F.W. Webb Named a Distributor of McElroy Fusion Equipment

We are now selling, renting and servicing McElroy fusion equipment as a certified distributor. The full line of McElroy fusion equipment is available across the F.W. Webb footprint and our Springfield, MA location will serve as the main hub. McElroy is the industry’s leading global manufacturer of fusion tools for Polyethylene (PE) and polypropylene (PPR) piping.

"Having what customers need, when they need it is our primary goal," said Mike Leander, Director of Industrial Sales, F.W. Webb. "We are pleased to partner with McElroy and provide customers with world-class fusion equipment, service and related products across our footprint. It’s a big step forward as we look to support the growing demand for fusible piping systems.”

The McElroy fusion portfolio includes their popular Acrobat™, Pit Bull®, TracStar® and MegaMc® lines designed for underground, construction, mechanical, HVAC and plumbing applications that involve PE and PPR piping.

"This is a very exciting time for McElroy. Not only are we expanding our footprint in the Northeast with F.W. Webb Company; we are working with a team that shares our passion — continued on page 2 —
F.W. Webb Named a Distributor of McElroy Fusion Equipment (cont.)

about the pipe fusion industry," said Chip McElroy, President, McElroy. "We look forward to working closely with them to grow the fusible thermoplastic market."

At F.W. Webb, we offer the largest selection of Thermoplastic piping in the Northeast. We are a premiere distributor of NIRON PP-RCT pipe, fittings and supplies in the Northeast, an innovative polypropylene, pressure piping system that can be installed in place of copper and steel. In addition, we have a comprehensive PE and high-density polyethylene (HDPE) piping portfolio, which consists of top brand names such as Georg Fischer Central Plastics, Performance Pipe and Charter Plastics.

For more information about McElroy fusion equipment and services contact mcelroy@fwwebb.com or the F.W. Webb Springfield location at 413-781-1700.

More Than Just Plastic

At the F.W. Webb Thermoplastic Piping fabrication shop, experienced technicians fabricate a variety of large vessels, industrial tanks and custom skid systems that are sent to municipalities, food and beverage manufacturing plants and chemical processing facilities across the Northeast. They are often behind the scenes solutions. A cog in the machine, if you will, or a small piece of a bigger puzzle. However you like to describe it, there is no getting around the fact that they play an important role in the day-to-day operations of our infrastructure and manufacturing processes.

– continued on page 3 –
A perfect example of this is the stormwater separator the team recently fabricated per their customer’s design. It is installed into concrete catch basins that are used in underground sewer systems to maintain proper drainage and catch debris found in rainwater. The stormwater separators assist in the capture of debris, sediments and other pollutants that enter the basins. Sewage systems are certainly not the flashiest topic, but they play an important role in protecting the local environment and drinking water supply.

The team also designed and fabricated a sump tank that was fitted and installed onto a cooling tower system for a food manufacturing plant. It replaced the plant’s old, dilapidated sump tank and the team built it with more durable, stronger materials to ensure a longer lasting solution that won’t leak. Since the plant’s processing equipment is running 24/7, the sump tank and cooling tower work together to play an important role in the process. They keep the equipment cool and prevent failure due to overheating.

The shop can fabricate just about anything from pipe headers, valves and balancing systems to round or square industrial tanks that are as large as 12 ft in diameter and 16 ft long. Additional projects the team has worked on include mixer tanks and industrial tanks for stormwater remediation, desalinization, pH neutralization and waste water and acid waste treatment. They can fabricate them from a conceptual drawing or add fittings and components to molded stock tanks. To learn more, contact the team at 800-343-7555 or plasticfab@fwwebb.com.

Fuel Oil Spill Puts Alliance Environmental Group to the Test

An Example of What the Team Can Do for Your Facility

When a long-time F.W. Webb customer, a major heating fuel supplier and heating services contractor, needed assistance with a fuel oil spill, they called on Alliance Environmental Group, an F.W. Webb Company.

The spill was located in the basement of a 1950s-era home and when the Alliance team went to investigate it they found that the residence had even bigger problems. The basement floor tiles were covered in asbestos and the spill reached the soil underneath the floor slab. The team removed the asbestos and then to understand the extent of the contamination, they installed soil borings, conducted field screening and sent soil samples in for laboratory analysis.

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Collecting soil samples proved to be no easy task. Because access to the basement was limited to a small pass door, the usual drilling equipment could not be used. Instead, Alliance Environmental Group had to get creative and they decided to use a hammer drill and drive 1-inch diameter pieces of iron pipe into the soil with a sledge hammer to collect samples. Following analysis of the soil, it was found that the concentrations of petroleum exceeded state regulatory limits for spill reporting. To help keep project costs down, Alliance used their knowledge of the state rules and regulations and determined that the cleanup could safely and cost-efficiently be done under a Limited Removal Action (LRA).

