

# CHOICE MONITORS

FIREFIGHTING MONITORS COME IN A VARIETY OF SHAPES AND FLAVOURS – WHICH ONE IS BEST FOR YOUR BRIGADE? NICO ZORZETTO OF MONITOR MANUFACTURER SANCO SPA IN NORTHWEST ITALY EXPLAINS THE OPTIONS.



**M**onitors are the most suitable way to discharge large volumes of extinguishing agent (water, foam or dry chemical powder) for cooling or for fire suppression.

In fact, their flow-rates are usually higher than the ones of portable nozzles and their throw is much longer than that achieved by standard branch pipes.

Monitors are very flexible – they can be portable, wheeled, they can be mounted on trailers or on vehicles and they can be used for fixed installations. A monitor's body can be cast (with bronze or special alloys) or welded (in particular for stainless steel versions).

Monitors can be operated in several ways:

- manually: thanks to devices such as hand wheels, chains or handlebars
- self-oscillating: the monitor moves horizontally in a pre-set angle thanks to a self-oscillating system (as well as operate in manual mode). This movement can be adjusted both with angular speed and with a pre-set angle.
- remote control system: by hydraulic or electric motors for instance.

Monitors are normally mounted on a rotating base that allows a 360° horizontal movement, whilst the vertical movement can be adjusted to a total angle of around 150°.

The horizontal and vertical orientation is provided by a handlebar/handwheel that – by means of a worm drive – provide stability to the outlet device during its operation.

Most monitors are manufactured for use with water or foam solution, and with a single or double-barrel. Where the extinguishing agent has a protein base, foam can be produced only by means of a barrel (and not by other types of nozzle).

A self-aspirating nozzle can be installed on the monitor, sucking the foam concentrate and water via a built-in foam

proportioning device. Self-aspirating monitors are commonly installed on trailers with or without accompanying tanks, with capacities that can vary between 500-10,000 l/m.

A manual monitor can be turned into a self-oscillating monitor via the installation of self-oscillating unit between the inlet flange of the monitor and the piping flange. Its angular speed and orientation movement can then be adjusted and preset.

## Remote-controlled monitors (RCM)

These electric/hydraulic-operated monitors are usually located in areas where their manual operation would expose a person to a hazard. Although they can be operated at distances of 50-200m away, they also have a manual mode depending on the type of emergency.

Electrically controlled monitors have proven themselves to be more reliable and easier to maintain than hydraulic types, whilst affording a more rapid intervention.

As well as available in a standard version, remote-controlled monitors are also offered in ATEX-approved versions for use in hazardous areas. Their operation is via a joystick or – if in a hazardous area – using explosion proof (ATEX) panels.

The remote-control console can be used to control different parts of the monitor to adjust foam stream and change between straight jet/spray patterns at the nozzle.

The same console can also control other devices, opening and closing water valves, adjusting foam solution flow as well as controlling the cooling water curtain.

## Large flow-rate monitors

This kind of monitor is very suitable for extinguishing large fires in a short time. Its high flow rate achieves longer throws, which is why many oil refineries; petrochemical plants and

Above: stainless-steel, wheeled-drive monitor on top of a vehicle. Right: bronze remote-controlled monitor.

power plants demand this monitor.

Traditionally, autonomy of the system has been considered more important than the specific discharge application rate (lpm/sqm) of the system. More recently, accuracy has become an important consideration for larger flow-rate monitors that are normally used both for fixed and mobile installation and on fire tugs (onshore and off-shore operations).

### The Red Typhoon

A typical unit designed and manufactured by Sanco SpA is the Red Typhoon mobile large flow rate monitor (40,000 l/m @10 bar). This unit has been designed for the extinguishment of massive petrochemical fires. It can provide cooling and fire suppression support for large fires, and provide protection to personnel, whilst operating at a safe distance. It has been especially designed for oil tank farms, chemical, petrochemical facilities and refineries, and other areas where large fires occur. Complete with a self-locking worm/gear for horizontal and vertical movements, the stainless steel (AISI 316) Red Typhoon can be locked at any position for flowing water or foam with a straight stream or full fog pattern.

This unit comprises a double-axe trailer made of large steel profiles that are welded (not bolted) with two trims and four wheels, and which can be towed by a truck.

The towing bar is complete with an automatic mechanical road brake plus a manual parking brake. The towing bar is mounted on a bolted counter plate for ease of adjustment and to match different truck/van hooks. In order to obtain the largest ground footprint - and thus achieve the greatest stability - the unit comprises four vertical manual jacks fixed on horizontal extendable stabilizers. A manoeuvring wheel enables the operator to place the unit in the best operational position.

The unit carries four fire hose containers (two on each side) integrated in the bodywork, with ample capacity for storing 5 ½" hoses and an 'easy coil' system for fire hose winding.

The trailer is fitted with several inlet connections, butterfly valves and relevant couplings in accordance with the standards of the country where the unit is to be used.



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