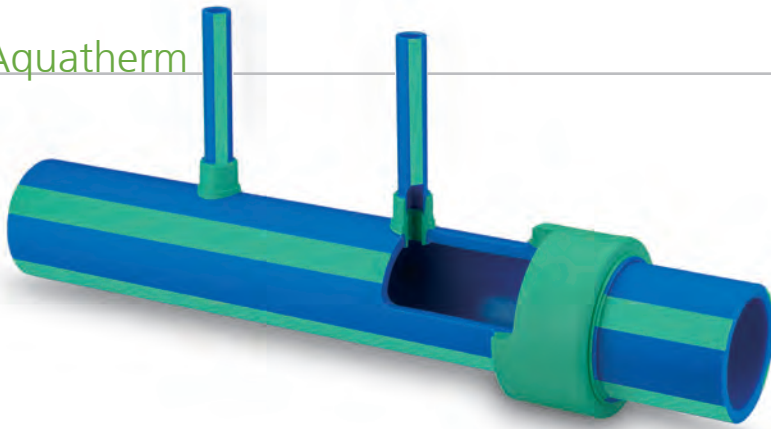


Building a Better Plastic Aquatherm

This company's pipes last longer and are greener than traditional metal pipes but cost about the same. No wonder Steve Clark and his team are seeing such rapid growth.





Many companies tout their products as “revolutionary,” but revolutionary products and services are exceedingly rare. Aquatherm may be one of those businesses with a truly revolutionary product on its hands. The German-based company manufactures the most advanced and environmentally friendly piping systems in the world. Aquatherm’s pipes are made of highly engineered polypropylene instead of steel and copper, the most common types of pipe used in North America.

According to Steve Clark, Aquatherm’s North American president, the average lifespan of a steel or copper pipe is about 10 years, after which leaks usually start springing. Polypropylene piping, in contrast, lasts for 50 years or longer.

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“Polypropylene piping is a relatively new concept in North America, but it has been used throughout Europe and other parts of the world for at least 35 years,” said Clark. “In fact, metal pipes are pretty much obsolete in Europe.”

Pure performance

A mechanical engineer who specializes in energy engineering, Clark joined Aquatherm about five years ago to help introduce the product in North America. He started out in Canada and moved to Utah about three years ago to oversee the US expansion.

Clark had performed many energy studies as an engineer, and one of his big discoveries was how much more efficient using water instead of air is for heating and cooling buildings. “Using water for heating and cooling requires about a tenth as much energy as moving air around,” he explained.

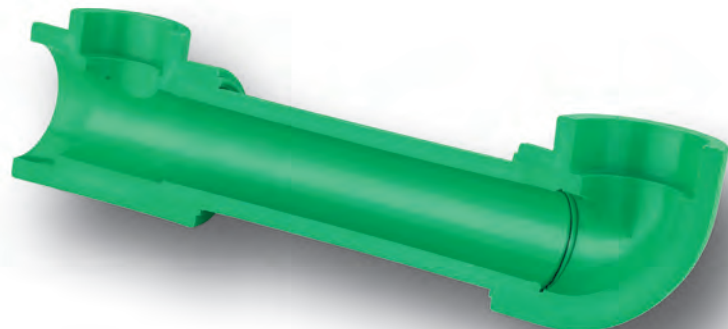
“I was designing systems based on this in London and working with a mechanical contractor who preferred to use Aquatherm’s piping products. I went to the Aquatherm lab in Germany and was extremely impressed,” he said. “It’s phenomenal what German engineers can do with plastic to make it perform like it does. Think about it: We’re hooking pressurized plastic pipes to 180-degree boilers, and these pipes will last for 50 years. That’s a heavily engineered plastic.”

Not to be confused with polybutylene, polypropylene is the same high-grade plastic that is used in the manufacture of surgical tools, Clark noted. It allows for the creation of a rigid pipe anywhere from half-inch to 14 inches in diameter that can be used in any commercial, industrial, or residential application.

Aquatherm offers a comprehensive 10-year warranty that covers any leaks in its pipes as well as damage caused by the leaks. “We guarantee the kind of worry-free performance that every piping system should deliver,” said Clark, noting that the pipes are put together using fusion, which ensures a seamless connection with no potential leak path and no potential failure method.

Aquatherm manufactures two different types of polypropylene piping systems. Greenpipe is the highest quality and most rigorously tested type of polypropylene piping. It is best suited for potable water and food-grade applications, where the combination of chemical safety and physical durability can truly perform.

Climatherm is engineered for applications beyond potable water installations, such as chilled water, hydronic heating, and various industrial applications. Clark said the piping systems



are very similar, and even use the same tools and fittings, but that Climatherm is not tested at the same high levels as Green-pipe.

“There really is no downside to our polypropylene piping systems,” said Clark. “They’re better for the environment, for contractors who don’t have callbacks, for engineers who don’t have to worry about getting sued, and for building owners who receive a greener product that lasts longer and won’t leak.

