



Kussmaul Electronics introduced a door monitoring system using LEDs to indicate whether doors on the cabs and compartments are open.

## FDIC Components

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same hole pattern as other Havis-Shields lights.

The Whelen Engineering Company exhibited its new Pioneer series super-LED floodlight, a 75-watt package producing 6,000 lumens.

The company said the Pioneer floodlights operate at a low temperature and are instant on/off, eliminating the high current warm up time associated with other light sources.

A first-time show participant Cliff Post, general manager of Rodgard, said his company has been selling its product for more than 30 years, but not extensively to the fire market.

Post said Rodgard Runflats are made from lightweight, high-strength polyester elastomers and can be found on vehicles ranging in size from oversized aircraft rescue and firefighting (ARFF) vehicles to passenger cars used by dignitaries.

"You can fire bullets at these and they'll stand up," Post said.

While bullets may not be a concern for firefighters, Post proved the point that they'll take abuse and can handle the weight of a fire apparatus.

He explained the system is comprised of a roller and a runner. The runner is clamped on to the bare rim in its drop center, inside the tire, and the roller rotates on the runner, he said, noting that it does not interfere with the handling, ride or performance of the vehicle.

When the tire blows out for whatever reason, he said it gives the driver greatly improved vehicle maneuverability and control at high speeds and with heavy loads. He said it's been used in police vehicles and government armored limousines for years, and can be found in special applications such as monorail trains and military combat vehicles.

"We think the time has come that they be installed in all firefighting vehicles," Post said. "It's a matter of firefighter safety."

The Runflat device is designed to allow the roller to move or rotate about the wheel at the same speed of the tire to reduce friction and heat build up, Post said.

The product is available to fit on wheels from 14 inches to 22.5 inches.

"We've got them to fit all kinds of tires and just about any applications," Post said.

# Revolutionary Nozzles Stand Out Among Fire Suppression Products

By ED BALLAM

Fire suppression items always receive a lot of play at the Fire Department Instructors Conference, and among the most talked about items this year were two revolutionary nozzles.

Elkhart Brass launched a new nozzle that can go from compressed air foam to straight water with the click of the tip. The nozzle, with a patent pending design, is called Flex Attack.

PyroLance, based in Denver, Colo., demonstrated a fire suppression system that uses a high-pressure jet of water

The nozzles introduced by Elkhart Brass were the buzz of the show – they even looked cool.

The Flex Attack nozzle features a patented variable orifice smooth bore with settings for 15/16-inch, 1 1/8-inch and 1 3/8-inch streams, according to Elkhart. A patent pending pressure balancing chamber allows the nozzle to be adjusted under flow pressures, and an unobstructed variable orifice waterway is designed not to strip away CAFS foam bubbles.

A nozzle position-indicating lug on the nozzle's bumper allows the user to click from dry CAF to wet CAF to water using tactile detents and the lug to provide position feedback. Clicking to the right creates an unobstructed waterway to produce shaving cream dry foam and clicking to the left creates a 15/16-inch smooth bore. The nozzle is rated at 184 gpm at 50 psi in the water setting and a maximum operating pressure of 200 psi.

It has a hard anodized Teflon impregnated aluminum alloy body and pistol grip and an aluminum bronze shut-off handle.

Elkhart Brass introduced a second nozzle at the show called Solid Strike with features similar to the Flex Attack product.

The Solid Strike allows the nozzle operator to vary the gpm or reach with-

## The nozzles introduced by Elkhart Brass were the buzz of the show – they even looked cool.

mixed with a proprietary abrasive material to penetrate steel and concrete up to 3/4-inch thick – or thicker depending on the material – and then delivers a cooling flow.

Other vendors displaying new items included Akron Brass with a monitor high-riser system and Task Force Tips with a "Sho-Flow" flow meter-type device and a wye with a specially designed half-ball closure.

Nozzles 20



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The makers of PyroLance, a high-pressure piercing nozzle system, demonstrated their product at FDIC. The system uses water and cutting aggregate discharged at 4,500 psi to pierce materials to administer atomized water to cool fires. (Fire Apparatus Photos by Ed Ballam)

**Nozzles**

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out shutting down to change tip size. The result, according to the maker, is an airless stream of water so tight it's virtually clear.

The nozzle works like any traditional smoothbore tip on a shut-off except the operator has the ability to vary the effective tip size under flow. It's rated for 159 gpm at 50 psi at 7/8 inch, 184 gpm at 50 psi at 15/16 inch, 209 gpm at 50 psi at 1 inch. It has a maximum operating pressure of 200 psi.

