

Fire Apparatus

The Reference Guide To Purchasing Fire Service Tools & Equipment

Volume 9 No. 4

Reprinted from April 2004

TFT Introduces Revolutionary New Products

By Ed Ballam

VALPARAISO, Ind.—Task Force Tips' booth at the Fire Department Instructors Conference (FDIC) will likely draw a crowd as the company shows off lots of new products, including a revolutionary remote control monitor that is sure to cause a stir.

TFT will unveil its new Monsoon RC and Hurricane RC monitors that are completely different from any other monitors on the market.

"We've had a number of manufacturers ask us to come up

with a remote control monitor, so we did," says Rod Carringer, TFT's Vice President of Sales and Marketing. "We've been working with several manufacturers and our first test monitors have been installed."

In addition to the new monitors, TFT will also introduce a new foam eductor with a one push-button flush system that will handle all the new foams, with flow rates from .25 to 6 percent.

New low pressure and fixed gallonage nozzles are also part

of the mix of new products, as is a new hydrant valve, a swiveling detent elbow and a new pressure relief valve for their jumbo gate valves.

It's the monitors, however, that are sure to captivate the crowds.

Apparatus manufacturers had issues with corrosion on the controls and motors that operate the monitors and TFT set about to resolve some of those issues, Carringer says.

In the process, they came up with a new monitor design that virtually eliminates sharp angles and the friction loss that comes with it, according to Carringer.

The two monitors, which were more than three years in the making, are modeled after a simple stove pipe elbow design with double swivels and an ingenious gearing system that has to be seen to be thoroughly understood. The concept is to keep the water flowing in as straight line as possible.

"We spent a lot of time with gearing," says Bob Steingass, Vice President of Engineering and Product Development. He says that machinists and other engineers initially thought the concept couldn't be achieved. "We did it and we think it works pretty well."

The new design allows the monitors to travel from straight up to minus-45 degrees below grade without any 90-degree angles. In fact, the monitors travel in a 5-inch radius.

"We believe this will become an industry standard," says Steingass.

The monitors are available in 3-inch and 4-inch diameters, capable of flowing 1,250 gpm up to 2,000 gpm.

During initial flow testing the



TFT's monitors, including the new Monsoon, are available on the company's Extend-A-Gun, which was also fitted with 12-volt motors to make it remote controlled.

monitors performed flawlessly. Carringer and Steingass say they were flowed without nozzles and the stream was just as straight as if the water were flowing through stacked tips.

During initial flow testing, the monitors performed flawlessly.

"It was a beautiful sight to see," Steingass says, noting that a rainbow appeared in the mist.

Typically, water flowed through monitors without the benefit of stream straightening through a nozzle comes out as if blurred, with no pattern. That's because of all the 90-degree angles the water has to navigate to get to the nozzle.



TFT's new line of monitors is revolutionary in design. The waterways are clean and straight, as illustrated in the cutaway, which greatly reduces friction loss.

The new design results in a monitor that offers better penetration and reach than any other monitor on the market, according to Carringer.

Patented Prototypes

With the prototypes patented, and the testing completed, TFT invited Fire Apparatus to take a look at the new product while it was still under wraps in its research and development plant.

The new monitors are “doing

their exercises” in a series of endurance tests in a “laboratory,” Steingass explains.

One of the monitors, attached to a computer, runs through its full range of motion from straight up to below grade with the 12-volt electric motor whirling away happily. A second motor pivots, or swivels, the entire unit from on its axis, which provides 360-degree coverage. The monitor does not, however, do full cir-

cles as it would cut the cabling.

To meet fire service needs, the motors are completely sealed and waterproof, as are the couplings and controls.

Underwater Testing

Illustrating the point, Carringer and Steingass submerge the monitor in a 3-foot tank filled with water. Without missing a beat, the monitor continues through its range of motion, driven by the electric motors.

Carringer says a number of manufacturers had complained of poor performance and equipment failure due to corrosion of the motors and electrical connections.

“We feel that we’ve completely eliminated that,” Carringer says.

On the other side of the work area, another monitor is elevating and retracting on a motorized Extend-A-Gun, another new product from TFT. The company has offered a manual version of the Extend-A-Gun for years.