However, this meant that the team had to move quickly because under a LRA the contamination levels need to be reduced within 120 days of the spill discovery. With this time constraint, the team got to work and coordinated the removal of the concrete floor and began excavating the impacted soil. But, just like everything else in the project, the excavation did not go smoothly. They had to put in temporary shoring and excavate by hand, and even with these modifications, they had to stop midway because the foundation was in poor condition and unsafe.

Fortunately, Alliance Environmental had removed five tons of impacted soil, which was enough to substantially reduce petroleum concentrations in the sidewalls and bottom of the excavation. The laboratory results indicated that most of the contamination had been reduced, but there were still two locations that exceeded the regulatory standard. Further excavation in those areas would mean additional costs for shoring and to remove the foundation.

Once again, Alliance had to use their knowledge of the state rules and regulations to come up with a plan. They carefully reviewed the post-excavation soil sample analytical data and determined a safe and responsible solution to cost-effectively complete the cleanup.

Of course, this is an example of a spill on a smaller scale. The Alliance Environmental Group is also capable of handling these types of situations on a much larger scale at industrial facilities, manufacturing plants, hospitals and universities.

The Alliance Environmental Group is staffed by experienced scientists and engineers, who are trained and certified to respond to emergency spills. They have the resources to quickly assemble a team and extensive regulatory compliance knowledge to respond and adapt to situations in a timely manner. To learn more about the team’s emergency spill response services, visit allianceenvironmentalgroup.com or call 401-732-7600.
What is Fusion?

By: John Dodge, Thermoplastics Manager, F.W. Webb

The pipe fusion process involves joining two pieces of thermoplastic pipe together with heat and pressure. While commonly associated with high-density polyethylene pipe (HDPE), pipe fusion can also be done with polyethylene (PE) and polypropylene (PPR) piping.

Pipe fusion is used in a number of applications including natural gas distribution, HVAC and mechanical systems, potable water delivery, fire suppression systems, greywater and sewer lines, geothermal installations, water distribution and transmission.

The heat fusion process develops pressure, causing flow of the melted materials, which results in mixing and fusion. Once the thermoplastic pipe is heated, the molecular structure is transformed from a crystalline state into an amorphous condition. Then, when fusion pressure is applied, the molecules from each pipe end mix. As the joint cools, the molecules return to their original form, the previous interfaces are gone, and the two pipes have become one monolithic pipe.

Why Fusion Pipe?

Heat-fused thermoplastic pipe has numerous benefits over traditional piping systems. Since fused thermoplastic pipes create a monolithic pipeline with less mechanical transitions, there are less opportunities for leaks. Having a leak-free system can then conserve resources by reducing maintenance and repair needs. Thermoplastic pipes don’t rust or corrode, they are resistant to chemical abrasion and they can withstand common damages, vibrations and pressure surges. Expected to last up to 100 years, thermoplastic pipe is a more cost-effective solution to alternative materials such as steel, iron or copper. Compared to thermoplastic pipe, metal often comes with an expensive price tag, over time it unavoidably builds up scale, corrodes, leaks and can lead to more than one unscheduled and often costly shutdown.
Since the fusing of thermoplastic pipe can result in a leak-free and corrosion-resistant system, it is quickly becoming the preferred choice for replacing conventional piping systems in infrastructures across the country. The natural gas industry adopted PE pipe over 30 years ago and it is still the material of choice for distribution systems across the US and Canada. Today, the potable water industry, with its failing infrastructure, is growing in its acceptance of AWWA C-906 polyethylene pipe (HDPE) for the same reasons. The concept of a “leak free” system is new to this industry that has grown to accept a 10-30% loss of treated water because of leaky joints and corrosion failures in conventional piping materials. Change can be hard, but when the benefits outweigh the negatives it becomes too difficult to ignore.

Alternatively, a new ASTM standard for pressure-rated polypropylene (PP) piping systems was published about four years ago and helped accelerate the uptake in North America of PP piping systems, and in particular the material class PP-RCT, a PP random copolymer with improved temperature resistance. PP-RCT is mostly used for hot/cold water and HVAC applications in mechanical, plumbing and industrial projects. While these systems are relatively new on the North American market, they have long been standardized in many other parts of the world, and have built up a solid track record over the past 30 years.

