



www.tft.com

NEAR AND DEAR TO YOUR HEART...

As a structural fire fighter, there are several components that are near and dear to your heart when the heat is on and the flames are banking down around your ears.

Your personal protective clothing has to hold up.

If you are going to be a rescuer instead of a victim, your helmet, bunker gear, boots, hood, and gloves must provide the highest level of personal protection from both elevated temperatures, as well as from direct flame impingement.

Your SCBA has to work flawlessly.

Breathing superheated air and smoke is no longer an option, even for the shortest period of time. Breathing clean, cool air is essential if interior fire fighting duties are to be safely carried out.

When you go to open up, the nozzle had better perform perfectly in straight stream or a protective fog pattern.

Faced with the potential of a back-draft or auto-ignition of an entire room filled with contents, suppression and personal protection become key elements of firefighter safety and survival.



Why then, with so much on the line from a personal safety aspect, does the nozzle, the key component in your suppression operations, rarely receive any sort of preventative maintenance? When you return from a fire, the SCBA is refilled, cleaned, checked, and the face piece inspected before it is put back in service. Your personal protective clothing is checked, possibly washed, and checked before being readied for the next call. But, the nozzle often is just placed back on the line after it is repacked on the truck: no inspection; no basic preventative maintenance; just screwed back on the hose where it resides until the next life-threatening situation is encountered. Then it must work perfectly.

For additional tips on keeping your nozzles performing like new, refer to the operational manual delivered with your nozzle or go on-line at www.tft.com. As an integral part of your interior firefighting ensemble, the nozzle deserves the same inspection and preventive maintenance you'd give your protective clothing and SCBA. Your safety and survivability depend on it.



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WELCOME

For many of you with 25 or more years in the fire and emergency service business, my comments will not come as a surprise. To others that haven't had a taste of the "way it used to be," my perspective may seem like something from an old black and white movie.



In the early days, it was not uncommon for our fire gear to be nothing more than a 3/4"-length of rubberized duck coat, pull up boots, and a pair of those bright orange "fireball" gloves. If we were lucky enough, the department maybe had a "Scott" SCBA with the heavy steel cylinder. It probably resided in a box somewhere on the first-out apparatus. As we rode the tailboard on the way to the fire, we stared up at our attack line. Typically, it was an 1-1/2" line with a selectable or brass fixed gallonage nozzle set in the 95 gpm position and was usually pretty effective on fires of basically Class A combustibles. We often found ourselves successful when we stuck the nozzle in the window and swirled it around in a "poke and hope" exterior attack.

Let's move ahead to today. No more "rubberized duck," now it's materials such as Kevlar, Nomex, PBI, and liners of Gore-Tex. The SCBA we wear today, complete with regulator, harness, integrated PASS, and bottle, weigh less than just the old "steel cylinder" did. And, now it seems that 1-3/4" hose is the line of choice for the majority of our initial attack operations. With great thermal protection, cool, clean air to breathe, and bigger handlines, our attack teams are now better equipped to do aggressive battle inside: no more fog patterns stuck in the window to create maximum steam conversion. But, in many departments, this is as far as technological advancement has gone when it comes to fire streams management.

Even with larger hoselines, higher capacity nozzles, and more efficient pumps, it is not unusual today to find departments that have retained 95 gpm as their target fire flow. This was OK twenty-five years ago, when most everything was a Class A combustible, but today, plastics and hydrocarbon-based components can generate three times the BTU production in a multiple room and contents fire. Whether it is due to a reduction in pump discharge pressure for whatever reason, or flow-restricting kinking caused by low-pressure nozzles, many departments' crews are facing fires without the proper tools to safely and effectively do their jobs.

For additional information on improving your initial attack fire flows, contact TFT's customer service group or any of our regional instructors. Let's bring fire streams management into the 21st century.

Regards,

A handwritten signature in black ink, appearing to read "Stewart McMillan".

Stewart McMillan
President

UPCOMING SHOWS



Wildfire 2002 - An International Association of Fire Chiefs Event

December 4-6, 2002, Kansas City, MO

Members of the TFT 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.