To protect the waterway, and to protect users’ hands from the moving gears, the unit is

wrapped in a coil of spring stainless steel extends and retracts as it goes up and down. It’s just one of those details that makes the product safer as well as enhancing the appearance, Carringer says.

The monitors and new Extend-A-Gun will be available with tethered controls, radio frequency controls and/or controls on apparatus pump panels.

“When we took on this project, we decided to take on the problems the industry had with monitors,” Carringer says. “We think we’ve done that.”

New Eductor

While the monitors will get attention, the new TFT foam eductor is innovative in its own right.

“We believe it will change the scope of eductors,” Carringer says.

The most interesting feature is the one push-button flush system. Taking the unit in hand, Carringer points out the large red button on the top of the selector dial.

When the operator pushes the button, water from the 1.5-inch line is diverted through the metering head and out the eductor hose.

“It cleans out the entire system, blowing it right out, making it maintenance free,” Carringer says. “This is something that’s going to get everyone’s attention.”

Works With New Foam

As designed, the new eductor will flow foam from .25, .5, 1, 3 and 6 percent and will work with alcohol-resistant foam, unlike many of the eductors on the market today.

The new eductor has two parts, the eductor body and the metering head, which are joined with a retractable snap connector. That allows the head to be removed from the body easily. Even when the metering head has been removed, water in the line can still flow through the body without the line having to be shut down.

Carringer says that some people may want to cease foam operations, but maintain a charged



TFT’s new eductor is designed to be used with the alcohol-resistant foams now on the market.



A simple stovepipe elbow inspired the concept for TFT’s new monitors. A double swivel joint helps reduce the number of sharp 90-degree bends that cause friction loss in other monitors. (Fire Apparatus Photo by TFT)

line. The removable head allows that to happen and it will get the head and pickup tube out of the way and more easily protected.

GPM Ratings

As designed, the new eductor will be available with gpm ratings of 60, 95 and 125, all with 200 psi. The company may develop units capable of flowing up to 250 gpm, according to Carringer.

Steingass says TFT used technology it learned from the airport deicing equipment it manufacturers to design the new fire fighting foam eductor. The viscosity of the deicing solution is thick and the equipment used to apply it is bigger. Using that, TFT made the metering head and the pickup tube larger to flow the new foam more easily and to prevent clogging.

“Firefighters just know is it making bubbles or not making bubbles and that’s really all they should have to worry about, not is the thing delivering the right percentage,” Carringer says.

Fixed Gallonage Nozzles

For more than 25 years TFT has been in the automatic nozzle business and at FDIC the company will introduce a new line of fixed gallonage nozzles, the Metro 1 and Metro 2 series.

The problem with fixed gallonage nozzles is that fire departments often ordered the wrong pressure or the wrong gallonage and had to send a nozzle back to the company to be changed. Even if the department ordered the right one and later wanted to change because of preference or different requirements, the nozzle still had to be returned for adjustments.

The new design incorporates a set of nine disks that are sold with the nozzles. With a simple Allen wrench, a department can change the disk and, thus, change the pressure and the gallonage.

While automatic nozzles continue to be the mainstay of TFT’s business, Carringer says the company has found a need to offer more and varied products.

“Some people like stick shifts, the selectable gallonage nozzles, and some people like automatic transmissions and automatic nozzles,” he explains. So TFT will introduce a new line of selectable nozzles at the show as well.

The selectable nozzles are low pressure – 75 psi – at 30, 60, 95, 125 gpm. Another nozzle is designed to flow 30 to 200 gpm and both will be priced competitively in the \$700 range, according to Carringer.

Nylon Shut-Offs

All the Metro series nozzles will have new nylon shut-off handles that will allow the end user to color code handlines and pistol grips.

“The whole Metro series is available with pistol grips, with no pistol grips, tips only - anything the customer wants,” Carringer says.

Another new TFT product to be announced is a simple hydrant gate valve made of very lightweight anodized, powder-coated aluminum. The valve will have a stainless

steel gate and will be available in 2.5 versions capable of flowing 500 gpm. The valve will also be available in brass for industrial applications.