According to the maker, the nozzle uses the hydraulic forces of the water flow to converge and project a perfect solid stream. It has a free swivel inlet and a Delrin adjustable hydrofoil.

Both nozzles have reflective color-coded bands on the bumpers for easy identification.

Task Force Tips, also known as TFT, had its Sho-Flow water flow indicators available for review. The indicators are designed for installation behind a nozzle or on the outlet of a pump panel to quickly determine the flow and pressure in the hose.

The indicator, which is available in 1.5-inch and 2.5-inch configurations, gives the user an LED readout about the hose pressure in psi and gpm.

Rod Carringer, TFT's vice president of sales and marketing, said he uses the indicator in training exercises like a flow meter to give firefighters a feel for what kind of pressure and flow rates they're working with at the nozzle. It can also be



The Flex Attack nozzle by Elkhart Brass permits the user to switch from dry CAF to wet CAF to water with a click of the tip.

used to train pump operators as it gives a visual indication at the discharge about pump performance.

"It's a great tool with lots of potential uses," Carringer said.

He also pointed out new gated wyes with concave half ball closures that retract completely out of the waterway giving full-flow and reduced friction loss. The wyes are currently available in 1.5-inch and 2.5-inch sizes.

"The great thing about these is you can open them half way and they'll stay there," Carringer said. "The water pressure won't force the ball all the way open."

He also pointed out the gates are operated by folding handles which makes the wyes more compact for storage and keeps the levers out of the way during use.

Outside in the demonstration area, the makers of PyroLance demonstrated a unique piercing system designed to create small holes in buildings and steel containers for the



Elkhart's new Solid Strike nozzle allows firefighters to vary the fire flow gpm and reach without shutting down the nozzle to change tip size.

issuance of a blanket of atomized water to cool fire thermal layers.

Kevin Spencer, the president of PyroLance, based in Denver, Colo., said the system can be powered by a stand-alone diesel skid unit or by an apparatus-based pto. The pump produces 4,500 psi delivering 15 gpm. A special granite-like abrasive cuts through steel, concrete or wood in seconds, he said.

"It's very different approach to fire-fighting," Spencer said as a firefighter in head-to-toe turnout gear set about to penetrate a steel plate on an enclosed steel container with a fire inside.

**A Very Small Hole**

The concept behind PyroLance is to make a very small hole in a contained structure to avoid the introduction of large amounts of oxygen to feed the fire and deliver atomized water to substantially cool and control the thermal layers of fires, reducing the risk of backdraft or flashover. Once the fire has been cooled by the PyroLance, firefighters can enter the structure and extinguish the remaining fire with conventional equipment and tactics.

"This system allows firefighters to make a safe, defensive interior attack," Spencer said, noting that the system delivers water directly into the thermal

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Task Force Tips showcased its line of Sho-Flow indicators, which provide an LED reading of psi and gpm on 2.5-inch and 1.5-inch discharges.



A wye with folding handles and a unique half-ball gate, introduced by Task Force Tips, reduces friction loss in the appliance and prevents the gate from opening wide during high-pressure water flows. (TFT Photos)

# Recent Apparatus Orders Report

**Alabama**

West Chilton Fire Department, Jemison – US Tanker Fire Apparatus tanker: International 4400 Series cab and chassis; International 4400 MAXXForce engine; Allison 3000EVS-P transmission; Hale Qpak 1,000-gpm pump; Newton electric rear dump valve; 2,000-gallon UPF tank. Sold direct from the factory in Burlington, Wis. Delivery was expected after the FDIC show in mid-April.

**Illinois**

Deer Creek Fire Protection District, Deer Creek – Pierce tanker: Kenworth T-300 cab and chassis; PACCAR 360-hp engine; Allison EVS transmission; Darley 500-gpm pump; 3,000-gallon UPF tank. Sold by Larry Graves, Global Emergency Products, Aurora, Ill. Delivery was expected in February.

**Indiana**

Pearl City Fire Protection District, Pearl City – Toyne pumper: Spartan Metro Star cab and chassis; Caterpillar C-9 365-hp engine; Allison 3000EVS

transmission; Hale 1,500-gpm pump; 1,000-gallon tank. Sold by Nick Dinges, Illinois Fire Store, Amboy, Ill. Delivery in October.