Finding the Right Equipment

Just as important as choosing the right piping material is making sure the fusion joints meet the highest standards. That is where finding the right fusion equipment comes in. It can ensure precise fusion joints and productivity on the jobsite. To identify the best piece of machinery for the job it is important to know the cylinder force in relation to the pipe size and the standard you are fusing to. Just as critical as the technical details are the jobsite logistics. Will you need to fuse in a tight space or in a ditch? How is the terrain to navigate? What orientation will you be fusing in; overhead, vertical, horizontal? Thinking through these questions can help you find equipment with the right design, vehicle option, power source, etc. for the job. Rely on the experts at F.W. Webb to help you choose the solution that will best meet your jobsite’s specific needs and train you on the applicable fusion method(s).

For more information about McElroy fusion equipment and services contact mcelroy@fwwebb.com or the F.W. Webb Springfield, MA location at 413-781-1700.
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For information contact F.W. Webb
Thermoplastic Piping Division

www.nupiamericas.com
Selecting the Right McElroy Machine

Choosing the right fusion machine is key to your jobsite success. By considering your pipe type, industry standard used and job requirements, you can quickly find the best McElroy machine for your job.

1 What Pipe Material Are You Fusing?
McElroy machines are capable of fusing many varieties of thermoplastic pipe including:

- HPDE
- MDPE
- PP-R
- PA11 & PA12
- FUSIBLE-PVC®
- PP-RCT

2 What Standard Are You Fusing To?
Standards are the backbone of the fusion process. They contain parameters and procedures that have been developed, established and tested extensively, within the requirements of the industry publishing the standard. It's important to know this critical step before you begin fusing to ensure you follow the pipe manufacturer's recommended procedures.

McElroy equipment meets most generally-accepted fusion standards around the globe including ASTM F2620, ISO 21307, PPI TR-33 and more.

Understanding Cylinder Force
Most McElroy hydraulic machines have the option of multiple carriage cylinders: high force (HF), medium force (MF) and low force (LF). These cylinder selections are identified by the cylinder color: green, orange and yellow respectively. Machine selection depends on the standard, the size range and dimensional ratio (DR) of the pipe and the total effective piston area (TEPA) required to fuse your pipe size.

- HIGH FORCE
- MEDIUM FORCE
- LOW FORCE
Selecting the Right McElroy Machine

3 What Pipe Size Are You Using?

What size of pipe and wall thickness will you be working with? This determines which size carriage and/or combination of carriages you may need. McElroy fusion machines are available for pipe as small as ½” CTS (16mm) and as large as 78” (2000mm) OD.

Find your pipe size on the outer ring and move inward to see compatible machines.

What Type of Fusion Are You Doing?

McElroy tools are available to perform several types of fusion.

- **SOCKET FUSION** kits are perfect for installing fittings for pipe diameters from 1/2” CTS to 4” IPS (16mm to 125mm).

- **BUTT FUSION** machines are available from 1/2” CTS to 78” OD (16mm to 2000mm) in several configurations to meet jobsite demands.

- **SIDEWALL FUSION** can be completed with the 28/250 range of machines. Pit Bulls, Rolling and TracStars are available as combination units that can accomplish both butt and saddle fusion.
## Selecting the Right McElroy Machine

### What Are Your Machine Requirements?

Once the pipe size and material have been determined, there are other considerations to make when it comes to choosing a machine that will make your job go more smoothly.

#### MACHINE OPERATIONS

Depending on your pipe size, the fusion functions on McElroy machines utilize either hydraulic power or are manually powered by hand.

- **Manually Operated**
  - Mini-Mc, 1LC, 2LC, 2CU, Socket, Pit Bull 14/26, Sidewinder®, DynaMc

- **Hydraulically Operated**
  - Acrobat, DynaMc, Pit Bull, Rolling, TracStar, MegaMc

#### POWER REQUIREMENTS

On-site power is an important factor in selecting a machine. McElroy offers solutions to work with on-site generators or completely self-contained machines to meet jobsite preferences.

- **Electric-Powered**
  - Mini-Mc, 1LC, 2LC, 2CU, Socket, Pit Bull 14, Pit Bull 26, Acrobat 180, Rolling, DynaMc, Pit Bull, MegaMc

- **Diesel/Gas-Powered**
  - Rolling 412 and 618, TracStar, Talon

#### VEHICLE TYPE

Consider the portability of your fusion machine and the need to move around the jobsite. Machines are offered in 3 basic types: on wheels, on tracks or without a vehicle.

- **Wheeled**
  - Rolling, MegaMc

- **Tracked**
  - TracStar, Talon

- **No Vehicle**
  - Mini-Mc, 1LC, 2LC, Acrobat 180, DynaMc, Pit Bull 2CU, Socket

#### OTHER CONSIDERATIONS

More features can increase productivity, provide quality assurance and increase flexibility on the job.

