

**A QUARTERLY PUBLICATION**



# TASK FORCE TIPS



**WINTER 2004**

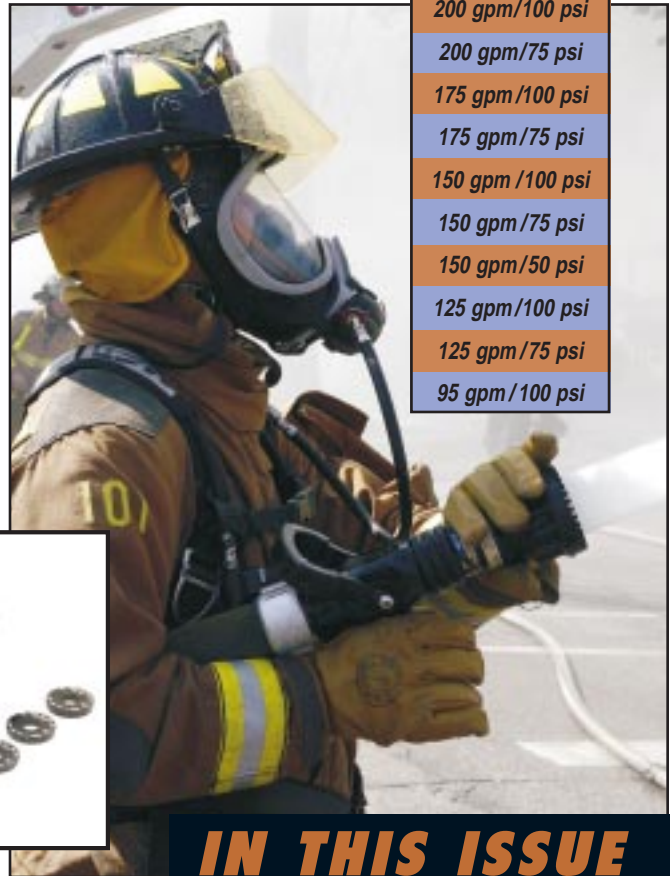
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## STOP WHINING AND JUST FIX IT !

While attempting to solve often challenging and complex fire ground hydraulics issues, some departments have opted to choose a fixed gallonage nozzle as their suppression tool of choice. Though this style of nozzle's optimum stream performance (straight stream and protective fog pattern) is limited to its rated flow and pressure, often the perceived simplicity of a single flow at a single nozzle pressure wins over many an unsuspecting firefighter.

The current problem with purchasing a fixed gallonage nozzle, is that you must establish all of your fire flow criteria in advance to be able to order the correct model. You must first determine target flow, nozzle operating pressure, length and size of attacks line(s) to know friction loss, and finally, by plugging in all the necessary numbers, you will come up with a pump discharge pressure for your attack line(s). Even if you did manage to order the right flow/pressure combination after this exercise, there still is little chance you could ever modify that nozzle should future operational changes be necessary.

Task Force Tips has solved this problem with the introduction of the new METRO series of fixed gallonage nozzles. Available in tip only, or with TFT's unique slide valve, the new METROs incorporate TFT's user-selected "disc" system for establishing the desired flow and pressure combination. Each METRO 1 nozzle is delivered with a series of discs that is designed to provide a specific flow at a given pressure. The user can also change these disks if a department's standard operational guidelines for attack line flows or pressures would change in the future. Problem solved...one nozzle, 10 flow/pressure choices, and TFT innovation and rugged durability.



### METRO 1 FLOW AND PRESSURE CHOICES

200 gpm/100 psi
200 gpm/75 psi
175 gpm/100 psi
175 gpm/75 psi
150 gpm/100 psi
150 gpm/75 psi
150 gpm/50 psi
125 gpm/100 psi
125 gpm/75 psi
95 gpm/100 psi

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# WELCOME

As customers tour TFT's north facility in Valparaiso, they often comment about the cleanliness of the plant, the friendliness of the employees (many of whom are active firefighters), and the fact that all hardware goes through such an extensive wet testing procedure. As they watch, service technicians capture the product's serial number with a bar code reader and start a lengthy process of checking flow, pressure, valve operation, pattern adjustment, and all aspects of the nozzle's performance. Typically, before the tour is over, the question comes up about how long it takes to get a nozzle manufactured, assembled, tested, and out the back door to the customers. The simple answer is yes, it is a lengthy process, but one that is so very important.