Colorado Fire Leadership Challenge

December 5-7, 2002, Breckenridge, CO

Visit with Ken Kendrick, TFT's North Central Regional Manager, and review our new BIV (Ball Intake Valve). This Task Force Tips, Inc. exclusive provides maximum flow while preventing both the galvanic and common corrosion that plagues competitive models.

Texas Association of Fire Educators 17th Annual Instructor's Conference

January 12-17, 2003, San Antonio, TX

Jerry Pilarski, Southern Regional Manager, will be demonstrating TFT's complete line of dual and low-pressure automatic handline nozzles. With flows from 75-500 gpm, TFT offers the broadest selection of fixed, selectable, and automatic handlines in the world.

FDSOA - Apparatus Specification and Vehicle Maintenance Symposium

January 19-21, 2003, Orlando, FL

Doug Miller, TFT's OEM Manager, and representatives from Cottrell Associates will be in attendance showing the latest in foam application equipment, LDH hardware, and the unique Blitzfire monitor.

Louisiana Fire Chief's Association

January 24-26, 2003, Baton Rouge, LA

Visit TFT's regional training staff and review the newest in high performance fire streams management equipment. Spotlight will be on the PROpak and its simplicity and exceptional performance in foam injection and application operations.

Fire Rescue East

January 30-February 2, 2003, Jacksonville, FL

Stop by and preview TFT's newest water delivery equipment with representatives from Cottrell Associates and take a look at their completely outfitted demonstration and training apparatus.

Training in the Desert



About 20 miles west of Elko, Nevada, in the shadow of the Ruby Mountains, stands a \$27 million, 426-acre, state-of-the-art industrial fire training campus.

With over one million square feet of burnable props and training platforms, a multi-level refinery operation replica, multi-media classrooms, and a 600-seat auditorium, the Reno Fire Science Academy of the University of Nevada has grown to be an incredible training resource for industrial fire brigades worldwide. The key to this agency's success can be found in the last sentence of their mission statement, "...The academy provides technical and practical experience unmatched in the industry by using real extinguishing agents to put out real fires that burn real fuels."

In an effort to support the important instructional work accomplished at the University of Nevada, as well as Texas A&M's industrial fire field in College Station, Texas, and Louisiana State University's industrial fire training programs, Task Force Tips, Inc. has made a commitment to provide over \$200,000 worth of fire suppression equipment. The choice of equipment was a direct result of feedback from instructors and students who demanded maximum performance and durability.

Requirement

Provide a nozzle that will offer maximum straight stream performance, a wide protective fog pattern, and would hold up to repeated rugged use at a fixed fire water system pressure of 75 psi and a flow rate of 125 gpm. The nozzle will be stored in the desert sun when not in use and will flow recycled water from the fire water system.

Solution

TFT's METRO nozzle – 125 gpm @75 psi. NFPA #1964 compliant, stainless steel spinning teeth, and TFT's unique stainless ball shut-off and quick-change rear valve seat.

Requirement

Provide monitor/nozzle packages for the fixed-fire system that could be used for backup protection, foam injection and application, as well as cooling of the all-important steel structures of the training props. The units had to operate at the 75 psi system pressure, provide maximum stream reach, while limiting the amount of water used so handlines would not be robbed of needed fire flow. All units would flow recycled fire system water and would remain in place in the hot desert sun.

Solution

TFT's Knightfire fixed-station monitors were matched to rugged 350 gpm industrial fixed gallonage nozzles and to 350 gpm Masterfoam self-educating nozzles for foam applications. Mounted to hydrant adapters, these units provide 360-degree rotation, friction lock mechanism, flow-efficient waterway, a multi-purpose combination nozzle, or the unique patented Masterfoam.

TFT's commitment to continuing education and new product feedback from instructors and students are integral parts of our industrial fire streams management initiative. Additional information on the full line of Task Force Tips risk management solutions can be found at www.tft.com.

For addition information on the Fire Science Academy at the University of Nevada go to www.fireacademy.unr.edu or call 800-233-8928.

ROAD TEST

The new
**MAX-Force vs.
the Vindicator™**

As fire suppression agencies struggle to find the “perfect” tool for high-flow fire streams delivery, several unique products have been introduced to the marketplace. One that has garnered a certain amount of interest lately as a “technological breakthrough” is a nozzle called the Vindicator®, distributed by First Strike Technologies, Inc. The following performance review is a summary of a head-to-head evaluation between the Vindicator® Heavy Attack nozzle and the comparable TFT MAX-Force handline.

