Fusion-Tech Pipe Safety®-Pol System

aquatechnik®

Professional **PP-RCT 125** and **PP-R 80** Fusion Piping Solutions

Fusion-Tech

PP-RCT 125 and PP-R Super 80 pipe and fittings for polyfusion welding

aquatechnik® has been manufacturing and distributing Fusion-Tech piping since the early 1980's. The **Fusion-Tech Pipe** family includes the new faser **FIBER-T** and faser **FIBER-COND** pipes with special reinforced fibers in the middle layer.

Range
From Ø ½" to 24"

Use
For most plant systems, hot/cold fluids, potable and non-potable fluids with a maximum working temperature of 203°F.

Applications
Sanitary systems, domestic plumbing, heating/cooling, industrial, food grade and non-food grade fluid transport.

Advantages

- The leader in high flow rate and low pressure drop
- Resistant to lime, cement, plaster and electro-chemical reaction
- Completely compatible with warm and cold fluids
- No scaling, corrosion or biological build-up
- 1/5th lighter than metal pipe
- Injection molded fittings up to 12" diameter
- Easy, safe flame-and-fumes free installation, plus low maintenance
- Comprehensive 30-year warranty

The **Fusion-Tech Pipe** family includes the new **faser FIBER-T** and **faser FIBER-COND** pipes with special re-enforced fibers in the middle layer.

The **faser FIBER-T** is ideal for heating, air conditioning, domestic hot water, warm water transport, irrigation and compressed air systems.

The **faser FIBER-COND** is designed for heating, chilled water and other mechanical systems.

FUSION-TECH PIPE FIELDS OF APPLICATION

	PLUMBING SYSTEMS faser FIBER-T Red Striped Pipe	PLUMBING SYSTEMS Blue Striped Pipe	MECHANICAL SYSTEMS faser FIBER-COND Grey-Striped Pipe
HEATING SYSTEMS	Yes	No	Yes
CHILLED WATER SYSTEMS	Yes	Yes	Yes
MARINE APPLICATIONS	Yes	Yes	Yes
RAINWATER COLLECTION	Yes	Yes	Yes
COMPRESSED AIR SYSTEMS	Yes	Yes	Yes
IN-FLOOR HEATING	Yes	No	Yes
CHEMICAL APPLICATION	Consult Factory	No	Consult Factory
POTABLE HOT WATER	Yes	No	No
POTABLE COLD WATER	Yes	Yes	No
FOOD GRADE	Yes	No	No
FIRE PROTECTION	Consult Factory	Consult Factory	Consult Factory
UNDERGROUND APPLICATIONS	Yes	Yes	Yes
IRRIGATION	Yes	Yes	Yes

Violet Pipe is used for recycled, rainwater, marine and irrigation applications only. For all other applications, please consult your **aquatechnik**® PP-RCT 125 and PP-R Super 80 fusion pipe distributor.

Like all the pipes in the system, the **FIBER-T** and the **FIBER-COND** can be polyfused with the Fusion-Tech fittings. All PP-R fittings with brass are lead-free (NSF 372).

aquatechnik® products carry multiple listings and approvals including NSF 14, NSF 51, NSF 61, NSF-rw and ASTM 2389-17 on different products. Please visit the aquatechnikNA.com website to view the full listing and approvals of each individual product.

Iso-Tech

Insulated PP-RCT 125 pipe and fittings for polyfusion welding

Range
From Ø 1" to 12"

Use
For most plant systems, hot/cold fluids, potable and non-potable fluids with a maximum working temperature of 203°F.

Applications
Sanitary systems, domestic plumbing, heating/cooling, industrial, food grade (pending) and non-food grade fluid transport.

Advantages
- Leader in high flow rate and low pressure drop
- Resistant to lime, cement, plaster and electro-chemical reaction
- Completely compatible with warm and cold fluids
- Economical quick-and-easy installation
- Pre-insulated for outdoor use
- Self-compensates for thermal expansion
- Acceptable for direct bury applications

- UV Black Piping

Proprietary UV resistant PP-RCT 125 pipe and fittings

Range
From Ø ½" to 16"

Use
For most plant systems, hot/cold fluids, potable and non-potable fluids with a maximum working temperature of 203°F

Outdoor Applications
Sanitary systems, heating/cooling, industrial, chemical and non-food grade fluid transport

Advantages
- Leader in high flow rate and low pressure drop
- Resistant to lime, cement, plaster and electro-chemicalreaction
- Completely compatible with warm and cold fluids
- Economical quick-and-easy installation

Safety®-Pol System

Patented Safety®-Pol fittings of PPSU with PAM Caps

Range
From Ø ½" to 2½"

Use
Transport of hot/cold fluid and non-potable fluids with maximum working temperature/ pressure 203°F/145psi