Our hardware test procedures, part of our ISO 9001 – 2000 series Quality System, are some of the most rigid in the firefighting industry. But, the reality is, much of this equipment is "mission critical" to a firefighter involved in an interior attack, or an industrial brigade member protecting millions of gallons of flammable liquids, or to a wildland firefighter facing thousands of acres of burning brush. It has to work as designed "right out of the box" as someone's life may depend on its performance.

To take this one step further, unlike other LDH hardware producers, we have chosen to adopt the new 900 psi hydrostatic test pressure process outlined in Section 6.9 Hydrostatic Testing of the NFPA #1965 Standard for Fire Hose Appliances (2003 edition). We have also chosen to use forgings instead of castings for the construction of all our 4" and 5" storz couplings. Why go to all this trouble for hose hardware? The answer is even simpler than why we wet test everything. It's all about the safety and performance of Task Force Tips equipment in a very rugged and demanding environment. It's having the confidence that TFT equipment will perform as designed.

From extensive wet testing, rigid quality control, and inspection programs to serializing every TFT product, we are as serious about our business as you are about yours. Yes, it may take a little longer to build and test our equipment, but it doesn't say TFT until Mike, Rob, Dave, Sandy, Pril, Trudy, or Lisa say it's TFT. If you have any questions on our quality system or would just like to stop by our plants in Indiana for a tour, just give us a call. We're proud of our heritage as well as where we are going.

Regards,



**Stewart McMillan**  
President



## UPCOMING SHOWS



### **Iowa Mid-Winter Fire School**

February 28-29, 2004

Iowa State Center, Ames Iowa

Stop by and visit Ken Kendrick, TFT's regional manager, and have him show you the new patent-pending swiveling inlet elbow. This is only one of many new products in the LDH hardware line that will be introduced in 2004.

### **Wildfire 2004**

March 3-5, 2004

Reno, NV

Dave Burns and sales professionals from L.N. Curtis and Sons wildland-urban interface response team will be in attendance with the newest wildfire suppression equipment. Foam injection and application systems, water distribution equipment, and our famous BubbleCup nozzle and Multi-Expansion foam attachments will be showcased. Stop by and visit with Dave and the LN Curtis guys.

### **Wisconsin State Firefighters 36th Annual Convention**

March 19-20, 2004

Green Bay, WI

Pete Jefferson from Jefferson Fire and Safety and Ron Prast, TFT's regional manager, will both be in attendance to show off TFT's newly redesign 75 psi automatic handline nozzle. Meeting the new NFPA 1964 standard, color-coded handles and pistol grips are now standard. Drop by their booth and grab the latest information.

### **Louisiana Fire Chief's Association 31st Annual Conference**

March 25-27, 2004

Gretna, LA

Jerry Pilarski, TFT's regional manager, will be working with CASCO Industries, providing a sneak peak at just some of TFT's 2004 new product introductions. The new METRO nozzle series will be available for viewing, with delivery later in the spring. Stop in and take a look.

### **The 14th Annual Duneland School of Emergency Response**

March 27-28 and April 3-4, 2004

Valparaiso and Chesterton, IN

Doug Miller and Ron Prast from TFT's field staff will be presenting classes on fire streams management and foam applications at the Indiana's largest fire school. In conjunction with over 50 classes, an evening with over 50 manufacturers is available to all attendees. For more information, visit [www.dunelandfire.com](http://www.dunelandfire.com).

### **FDIC – Fire Department Instructor's Conference**

April 26-May 1, 2004

Indianapolis, IN

Stop by the Task Force Tips booth at the convention. All TFT inside and field managers will be in attendance to show off TFT's new products for 2004. If you have to stand in line to see the next generation of high-performance firefighting equipment, it'll be worth it.

Want to Check out TFT's Complete Show Calendar? Simply log on to [www.tft.com](http://www.tft.com) and click onto the "Events" Section for more info.

# ARAMCO

## THE CHALLENGE OF PROTECTING SAUDI OIL

**W**ith over 100 fire-fighting and rescue apparatus housed in more than 40 fire stations throughout the Kingdom of Saudi Arabia, as well as countless fixed fire suppression systems at every facility, ARAMCO (Arabian American Oil Co.) fire protection personnel are well prepared to mitigate most any situation. From off-shore platforms to marine loading docks, a fleet of super tankers, processing and storage facilities, and over 12,000 miles of pipelines, ARAMCO and its 50,000-plus employees manage a large portion of the world's oil production and reserves.