TFT MAX-Force	Vindicator™ Heavy Attack
Dual-Pressure Automatic (100 psi or 50 psi)	Fixed Gallonage (1-1/8" fixed orifice)
100-500 gpm flow range 250 gpm @ 50 psi – 1-3/4" 500 gpm @ 100 psi – 2-1/2"	250 gpm @ 50 psi – 1-3/4" 425 gpm @ 100 psi – 2-1/2"
Reach 250 gpm @ 50 psi – 110 feet 400 gpm @ 100 psi – 175 feet	Reach 250 gpm @ 50 psi – 95 feet 400 gpm @ 100 psi – 150 feet
Protective Fog Pattern 120 degrees – full-filled power fog	Protective Fog Pattern NO PROTECTIVE FOG PATTERN
Nozzle Reaction 250 gpm @ 50 psi – 89 lbs. reaction 500 gpm @ 100 psi – 253 lbs. reaction	Nozzle Reaction 250 gpm @ 50 psi – 89 lbs. reaction 425 gpm @ 100 psi – 215 lbs. reaction
Price – MSRP as Tested \$850	Price – MSRP as Tested \$799
Weight 8.6 lbs.	Weight 6.8 lbs.



Test Summary

Nozzle Reaction

As nozzle reaction is a function of both flow (mass) and nozzle pressure (velocity), both nozzles exhibited similar reaction characteristics. At 250 gpm and a base nozzle pressure of about 50 psi, each nozzle had less than 90 pounds of reaction force on the 1-3/4" lines. As a comparison, this would be similar to 180 gpm flowing from a 100 psi pressure nozzle. Both nozzles tested offered reduced reaction and higher flows than higher operating pressure nozzles.

Stream Reach

In side-by-side reach tests, the Max-Force hand line reach exceeded the Vindicator® by over 15% (15 feet) at the 250 gpm @ 50 psi test, and over 16% (25 feet) at the 400 gpm @ 100 psi test. Stream reach performance was hampered in the Vindicator™ due to the unusual design that entrains air into the stream at the nozzle tip. This design does not allow the operator to adjust the stream to achieve maximum stream performance.

Fog Pattern

The inability of the Vindicator™ Heavy Attack to provide any sort of protective fog pattern or “flush” position also remains a definite drawback. Whether for firefighter protection, hydraulic ventilation, or for increased aeration when foam is being applied, the Max-Force’s ability to go from a straight stream, to a power fog, and, ultimately, to a wide-fog pattern and flush position is considered critical to a successful and safe fire streams management operation.



Project Summary

As a single orifice, or fixed gallonage nozzle, the Vindicator™ Heavy Attack unit exhibits flow, reach, and nozzle reaction characteristics common to a 1-1/8" smoothbore tip. Unlike the Vindicator™ nozzle, the TFT MAX-Force is a constant pressure / variable gallonage nozzle. This automatic function provides a constant nozzle pressure, ensuring a consistently hard-hitting stream throughout its entire flow range.

Maximum flow, combined with low operating pressures, at first glance, may offer the perfect firefighting performance mix for some departments, but there are several issues associated with reduced operating pressures that need to be considered.

- Though reduced pump discharge pressures can be expected with these high-flowing low-pressure nozzles, expect to give up some level of reach and penetration over a 100 psi operating tip.
- Realize that lower operating pressures in many hoselines will increase the potential for flow-restricting “kinking” every time you try to “make a corner.”
- Often “lower nozzle pressure” is confused with “lower nozzle reaction.” This is not necessarily the case as nozzle reaction is a factor of both flow (mass) and pressure (velocity). You can reduce nozzle operating pressure, increase flow, and actually have a higher nozzle reaction.
- The reduced stream velocity of a low-pressure nozzle will decrease the nozzle’s hydraulic ventilation capabilities.

Fire streams management is a fine balance of delivering the fire flow needed to absorb the BTUs being generated, achieving the reach and penetration necessary to get to the seat of the fire, and providing the nozzle crew with a level of acceptable nozzle reaction and pattern choices to meet any circumstance safely.