Applications
Domestic plumbing, heating/cooling, industrial fluid transport

Advantages
- Simple and safe connections for in-wall installations
- High impact-resistant
- High flow rates and low pressure drops
- Quick-and-easy installation
- Possibility to unlock fittings for re-use
- Resistant to lime, cement, plaster and electro-chemical reaction
- Low cost and economical dedicated tools

Safety®-Pol multi-layer pipe (PEX-AL-PEX)

Range
From Ø ½" to 2½"

Use
Transport of hot/cold fluid and non-potable fluids with maximum working temperature/ pressure 203°F/145psi

Applications
Domestic plumbing, heating/cooling, industrial fluid transport

Nominal Ø	EXT. Ø	Roll (ft.)	Bundle (19 ft. Sticks)
1/2"	16 mm	300 & 1000	15
5/8"	20 mm	300 & 500	10
7/8"	26 mm	300 & 500	10
1"	32 mm	100, 300 & 500	8

Advantages
- Extremely flexible
- High working temperature and high pressure tolerant
- Chemically safe and stable for food-grade fluids
- Non-corrosive
- Leader in high flow rates and low pressure drops
- Economical quick-and-easy installation
- Impermeable to oxygenated fluids

Heat Fusion Methods

Proven reliable, corrosion-resistant and lighter weight polypropylene piping, led by the best-in-class PP-RCT 125, is evolving as a viable alternative to metal pipe. In addition to cost savings and flame-free installation, aquatechnik PP-RCT 125 offers the most comprehensive 30-year warranty in the industry. The pipe's excellent welding properties consistently ensure a leak-free install and permanent joints created by the polyfusion welding methods of socket fusion, butt fusion and electrofusion. Qualified and trained installers may find more detailed instructions for each of these fusion welding methods in the Fusion-Tech Design and Installation Manual, as well as manuals produced by fusion welding tool manufacturers

Socket Fusion Welding

Range
From ½" to 4"

Socket fusion welding is generally used with pipe/fitting diameters of 1⁄2" through 4", and is ideal for joining plastic piping systems using injection molded fittings. The operating principles are straightforward, with the welding cycle basically consisting of a heating phase and a cooling/welding phase. To achieve a proper fusion, the pipe must first be marked to the specified depth. The pipe and fitting are heated for a specified period of time, after which the pipe is inserted into the fitting to cool and create a homogeneous connection.

In addition to a saddle outlet option, aquatechnik is the only manufacturer offering direct outlets. An alternative to reducing tees, the outlets are fused to the outside of pipe up to 12", using standard socket fusion dies and heating irons.

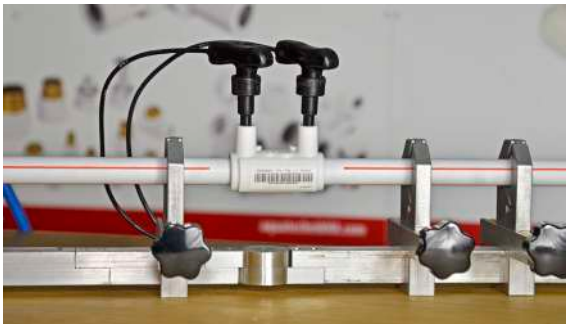
Butt Fusion Welding

Range
From 6" to 24"

This heat fusion technique involves the joining of plain-end pipe with plain-end fittings, and is suitable for pipe and fittings ranging from 6" and larger. The pipe and fittings are heated while being pressed against a "heated plate" for a specified period of time. The piping is then welded together and cooled (see heat soak times charts in Manual).

Electrofusion Welding

Range
From ½" to 16"



The electrofusion process involves the use of molded socket fittings containing an electric heating coil. The pipe ends are inserted into the sockets and clamped. An electrical current is then passed through the coil for a pre-set time. Heating of the surrounding plastic and heat transfer to the pipe wall then takes place. This process is commonly used where space is limited or lateral pipe movement is not possible.

Heat fusion creates a homogenous union of aquatechnik PP-RCT 125 and PP-R Super 80 pipe and fittings. The fused joint is stronger than the pipe itself, ensuring a durable leak-free connection.

Please visit www.aquatechnikNA.com to view the fusion welding techniques video series.

Solutions for plumbing and systems design

Fusion-Tech®

Pipes and fittings in PP-RCT 125 and PP-R Super 80 for polyfusion welding

Iso-Tech®

PUR preinsulated pipes and fittings in PP-RCT 125 and PP-R Super 80 for polyfusion welding

Fusion-Tech® UV

UV resistant pipes and fittings in PP-RCT 125 and PP-R Super 80 for polyfusion welding

Safety®-Pol System

Patented system of PPSU fittings

Patented system of PPSU fittings

aquatechnik®

Professional **PP-RCT 125** and **PP-R 80** Fusion Piping Solutions

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