Fire protection specialists throughout the Kingdom oversee the production of over 10,000,000 barrels of oil every day, as well as more than 250 billion barrels, or 25% of the planet's total oil reserves and the fourth largest gas reserves in the world. Combining this with ARAMCO's joint ventures around the world, (Motiva in the US – Hellas in Greece – S-Oil in Korea – Petron in the Philippines), it is easy to understand why they have retained the world's #1 Producer ranking for the past 14 years. Faced with these enormous fire-protection challenges, the critical importance of rapidly deployed, high-volume suppression equipment that holds up in this rugged environment cannot be measured. Recently, as part of an ongoing apparatus replacement program, new E-One pumpers were delivered with TFT's Crossfire and Blitzfire portable monitors.

With numerous manufacturers of portable monitors throughout the world, there are three key benefits that elevate the Task Force Tips' products into a category by themselves.

### **SAFETY**

The Crossfire and Blitzfire portable monitors offer a level of safety with their unique trip mechanisms that are not found in any other appliance.

### **HIGH PERFORMANCE**

The Crossfire, at 1250 gpm, and the Blitzfire, at 500 gpm, offer maximum flow performance and reduced overall weight for rapid deployment with limited staff.

### **DURABILITY**

Stainless steel components and TFT's exclusive surface coatings provide years of service in the harshest environments.

Even though you may not be protecting the largest oil reserves on the planet, the same safety, durability, and high performance that ARAMCO demands can be yours with the Crossfire or Blitzfire portable monitors.

Contact your authorized dealer today for a demonstration. For additional information, including product videos, visit [www.tft.com](http://www.tft.com) or contact TFT customer service at 800-348-2686.





# The NEW Task Force Tips Automatic Handline and Dual Force Nozzle

## 21 years in development

The NEW polymer handle has been developed for the harshest fire ground operations while offering increased durability and reduced maintenance costs.



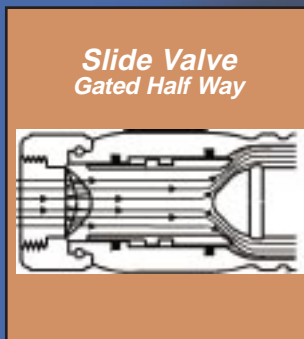
The unique "gasket grabber" provides unparalleled protection from debris plugging up the nozzle and affecting stream quality.



Slide Valve Gated Half Way



Slide Valve Full



Slide Valve Gated Half Way

TFT's famous slide valve design provides total firefighter flow control. Even with the nozzle valve gated and the flow reduced, a penetrating straight stream will still be provided.

### Slide Valve Considerations

- Stainless Steel design eliminates "valve seat" replacements
- Designed to be gated for flow control
- Will not bind or tighten with age
- Will not tighten under high-pressure operations



The NEW handline offers TFT's unique "full-filled" fog pattern and a solid straight stream for maximum reach and penetration. The "quick" straight stream to fog pattern adjustment provides immediate firefighter protection.

Since 1983, the design of the TFT handline nozzle has been the benchmark by which all other automatic nozzles were judged. Combining an award-winning fog pattern design, nozzleman flow control, the unique Gasket Grabber debris filter, and a rock solid pressure control design, the heritage of the TFT handline is one of reliable performance in the harshest of firefighting environments. Taking into account the handline's years of rugged experience, the design and development of the NEW Handline and Dual-Force nozzles have truly been 21 YEARS IN THE MAKING.



The NEW handle is designed to accept TFT's unique color-coded shut-off grips. Your choice of black, blue, yellow, orange, red, white, or green.



TFT's unique Scotchlite labels offer maximum visibility.



The NEW pressure control mechanism design now allows simple field replacement with no special tools. Installing a new control assembly can easily change nozzle operating pressures.

The NEW design allows the following flow performance options:

- Handline – 100 psi operational pressure
- Handline – 75 psi operational pressure
- Dual-Force – 100 psi/55 psi operational pressures
- Dual-Force – 75 psi/45 psi operational pressures

TFT's New Handline design will meet the NFPA #1964 Standard for Fire Fighting Nozzles 2003 edition.