To schedule your own fire streams management program, head-to-head nozzle comparison, or for additional information on the Task Force Tips, Inc. line of high performance equipment, contact any regional manager or customer service at 800-348-2686.

For more information on Fire Streams to the MAX, ask for our new PowerPoint training program.

THIS IS A TEST...

...for the next sixty seconds, this information could save your life...

So you're back in the station from a working fire. Tired, somewhat dirty, and ready to get everything packed up for the "next worker." The hose, donut rolled at the scene, is going to get washed down and repacked. The SCBA will need to have the bottles refilled, masks cleaned up, and put back in service. Your gear, wet and dirty, will certainly need to be washed and dried when you get a chance. Finally, you grab the nozzle, screw it back on the hoseline, and focus your attention on the next project – never giving a second thought as to whether the nozzle will function as designed during the next fire.

Though this scenario is played out thousands of times every day, often the importance of a well-maintained and properly functioning nozzle is overlooked. Until, that is, the fire is blowing in over your head, and the only thing between you and the fiery dragon is that handline nozzle. The following is NFPA's viewpoint on nozzle inspections.

NFPA Standard #1962 – Care, Use, and Service Testing of Fire Hose Including Couplings and Nozzles

4-1.2

All nozzles shall be inspected at least annually and after each use. The nozzle inspection shall include verification of the following:

- Clear of obstructions in waterway
- No damage to tip
- Full operation of adjustments such as pattern selection, etc.
- Proper operation of shutoff valve, if so equipped
- No missing parts
- Thread gasket in good condition in accordance with 4-3.1

4-1.3

If the nozzle fails the inspection for any reason, it shall be removed from service and repaired or replaced.



A victim of a "drop and run" interior operation, this nozzle would not pass any sort of inspection. Surprisingly, the stream pattern adjustment, stainless steel spinning teeth, and ball shut-off continue to operate.

Sample Data Chart

Nozzle Serial Number	Nozzle Pressure (psi) @ 50 GPM	Nozzle Pressure (psi) @ 100 GPM	Nozzle Pressure (psi) @ 150 GPM	Nozzle Pressure (psi) @ 200 GPM	Nozzle Pressure (psi) @ 250 GPM

Aside from the routine cleaning, inspection, and lubrication that is recommended, agencies often will perform annual flow/pressure tests on their nozzles. As the method to field test nozzles will vary greatly from fixed and selectable gallonage nozzles to automatic nozzles, use the following test setup and criteria for testing AUTOMATIC HANDLINE NOZZLES.

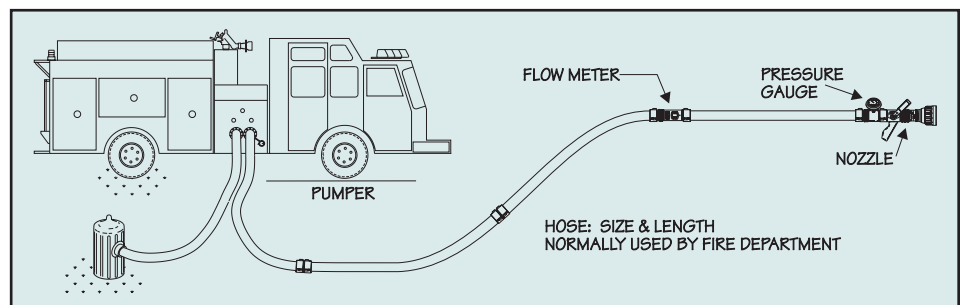
To properly test an automatic nozzle, you must go to a pre-determined flow and then note the associated base nozzle pressure. The setup is simple. You will need a flow meter and a good pressure gauge.

- Connect the nozzle to the pump through at least 100 feet of 1-3/4" hose with a calibrated flow meter in the middle.
- Install a calibrated pressure gauge at the base of the nozzle.
- For each nozzle, record the serial number and, with the nozzle fully open, bring up the pump pressure until the flow meter reads 50 gpm – record the base nozzle pressure.