“I love selling this product because when people realize how much better it is, and that it doesn’t cost any more money, I can see the light bulb go off. They ask me why anyone would use anything else?”

Although there are many other companies now selling polypropylene piping outside the US, Clark said Aquatherm was the first company here and that its piping systems are widely recognized in the industry as the best. “You can’t afford to use low-grade plastic in a piping system,” he explained. “If a plastic piece of lawn furniture breaks, you just throw it away and buy a new one. If a high-pressure pipe bursts, you’ve got major problems.”



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Rapid growth

Aquatherm’s US operations are headquartered in Orem, Utah with about a dozen employees, and its piping systems are sold throughout the US through a nationwide network of sales reps. In just three years, the company has established working relationships with some of the largest plumbing wholesalers in the country and launched projects in more than a dozen states.

“Some major players are starting to come onboard,” said Clark. These include Marriott Corp., for whom leaky pressure pipes are a major expense; the Corps of Engineers; and many hospitals. “Hospitals have miles of metal piping that require lots of maintenance and replacement,” said Clark. “Many are telling their contractors that they want our polypropylene piping because they don’t want to have to deal with leaks and repairs 10 years down the road.”

Clark expects US sales in 2010 to hit \$7 million and for growth to continue at its current 200% annual rate for the

foreseeable future. “We’re a magnet for great employees and reps who want to get in on the ground floor of something special,” said Clark. For example, the national sales manager in the US formerly worked for one of Aquatherm’s major competitors.

The company is focusing on commercial buildings in the US for now but will expand eventually to industrial and residential. “Every structure that’s built, whether it’s commercial, industrial, or residential, has pipes, and every steel or copper pipe can be replaced with one of our polypropylene pipes,” he said. “So our potential is virtually unlimited. This is the right time for a product like ours, and I’m having fun going along for the ride.”

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Aquatherm's Polypropylene (PP-R) Piping System
with Fusion Connections

✓ Check out the Performance Benefits ✓

*30 years experience in over 70 countries
and backed by a 10 year warranty covering
material, labor and incidental damages*

aquatherm

PIPE MATERIAL	PP-R	Stainless Steel		Copper		Steel		PEX	CPVC
Impact resistant	✓	✓	✓	✓	✓	✓	✓	-	-
Chemically resistant*	✓	✓	✓	○	○	○	○	○	-
Abrasion resistant	✓	✓	✓	-	-	-	-	○	✓
Scale resistant	✓	✓	✓	-	-	-	-	○	○
No toxic metals or plastics	✓	○	○	-	-	-	-	○	-
Corrosion resistant	✓	✓	✓	-	-	-	-	○	○
Non-toxic	✓	○	○	-	-	-	-	○	○
Non-toxic combustion products	✓	✓	✓	✓	✓	✓	✓	-	-
Resists chemical leaching into water	✓	✓	✓	✓	✓	✓	✓	-	-
50-year system rating	✓	-	-	-	-	-	-	-	-
Controlled thermal expansion	✓	✓	✓	✓	✓	✓	✓	-	-
Recyclable	✓	✓	✓	✓	✓	✓	✓	○	-
Opaque to block algae and bacteria	✓	✓	✓	✓	✓	✓	✓	○	○
Self insulating	✓	-	-	-	-	-	-	○	○
Quiet	✓	-	-	-	-	-	-	✓	✓
Does not easily sweat	✓	-	-	-	-	-	-	○	○
Stable competitive pricing	✓	-	-	-	-	-	-	✓	✓
Environmentally friendly system	✓	-	-	-	-	-	-	○	-
Potential LEED Innovation Credits	✓	-	-	-	-	-	-	-	-
CONNECTIONS AND FITTINGS	Fusion	Weld	Gasket**	Solder	Gasket**	Weld	Gasket**	Crimp/Compression	Glue
Leak-proof connections	✓	○	-	○	-	○	-	-	-
No foreign materials	✓	○	-	-	-	○	-	○	-
Joints stronger than pipe	✓	○	-	○	-	○	-	-	-
Saddle or other low cost branches	✓	✓	-	○	-	✓	-	-	-
Low Cost Connections	✓	-	-	-	-	-	-	-	○
Non-toxic connections	✓	✓	○	○	○	-	-	○	-
No open flames	✓	-	✓	-	✓	-	✓	✓	✓
Connections usable in < 1 hour	✓	✓	✓	✓	✓	✓	✓	✓	-
Full Range 1/2" to 12"	✓	✓	-	○	-	✓	-	-	-

✓ Excellent
○ Sometimes
- Not Recommended

* Please provide details of intended application including chemical(s), concentrations, pressures and temperatures, to verify compatibility
** Includes pressed and grooved fittings

*Performance matrix is not part of
the original article published with
American Executive Magazine.*