# Is the Day of the Firefighter on TOP of the Truck OVER?



**W**ord of changes in the NFPA #1901 Standard on Automotive Fire Apparatus (2003 edition) and the corresponding recommendations noted in Annex A and Annex D are starting to filter into fire departments throughout the United States. The initial laughter from those that read it is often replaced with a sense of being totally overwhelmed. With the ultimate goal being the safety and well-being of the firefighter, this standard will have far-reaching effects on apparatus design and how we, as firefighters, will function in the future.

One section of the Standard – Annex D – Guidelines for First Line and Reserve Apparatus, clearly recommends an apparatus built before 1979 or not meeting previous NFPA guidelines, should either be considered for upgrade or replaced. It also goes on to suggest that apparatus designed and built to either the 1979 or 1985 editions of the standard be placed in reserve status and upgraded to meet the newer standard revision levels. This wording can be either a powerful tool to fire department administrators as they work to improve their fleets or a financial burden on smaller departments with seldom used, but well maintained, apparatus. No matter how you look at it, change is coming.

Annex A also has some great recommendations for firefighter safety and survivability. Sections A.15.3.1, A.16.7.9, and A.18.7.9 all recommend “where possible,” that all steps be taken in the design of the apparatus to “reduce the need of the firefighter to climb to, or operate from, the top of the apparatus.” This includes the suggested use of powered equipment racks, bringing attack lines lower on the apparatus so they are easier to pull and repack, providing for the checking of apparatus fluid levels from ground level, and one item that especially catches the eye of anyone involved in fire streams management, the use of a remote-controlled monitor.

So, the question remains, “Is the DAY of the Firefighter Standing and Using a Deck Gun from the TOP of the Truck OVER?” It may be if standards such as NFPA #1901 and OSHA, state, and local safety workplace guidelines are followed. It also may be if fire suppression agencies see the continued need for this typically defensive tool, and rural agencies with water supply challenges understand the need for it. But, it has no chance of being accepted unless manufacturers of this equipment solve some of the following problems:

- *Reliability of electrical components (wiring, connectors, chip boards, and electrical interfaces).*
- *Challenges to OEMs on installation procedures.*
- *Electric and hydraulic motors that are more dependable and “hardened” for the rugged fire ground environment.*
- *The size and weight are reduced.*
- *Poor stream performance, excessive friction loss and internal stream turbulence are improved.*
- *Field service and warranty issues are managed effectively.*

But, until that happens, you can still expect to see manual monitors on new apparatus deliveries and firefighters crawling across the tops of trucks to use deck guns, pack hose, and get equipment. So, what does the future hold? A mix of manual and remote-controlled monitors being specified and installed; current remote controlled monitor producers working to improve designs, durability, and performance; and fire departments with limited staffing continuing to use the new lightweight portable monitors, such as TFT’s Blitzfire and Crossfire, more and more for their heavy stream applications.

Change will happen when firefighters find equipment that provides safety, functionality, and durability, as well as a high level of service and support. As to who builds the equipment that will meet and exceed their customers’ needs...the next chapter is only beginning.



## Los Angeles Fire Department Chooses TFT's New BIV Intake Valve

As part of the Los Angeles City Fire Department's fleet management and apparatus replacement program, new Pierce and Seagrave pumpers with specially designed and manufactured TFT BIV (ball intake valves) are currently being delivered. Task Force Tips' design engineers worked hand-in-hand with both Pierce and Seagrave representatives, as well as equipment specialists from the Los Angeles Fire Department, to meet and exceed all intake valve performance criteria.

The key performance features that won this impressive evaluation included:

- The BIV's unique swiveling intake elbow allowed easy attachment of supply lines and prevented unwanted and flow restrictive kinking.
- The high flowing stainless ball valve design efficiently provided maximum flows, as well as allowing the valve to remain dry when not in use.
- The valve design offers the operator a visual position indicator on the top of the valve to quickly access the valves operation.



## After a Two-year Nozzle Evaluation, Seattle FD Specifies TFT's New Low-Pressure Mid-Matic Nozzles and Integrated VITG Ball Shutoffs

After an extensive evaluation of the department's in-service equipment, as well as a review of commercially available products, the Seattle Fire Department's decision was to specify TFT's new low-pressure Mid-Matic automatic nozzles. Ordered in a break-a-part configuration, the low-pressure automatic nozzle operates at a 75 psi nozzle pressure. The new Mid-Matic tip, combined with TFT's unique VITG shutoff, which incorporates a 15/16" smooth bore insert, was the ideal "break and extend" combination for all of Seattle's fire streams management needs.

