

Well proportioned

FireDos has been a household name in the European fire industry for years. In the US the foam proportioning system isn't as well known yet, but Ann-Marie Kneigt thinks this is about to change.



“MSR Dosiertechnik manufactures custom-made water driven proportioning systems for fire protection applications,” explains Wayne Hepper the North American Agent for MSR Dosiertechnik, the manufacturer of the FireDos line of proportioning systems.

Municipal fire departments often choose to inject a Class A foam into their water stream to reduce the surface tension of the water or to create a foam blanket, he continues.

The most popular FireDos sold in the US is the FD500 (132 gpm). The most popular configuration is able to proportion foam as well as gel, it has a single water motor and two separate concentrate pumps, meaning the proportioner can handle two different products. The system is available installed in or on your apparatus or as a portable system. This proportioner is becoming more popular in the USA, as an increasing number of departments and agencies in the United States are starting to work with gel. FireDos is the only system available that is proven to proportion gel effectively.

The most common use of this gel is for structure protection. In other cases Thermo-Gel –marketed in Europe under the name Firesorb – is used when firefighters want to start a ‘back fire’ (a fire set along the inner edge of a fireline to consume the fuel in the path of a wildfire or change the direction of force of the fire’s convection column) and the gel solution enables Fire Fighters to put down a wet line that will hold longer than if they were using water or a wetting agent.

“We also manufacture systems that are portable and are used to mix gel for aerial applications to be dropped by helicopters or fixed wing aircraft. These proportioners can handle foam as well as gel and the solution is mixed on the ground where it is pumped into the dip tank or the fixed wing aircraft. The helicopter or air tanker takes it up into the air and drops it onto the fire.”

Accurate flow rate

Wayne believes that the FireDos system has several advantages over competitive systems, the main one being that it requires no external power source because it operates on the water flow. Sometimes it’s not practical to have another power source running the proportioning system.

He is also convinced that FireDos is more accurate than other systems. While fixed foam bladder tank systems only operate accurately in a very narrow window, the pressure and the flow rate have to be very constant.

Wayne’s experience with the electronic systems has been that they are not as accurate or reliable as he would need them to be in the field. FireDos is not affected by pressure of flow fluctuations and proportions accurately as soon as the water flow starts. The lag time needed for some of the other systems to adjust and begin to proportion as they are calibrated has been one of the stumbling blocks for our applications

“The largest system manufactured by MSR is the FD 20,000 (5280 gpm) and when the system is operating anywhere between 500 gpm and 5,280 gpm, the FireDos system is going to

Above: MSR is demonstrating the FireDos system at Stuttgart Fire Department. Below: The FD 500 is used in wildland fire applications because it mixes Thermo-Gel as well as foam. Opposite: Thermo-Gel is ideal for protecting structures.



solutions

proportion accurately, regardless of fluctuations in pressure.”

This the reason why Schiphol Airport took delivery of several large 6000 gpm portable fire pump roll off units - built by Dutch company Gemco - which have the FD 20,000 (20,000 lpm) built in. The pumping units were acquired to protect a new fuel storage terminal adjacent to the airport.

“In most cases when you are talking about proportioning systems there are companies that focus either on the industrial market or on the municipal markets alone and the types of systems used by those different segments of the fire service are completely different. But the FireDos is custom designed and can be built to fit any application,” explains Wayne. This ability for the water driven systems to be designed to fit any application gives departments, agencies and company fire brigades the unique opportunity to standardise there proportioners throughout there jurisdiction. FireDos also offers the option of having both an A and B foam system in one. “FireDos users never have to worry about cross contaminating A and B class foams, because the concentrates have separate pumps and plumbing. The issue with combination A and B foam systems is that when the two foams come into contact with each other they can thicken and plug the system.

“Other systems have an A setting and when the firefighters switch to B foam they have to go to a flush setting first and then switch to the other foam. The flushing doesn't always work properly or is not carried out for the required period of time. So that when they switch to other foam concentrate the systems clog up. This is most dangerous when faced with a liquid fire, when you try to switch over to B foam and your proportioner clogs up, then you are in trouble.”

Wayne believes that while in the past having Class B foam in stock wasn't as important for municipal fire brigades, departments now have large “liquid fire issues”, due to roads getting busier and the fact that in the US there are ethanol plants being built everywhere.



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