- With the nozzle valve fully open, increase the pump pressure for each of the successive flow rates and record the base nozzle pressure on your chart.
- When all flow rates for the nozzles have been achieved, read across the base pressures. The pressure at 50 gpm should be approximately 60 psi. This is the very bottom of the automatic flow range. At all other flow settings, the nozzle pressure should be 100 psi plus or minus 15 psi, as noted in the NFPA Standard #1964.

Performing a simple, annual flow/pressure test on your nozzles will identify instances of damage that can reduce overall performance. Just as the annual hose test does, nozzle testing may also bring to light issues concerning lack of routine maintenance and lubrication. Nozzles that do not meet the manufacturer's flow/pressure performance criteria should be removed from service and repaired or replaced.

For additional information on field-testing of nozzles, contact TFT's Customer Service Department – 800-348-2686.





The Latest BUZZZZZZZZ on “Killer” Bees

If you're an emergency responder in central or southern Texas, or in southern parts of New Mexico, Arizona, and California, what was once only an occasional response to “killer bee” incidents has now become a major life safety issue. As the Africanized Honey Bee, or “killer bee” as it appears in the press, continues its migration northward, more and more communities are establishing emergency response parameters and operational guidelines for the first due companies.

The Africanized Honey Bee and offspring created from cross breeding with the more docile European Honey Bee, tend to be much more aggressive in the defense of their nesting sites. Often, these sites are found by accident when an unsuspecting responder is offering assistance to a bee sting victim, or when personnel are attacked while fire suppression duties are being carried out. In either case, the seriousness of the situation only becomes obvious after the first stings of the angry bees are felt.

Facts about the Africanized Honey Bees

They are slightly smaller than a common honeybee, but carry the same venom. Once a sting is inflicted, the stinger and venom sack are ripped from the bee. Though the bee dies, the muscles around the detached sack can inject additional venom into the victim for several minutes.

Africanized Honey Bees respond more rapidly, aggressively, and in larger numbers to disturbances than the calmer European Honey Bee. It is not unusual for swarms to continue to attack an intruder for up to a half mile, and they prefer to attack the uncovered head and neck areas causing disorientation to victims.

Typically bees live in colonies of 10,000 to 50,000 individuals. When a sting occurs to an intruder, along with the stinger and venom sack, a chemical marker (alarm pheromone) is left that alerts and directs the other bees to the victim.



Victim protected with foam

Emergency Medical Procedures for Victims

- Prevent further stinging by covering the victim or applying foam, and if possible remove the victim from the area of bee infestation.
- Remove all stings.
- Use standard first aid procedures – ABC (maintain airway, breathing and circulation).
- Treat for shock and evacuate victim to a hospital as quickly as possible.

Emergency Responder Protective Procedures

- Conventional firefighting gear, including leather gloves, will provide adequate protection from stings.
- The head and neck areas should be covered with either a bee veil or some sort of screening or netting.
- All cuffs and waist areas should be taped to prevent bees from entering the clothing.
- Hazmat suits, such as lightweight TYVEK suits, offer outstanding protection when worn over clothing.
- Again, care should be taken to provide protection to the head, neck, and face areas, as well as taping shut any possible entry point.

One of the best tools available to deal with either Africanized Honey Bees or Yellowjacket Wasps is Class A Foam. The Class A foam (synthetic detergent) reduces the surface tension of water and allows it to soak through the waxy exo-skeleton of the bee, causing it to drown within 60 seconds of application. By using a mixture of 0.5% Class A foam in your initial attack handline, a victim can be quickly covered and protected from further stings with foam solution from a safe distance. Then using a wide protective fog pattern, the response team can move in and remove the victim from the hazardous area.

Whether your dealing with the migration of the Africanized “killer bee” into your jurisdiction or the ever-present Yellowjacket Wasps that seem to be around at every structure fire, appropriate operational procedures should be reviewed or updated to include both emergency responder protection as well as patient care.

For additional information on the use of foam as a tool in suppressing bees refer to the following sources:

- www.tft.com
- University of California Riverside – Department of Entomology
- USDA – Agricultural Research Service
- Texas A&M University – Department of Entomology



NEW PRODUCTS

Clearing the Air

With the fall and winter heating season upon us, the number of chimney fire responses increases proportionally as the temperature decreases. By using positive pressure ventilation in conjunction with the TFT Chimney Snuffer, the time spent in fire suppression, inspection, and cleanup can easily be reduced.