Key evaluation performance criteria:

- The low-pressure Mid-Matic provided maximum flow and reduced nozzle reaction at low operating pressures, while meeting and exceeding the NFPA #1964 (2003 edition) Standard.
- TFT's unique full-filled protective fog pattern offered a higher level of performance as it pushed heat, flame, and smoke ahead and away from attack crews.
- The Mid-Force LP and VITG packages offer smooth bore as well as low-pressure nozzle performance to meet the demanding needs of the department's aggressive interior firefighting operations.



## For CAFS and Fire Streams Performance, Phoenix Fire Department Picked the New Task Force Tips Low Pressure Mid-Force Automatic Combination

When evaluation and performance criteria were established for the new "Phoenix Nozzle," a program was crafted to find a nozzle combination that provided the best performance in the following categories:

- Outstanding performance with the department's Compressed Air Foam Systems: maximum reach with little foam quality degradation.
- Automatic nozzle operating pressure choices that provide maximum reach and penetration, as well as maximum flow rates, while lowering nozzle reaction.
- A break-and-extend package that combines a low-pressure automatic combination nozzle tip and an integrated smooth bore shut-off for optimum CAFS and water stream performance.

The nozzle of choice is the new Task Force Tips' Low Pressure-Mid-Force automatic tip combined with an integrated 1" smooth bore insert in the TFT VITG ball shutoff model. The new Mid-Force nozzle enables a user to select 75 psi or 45 psi operational pressure and meets and exceeds the NFPA #1964 (2003 edition) Standard.





**Mike Grcich**  
Service Manager  
800-348-2686

Spacer #1	125 gpm	75 psi	Kfactor = 14.4
Spacer #2	175 gpm	100 psi	Kfactor = 17.5
Spacer #3	185 gpm	75 psi	Kfactor = 21.4
Spacer #4	200 gpm	75 psi	Kfactor = 23.1
Spacer #5	250 gpm	100 psi	Kfactor = 25.0
Spacer #6	250 gpm	75 psi	Kfactor = 28.9
Spacer #7	325 gpm	100 psi	Kfactor = 32.5
Spacer #8	250 gpm	50 psi	Kfactor = 35.4

**Q:**

Our department recently purchased 25 new METRO 2 nozzles. As we were choosing the flow/pressure options for the different nozzles, we noticed the term “Kfactor,” or “K,” was used on the interchangeable baffles provided with each nozzle. What is a “Kfactor?”

**A:**

Kfactor is a measurement more commonly used in industrial fire protection design. For example, most of TFT’s industrial nozzles are specified by design engineers with a specific Kfactor that allows for maximum stream performance under their unique operational conditions. With the METRO 2, which is a fixed gallonage nozzle, TFT provides 8 specific flow/pressure choices to meet a department’s desired performance criteria.

The formula for determining the Kfactor of a METRO fixed orifice nozzle is  $K = \text{GPM} / \sqrt{\text{psi}}$ . For instance, the flow/pressure of Spacer #1 is  $K = 250 \text{ (gpm)} / \sqrt{100 \text{ (psi)}}$  which equals 10. So the Kfactor is 25.0. An automatic nozzle would have a variable Kfactor based on its flow and pressure rating. Simply put, the bigger the hole, the bigger the Kfactor: the smaller the hole, the smaller the Kfactor. Also, because there are two variables in the formula, it is possible for two different flow/pressure combinations to have a similar Kfactor.

**Q:**

While attending the Firehouse World show in San Diego, I noticed a prototype intake/discharge elbow that will be introduced this spring. Can you tell me more about this?

**A:**

What you saw was TFT’s new patent-pending, swiveling detent elbow. Customers receiving apparatus with new integrated MIV (master intake valves) requested the same functionality we provide on the patented BIV (ball intake valve). This new elbow will be available in all sizes and will incorporate the unique 360 degree swiveling function. Detent stops allow the swivel to be “locked in” every 90 degrees. Also, incorporating TFT’s unique corrosion-resistant coatings and the patented polymer ring coupling attachment method, this new swiveling detent elbow will meet the NFPA 900 psi hydrostatic testing. Look for delivery information at the FDIC by the end of April.



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