- **Datalogger® Compatible**
  - Acrobat, DynaMc, Pit Bull, Rolling, TracStar, MegaMc

- **Hydraulic Clamping Options** available on Rolling, TracStar, and MegaMc 412-2065

- **Removable Carriage**
  - Acrobat, DynaMc, Rolling, TracStar, MegaMc

### Online Tools

To quickly find the right machine for your jobsite visit [www.mcelroy.com](http://www.mcelroy.com) > Fusion > Help, enter your job information and recommendations will automatically appear. Then, download the [McCalc Mobile App](http://mcalc.com) to find the right fusion pressure for your job. For any additional questions, contact mcelroy@fwwebb.com or call 413-781-1700.
Meet the Demand of any Jobsite

The name McElroy is recognized as the most reliable, efficient, rugged and technically advanced pipe fusion equipment in the world. Founded in 1954, McElroy has grown from a two-person start-up to the industry leader in the science of joining thermoplastic pipe. McElroy equipment and tooling are ideal for joining a wide range of polypropylene (PPR) pipe and fittings.

ACROBAT™

The Acrobat fusion machines from McElroy are designed to meet the installation needs for PPR piping systems used in HVAC, mechanical and commercial plumbing applications. Models are available to cover PPR pipe ranging in size from 63mm to 315mm (2” to 12”).

QuickFit Carriage™

The Acrobat 355mm to 630mm machines feature the QuikFit carriage that is designed to address the challenges that come with fusing large-diameter PPR pipe in close-quarter working environments. It eliminates the difficulty of lifting and fitting an entire carriage into a small space and it will fuse pipe in any orientation that is required, including vertical and overhead. The carriage is size specific and composed of lightweight, modular components so that the upper and lower jaws can be assembled around the pipe by hand.

Additional Details

- Features lightweight and small footprint designed to make overhead work and movement between fusions easier.

- Includes a Modular Hydraulic Power Unit (HPU) that consumes less power and provides two carriage pressure configurations. Low force pressure is used for fusing in low drag situations or with thinner-walled pipe; and high-force, for fusing in high drag and vertical applications.

- Fuses in any orientation from overhead to vertically or horizontally and narrow jaws allow fusions to most flanges and fittings.

- Adapts quickly to jobsite demands with tool-less carriage conversion. Acrobat carriages can be configured from a 4-jaw to a 3-jaw machine by removing the base without the use of tools. In more confining spaces, the top jaws can be removed completely with the pull of a pin, for easier manipulation around pipe and fittings.
TracStar® iSeries

In 2020, McElroy introduced the next generation of TracStar machines, called the iSeries. It builds off of the legacy of the original TracStar, while adding the latest industry technology. Consisting of three models, the iSeries features new emission-compliant engine, intelligent communication capabilities, as well as hydraulic, mechanical and electrical upgrades. It is primarily used within the water, mining and natural gas distribution sectors for fusing High-Density Polyethylene (HDPE) pipelines. The TracStar machine helped revolutionize the thermoplastic fusion industry and is the number one choice on jobsites fusing long pipelines because of their mobility, hydraulic assistance on key functions and the fact that they require less manpower.

Self-propelled via rubber crawler tracks, TracStar vehicles can traverse rough terrain and are self-contained with all of the necessary electrical equipment on board. The carriage is mounted on the track-driven chassis for easy pipe loading and movement along the pipe. The carriage is removable so that pipe can be fused on special applications in the ditch. TracStar also offers a wide range of fusion capabilities from 2” IPS to 48” OD pipe.

Additional Details

- Offers three levels of control with the FusionGuide™ Control System from operator-controlled to completely automatic, machine-controlled operations.
- Includes a new and quieter Perkins (Caterpillar) engine that meets US Tier 4 and EU Stage V environmental regulations while providing greater torque.
- Raises system pressure to more than 3,000 psi for more powerful ground drive, pipe lifts and other functions that use higher levels of pressure.
- Features a number of enhancements including a new Power Control Module that provides heater control, a 7” sunlight-readable, touchscreen vehicle display for service and diagnostic information and a redesigned indexer with embedded sensors for collision avoidance to protect the heater, facer, jaws and carriage.

DataLogger®

All McElroy fusion equipment is compatible with the DataLogger software and the DataLogger 7 is completely integrated with the TracStar iSeries. Recording critical information on fusion joints, the DataLogger provides assurance that pipelines adhere to industry standards before going into service. It also records and documents all important information related to the fusion operations, which aligns with new ASTM standards that have been implemented to govern the collection of data from plastic pipe fusions.
Now Available!

***Ask your FW Webb sales person for more information***

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For more information, please visit: fwwebb.com

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