

# Industrial Case Study

## Hospital Project Reaffirms a Shift to CPVC for Potable Water

Installation of Xirtec® CPVC made with Corzan® for Potable Water in a large addition to an Ohio medical center shows the many benefits of engineered thermoplastics system

### Xirtec® CPVC

#### PROJECT:

Ashtabula County  
Medical Center, Ohio

#### PRODUCTS:

Xirtec® CPVC Potable Water Line

#### DISTRIBUTOR:

Harrington Industrial Plastics

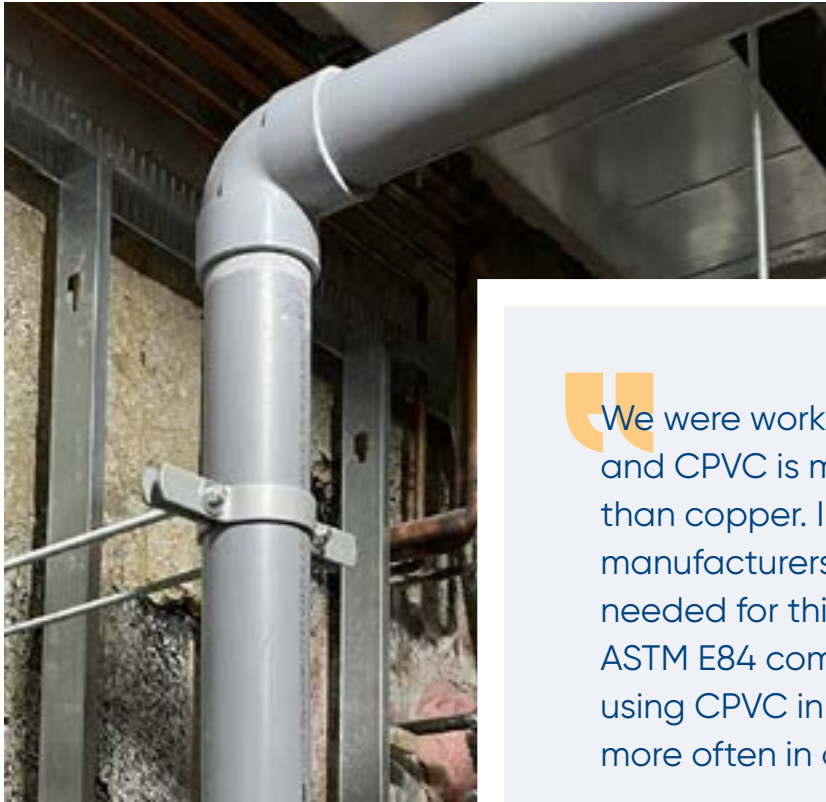
#### PROJECT SUCCESS:

- Cost-Effective Solution Compared to Copper
- Easy Installation Solution – Lighter than Copper and Solvent Welding
- Full Range of Services – Local Sales Support, Local Inventory, Application Engineer Design, Expertise & Installation Training



### SUMMARY

Xirtec® CPVC made with Corzan® for Potable Water was the ideal solution for a hospital project team in Ohio that needed a cost effective and durable, high-capacity water distribution system. They chose to use CPVC, which offers a streamlined installation process compared to standard copper systems. Xirtec® CPVC is resistant to all chlorine based disinfectants, won't corrode pit or scale, and resists biofilm build up due to its smooth inner walls and the ability to operate at higher fluid velocities. Furthermore, CPVC requires little to no maintenance over decades of service life.



“We were working with a limited budget and CPVC is much more cost-effective than copper. IPEX is one of the very few manufacturers that make pipe in the size needed for this project and that met the ASTM E84 compliance. This is our first time using CPVC in healthcare. We'll be including it more often in our specs moving forward.”

**Tim Foresta, Kapinski Engineering**

## THE CHALLENGE

When a growing county in northeastern Ohio required an extension and renovation of its hospital, it turned to IPEX's Xirtec® Schedule 80 chlorinated polyvinyl chloride (CPVC) thermoplastic piping system.

A new 131,500-square-foot, four-storey patient care tower is the largest construction project in Ashtabula County Medical Center's 118-year history. It will house 55 private patient rooms, a new 10-room intensive care unit, 24 emergency department rooms, five operating rooms, and a wound healing center.

Recognizing the limitations of its outdated infrastructure and the importance of providing safe, clean and reliable water to patients and staff, the project management team sought a state-of-the-art solution.

Xirtec® CPVC, known for its advanced design and exceptional performance, promises efficiency, reliability and a long life.

IPEX has made a name for itself in large-diameter CPVC pipes and fittings. The Ashtabula County project required lines of 6 and 8 inches to meet capacity needs for the hospital but many other manufacturers don't produce pipe of more than four inches.

Thermoplastics require slightly different design considerations than copper. For example CPVC experience thermal expansion at a far greater rate than copper. Fortunately this can be easily addressed with expansion loops and proper layout. An IPEX Applications Engineers assisted with this to ensure success.

## PROJECT SUCCESS



Xirtec® CPVC delivered a cost-effective, durable engineered solution for potable water needs.



CPVC is much lighter than copper and requires only simple solvent welding, making it an effective installation solution.



Where other manufacturers simply sell pipe, IPEX provides a full range of services, including a robust customer service department managing orders and delivery, design expertise, installation training for contractors and post-installation inspection to ensure performance.

## THE SOLUTION

This project is an example of the benefits of using CPVC for potable water in a healthcare setting.

CPVC provides a number of benefits over copper, including a much lower unit cost, resistance to corrosion, pitting and scaling, and resistance to chlorine based water sanitation chemicals. Installation is also easier due to its lightweight nature and use of solvent-welded connections rather than traditional soldering and welding.

In fact, CPVC is up to six times lighter than copper and up to 50 per cent cheaper in material costs and installation. Yet it offers a lifespan that is comparable to copper but without any pitting or corroding that effects efficiency and biofilm buildup.

Xirtec® CPVC Corzan compound is listed to the requirements of NSF 61 while pipe and fittings are listed to NSF 14. Xirtec CPVC has also been listed by ICC-ES under PMG 1264 in general accordance with ASTM E84 test methods, which are important for infrastructure within healthcare facilities.

Construction began in June 2022 and Xirtec® CPVC pipes and fittings were installed in November 2023. The new patient tower is scheduled to open in the summer of 2024.

The contracting crew undertaking the Xirtec® CPVC installation was trained by IPEX in the proper solvent bonding method. After installation, an application engineer from IPEX inspected the system and its connections.

**Xirtec® CPVC pipe and fittings replaced outdated water systems at Ashtabula County Medical Center to deliver a modern, cost-effective, durable engineered solution. This project will make it easier for engineers to convert from copper to thermoplastic systems for drinking water in healthcare settings.**

## THE RESULTS

The smooth installation process and the prospect of a robust system that will offer reliable and safe service for decades to come has met and exceeded the expectations of project stakeholders, including the hospital's management and the engineering and contracting firms involved in the construction.

The success of the Ashtabula County Medical Center project – in a sector with the highest of standards – stands as a testament to an industry shift to specialized engineered thermoplastics, positioning Xirtec® CPVC as a frontrunner in modern construction solutions.



Photo Credit: acmhealth.org

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