Extinguishing Chimney Fires with Positive Pressure Ventilation and the Chimney Snuffer is as simple as 1-2-3.

STEP #1.

Upon arrival, the first arriving company prepares for chimney fire extinguishment.

- Set up ventilation fan at the front (or appropriate) door – avoid opening windows or doors within the structure to maximize PPV effect.
- Conduct size up of interior and exterior.
- Advance a charged handline(s) to the front door for advancement to any floor(s) of possible extension.
- Ladder the roof, remove chimney cap, advance 1" Chimney Snuffer line for use in the chimney.
- Remove active fire from the fire box and take outside for extinguishment.

Step #2 Extinguishment.

- Open exterior and fireplace / wood stove door and establish PPV operations – pressurizing the structure and forcing all smoke, steam, and flue gases up and out the chimney.
- Lower the charged Chimney Snuffer down chimney flue, breaking through any creosote barriers that may have formed within the chimney

over time. The fine mist created by the Chimney Snuffer reduces water damage, as well as creating a smothering steam laden atmosphere within the chimney.

- Repeat procedure until extinguishment is complete. Complete structural ventilation.

Note: Even though their heat absorption capabilities are limited, dry chemical fire extinguishers can also be used in this process. Water, especially water with some Class A foam added, though has much better heat absorbing and creosote soaking characteristics and can greatly reduce overall extinguishment time.

Step #3. Check for Extension.

- Personnel need to check for any possible extension of the fire through cracks in the mortar, or metal joints throughout the entire structure.
- Check for complete flue extinguishment.
- Advise homeowner to have chimney checked by a professional before further use.
- Clean up any mess you may have made, pack up equipment, and go back in service.

Chimney fires and the unchecked extension of the original fire lead to hundreds of fully involved structure fires each year. By having a thorough knowledge and understanding of chimney and building construction, combined with a well thought out suppression strategy, you will be able to minimize losses and total time on your next chimney fire response. The TFT Chimney Snuffer quickly knocks down chimney fires with a fine spray so water damage is minimized or totally eliminated. One person, even while positioned on a peaked roof, can easily operate the rugged five-pound head. Eight strategically placed nozzles are designed to spray 40 gallons per hour, at 60 PSI. The Chimney Snuffer kit comes complete with carrying bag, garden hose adapter, Res-Q-Rench, 25 feet of 1" hose and ball shutoff valve.

For additional information on the Chimney Snuffer and associated chimney fire suppression accessories visit www.tft.com





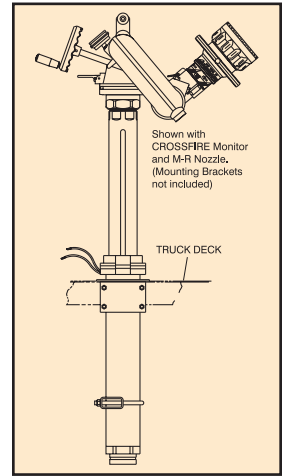
Mike Greich
Service Manager
800-348-2686

Q:

Our department has a five-year-old Pierce pumper. The truck came delivered with your Crossfire monitor, but it is on the fixed 3" plumbing provided by Pierce. Now that we see the Extend-a-Gun, we realize the effectiveness of this unit and the increased performance it will add to our monitor. Can the Extend-a-Gun be retrofitted into our current apparatus?

A:

Yes, the Extend-A-Gun can be specified with a new truck or retrofitted to existing apparatus and will provide new capabilities for your deck-mounted master stream device. For storage, it can be lowered to deck level (or even into a monitor well). On the fireground, the monitor may be raised to its extended position (12 or 18 extra inches) by lifting the quick release and raising by hand until the non-rotating pipe locks into position. This gives greater clearance of other equipment on the apparatus, greater freedom of movement, and allows a more comfortable operating position. The Extend-A-Gun offers full 360-degree monitor rotation, operation in either the raised or lowered position, a full 3" waterway, hardcoat anodized finish, and built-in sensor for connection to a remote "monitor raised" light. For complete information and instructions on performing this retrofit, visit www.tft.com for installation manuals on-line.



Register for Your Copy of the Task Force Tips Newsletter On-line at www.tft.com



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