**Illinois**

Prophetstown Fire Protection District, Prophetstown – Toyne pumper/tanker: Freightliner cab and chassis; Cummins ISM engine, Allison 4000EVS transmission; 750-gpm Waterous pump; 3,000-gallon UPF tank. Sold by Joel Hallstrom, Illi-

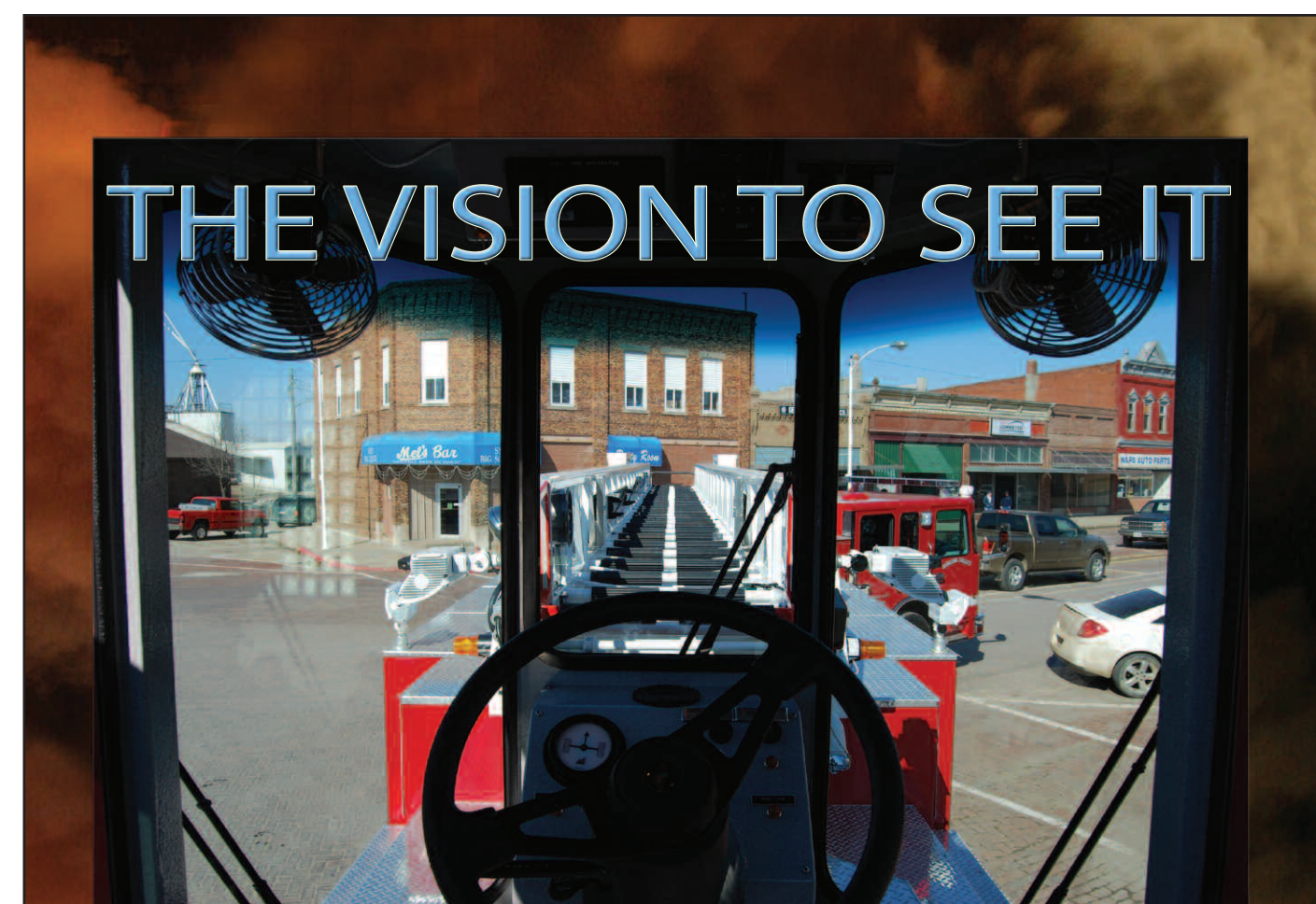
nois Fire Store, Amboy, Ill. Delivery in December.

**Indiana**

Flat Rock Volunteer Fire Department, Flat Rock – Danko side mount tanker: International 7600 cab and chassis; Cummins ISM engine, Allison 4000EVS transmission; 750-gpm Waterous pump; 3,500-gallon UPF tank. Sold by Shane Scott, Fire Apparatus & Supply Team, Lincoln, Ill. Delivery in October.

**Kentucky**

Blandville Rural Fire Department, Blandville – Rosenbauer/Central



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