behind the wall. The novel hybrid approach, made possible by the FlowGuard MultiPort, created a professional looking, fully corrosion-resistant plumbing solution that could be installed in a fraction of the time it would have taken with copper.

"We knew that the concept made a lot of sense financially," said Mielke. "From our experience with the BlazeMaster fire sprinkler system, we knew that these were all superior products that offered more dependability than metal. The benefits really added up—cost savings, corrosion resistance, and a faster, easier-to-install system. And, best of all, we didn't have to deal with metal."

There were a number of reasons why the Hilton Garden Inn Cleveland East represented an ideal opportunity to put the FlowGuard MultiPort Commercial System to the test, starting with its wooden frame. Chuck Hinchliffe, a foreman for M. W. Mielke overseeing the Hilton Garden Inn project, noted, "Because of the wood frame building, we used FlowGuard Flex pipe to avoid offsets. We were able to cut long runs of the FlowGuard Flex pipe and easily maneuver the pipe between the wall cavities and pull it straight up through the floors of the four-story structure."

For the smaller diameter piping, FlowGuard Gold CPVC pipe and fittings were used in sizes up to its maximum available size of 2" in diameter, and FlowGuard Flex PEX pipe was used in ½" and ¾" dimensions.

For larger diameter piping, Corzan® CPVC pipe and fittings (available up to 24" in diameter), were used in sizes up to 4" in diameter for the mains. The mechanical room was done in 4" pipe with 2" and 3" diameter pipe running to the boilers. The Corzan CPVC pipe continues down the hallways and branches off the main to the smaller-diameter FlowGuard Gold CPVC pipe.



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**Type of Construction:**  
Commercial

**Installation Type:**  
New

**CORZAN®**  
PIPING SYSTEMS  
**FLOWGUARD GOLD®**

**FLOWGUARD flex**  
MULTI-LAYER PIPING SOLUTION

# CORZAN®

## FLOWGUARD GOLD®

Having recently joined M. W. Mielke from the New England area where radiant heating is more prevalent, Hinchliffe was quite familiar with the installation benefits of PEX pipe. This was, however, his first experience with any of the FBC Building Solutions plumbing products.

"I was especially impressed with the flexibility of the FlowGuard Flex pipe," said Hinchliffe. "I found the product to be more flexible than the other PEX piping I've used in the past. I bent circles in the stuff with no problems, as long as the radius was kept right. It didn't kink, either, if you bent it too far. And it pulled corners better than other brands, especially around the engineered beams." (FlowGuard Flex PEX is a PEX-b type, which is known for its superior flexibility compared with other methods, including PEX-a/peroxide or PEX-c/irradiation.)

As a novice user of CPVC pipe and fittings, Hinchliffe immediately noticed the additional time savings afforded by using FlowGuard Gold and Corzan CPVC pipe and fittings.

"The project went faster than expected, partly because of the FlowGuard Gold one-step solvent cement application," said Hinchliffe. "I liked how the fittings were made. The whole system took the extreme temperatures well. It was 20° below zero when we started the project, but we had no problems with the pipe getting brittle or with the solvent cement."

Hinchliffe was equally impressed with the FlowGuard MultiPort manifold. "I absolutely loved it," he said. "It was a huge bonus. We used it wherever we could. In the past, I've built my own manifolds with lots of tees. This design was a real time saver. Plus the installation looked beautiful—very professional. All the valves were angled uniformly. There was only one joint on each end, and there was no need to square anything up. I've used other manifolds with mechanical joints. But the FlowGuard MultiPort was a step above by far. It's so simple. I especially liked the extended tail which I capped for possible future expansion. I could make any configuration I wanted due to the great range of sizes. It was definitely a joy to learn to use this product." The Hilton team was equally impressed.

"Anyone who works with the Hilton team knows they are a demanding, detail-oriented client," said Hinchliffe. "They are very particular and have strict requirements. That's why we were so pleased with their reaction on this project. They loved not only the look of the installation, but also the overall results. This was the first Hilton in the U.S. to use a FlowGuard MultiPort Commercial System. The project was originally specified to

be 100 percent copper for plumbing and iron for the fire sprinklers. We sold the conversion to CPVC and PEX by showing them a savings in both material and labor. In the end, very little steel was used, except where required by code."

The Mielke team is quick to point out, however, that their long-standing partnership with FBC Building Solutions and, more specifically, BlazeMaster fire sprinkler systems, is based on more than just having a superior product quality offering. It's also about the customer service and ongoing technical support they receive.

"We had some high-temperature water issues which required outside technical assistance," explained Hinchliffe. "Our FBC field rep was phenomenal. Even if he was traveling, I had the information I needed within hours. And it seemed like someone was always stopping by the job site to ensure the installation was progressing smoothly. Even better was the fact that since all of the CPVC and PEX used to make the piping products originated with a single manufacturer—Lubrizol—we had one convenient source for

addressing questions and problems."

To help with the learning process of using the FlowGuard Gold and FlowGuard Flex piping systems for the first time, FBC Building Solutions field representatives provided on-site installer training. In order to gain additional insight and technical information on the products, Mielke engineers attended FBC University in Cleveland, where they gained valuable hands-on experience with the various piping products.

"I absolutely want to use this combination of piping products on future jobs," said Hinchliffe. "We are always looking for ways to upsell a project, and I see a lot of opportunities. Whether it's the BlazeMaster CPVC fire sprinkler system that we installed throughout the entire Hilton project or the FlowGuard MultiPort Commercial System, the installation is easy and clean. There's no mess. The fittings are easy to organize. The whole system is lightweight; you just throw it over your shoulder and walk up the stairs. I was very impressed with the products used as a system."

Since Lubrizol Advanced Materials, Inc. (as part of BFGoodrich Performance Materials) developed CPVC plumbing systems over 50 years ago, more than four billion feet of CPVC pipe has been installed in homes, condominiums, buildings, apartments and hotels, including more than 12 million homes. For more information on the FlowGuard Gold® plumbing system, including pipes, valves, joining cement, caulks, sealants and tools, call 888-234-2436, x447-7393, or visit [www.fbcbuildingsolutions.com](http://www.fbcbuildingsolutions.com).



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PIPING SYSTEMS  
**FLOWGUARD GOLD®**

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