Rounding Out The Line

“We’ve never had one before, so this rounds out our product offerings a little

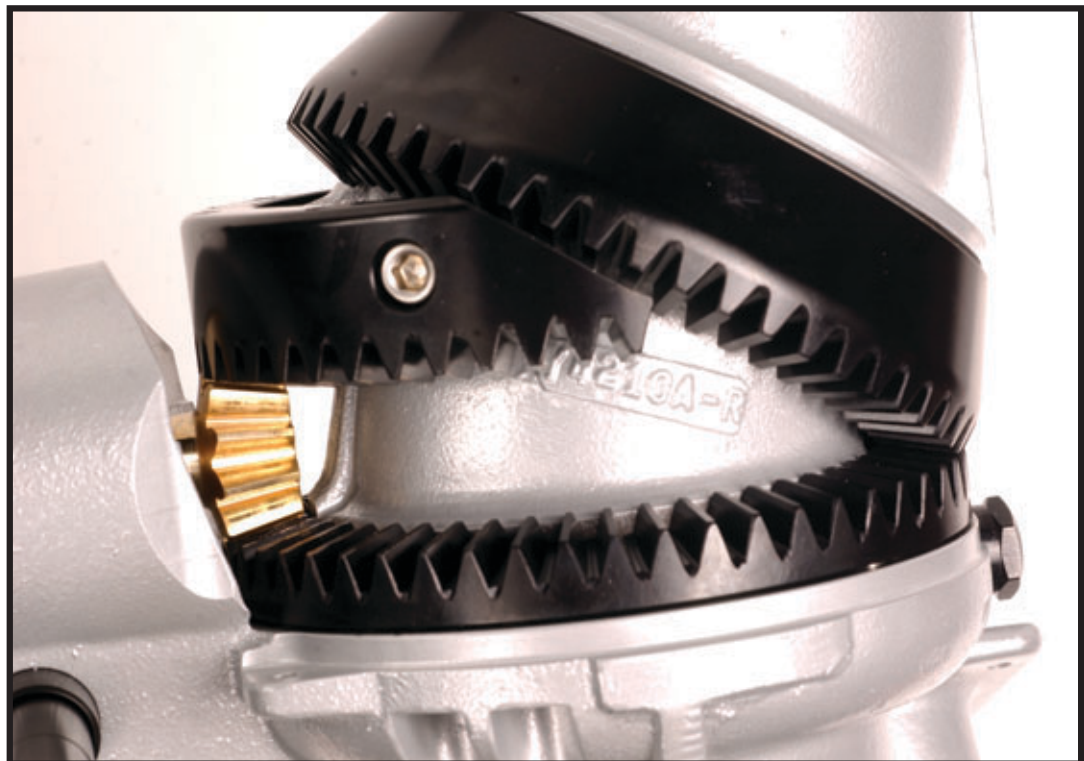
more,” Carringer says.

So, with as many as a dozen new products being introduced, Task Force Tips will have a lot of new stuff to show FDIC visitors this year.

TFT can be found at www.TFT.com or by calling 1-800-348-2686.



TFT will introduce a new line of fixed gallonage nozzles called the Metro 1 and Metro 2 at the FDIC show in Indianapolis.



Some engineers and machinists thought TFT’s gearing for its new monitoring system couldn’t be done, but after more than three years of brainstorming and testing, the gears were perfected. *(Fire Apparatus Photos by TFT)*

Monsoon RC Remote Control Monitor Package

The Storm that Outperforms

For a storm system with the sheer power and performance to tackle the toughest challenges, rely on Task Force Tips Monsoon RC Remote Control Monitor Package, which incorporates the new Monsoon RC, Extend-A-Gun RC4, and TFT's exclusive Masterstream 2000 automatic nozzle.

- *Stream quality of the Masterfoam 2000 automatic nozzle, functionality of the electric Extend-A-Gun RC4, and the new high-flowing Monsoon RC set the standard for remote-controlled, truck-mounted systems*
- *Full, 4" waterway provides 2000 gpm flows with only 15 psi loss and virtually no turbulence, assuring maximum reach and penetration*
- *Extend-A-Gun remotely raises the Monsoon RC 18" from its stowed position to reach over most obstacles*
- *Choice of panel mount, tethered, or radio frequency remote controls*
- *Fixed gallonage nozzles and jumbo stacked tips available*

For additional information on the Monsoon RC Remote Control Monitor Package, visit www.tft.com or contact your local authorized TFT distributor.



2800 East Evans Avenue
Valparaiso, Indiana 46383-6940
(219) 462-6161
(800) 348-2686 US & Canada
www.tft.com



MONSOON RC