ANGUS FIRE

Firefighting Monitors

Angus Fire offers an extensive range of firefighting monitors, which set new standards of performance for high risk environments. The range includes Fixed Monitors, Portable Monitors, Nozzles and Cannons. Bespoke monitors for specific needs can be supplied on request.

Firefighting monitors are installed in harsh environments and will normally remain unused for many years and then be required to operate at peak performance in an emergency. As a result Angus Fire pays particular attention to design for long term reliability and resilience.

The choice of material is key to achieving high levels of performance. The most corrosion resistant ones, such as bronze, are used in extreme environments like offshore oil rigs, where the punishing saltwater environment can severely limit the life of a monitor. Stainless steel is also used extensively for foam cannons and fittings to further the life of the monitors.

In Angus Fire's wide ranging portfolio, from a ground monitor delivering 900lpm at 7 bar to a trailer mounted system throwing 30,000lpm of foam solution there is a suitable monitor to protect your risk.

Applications

Fixed monitors are found where there are substantial Class B fire risks whilst portable monitors are often used to protect multiple risks by moving the monitors around the site. Nearly all industrial fire hazards are candidates for monitor protection, but some of the more common applications are:

- Refineries
- Fuel distribution depots
- Chemical plants
- Warehouses
- Helicopter landing pads
- Aircraft hangars
- Loading jetties
- Process plants
- Industrial process areas
- Shipping
- Vehicle-mounted

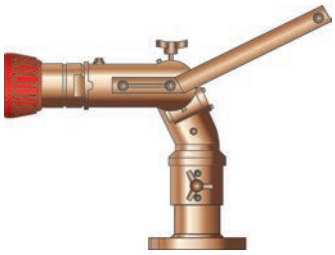
Fixed Monitors

Fixed monitors are used with foam for firefighting or with water for cooling of structures. Simple in principle they are the result of complex engineering, designed to deliver high performance after long periods of inactivity.

Angus Fire's range of fixed monitors is predominantly installed in purpose built fire protection systems. Alternatively they can be mounted on trailers to offer the flexibility of a mobile solution. Options include 1000l, 2000l foam tanks or 1000l tote trailers as pictured below.

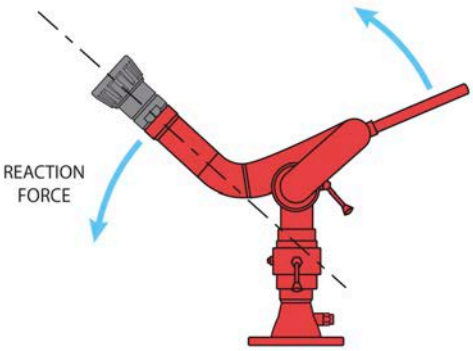
Hand Monitors

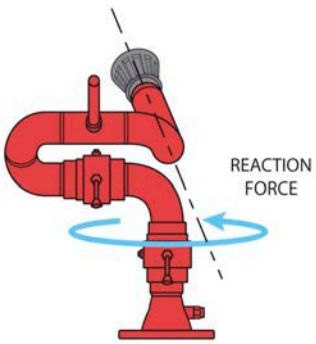
Hand Monitors are chosen for their simplicity and cost effectiveness. Lever operated, hand control monitors are ideal for protecting risks where the monitor angle and trajectory can be adjusted and locked before use. Once in operation, manoeuvring the steering arm (handle) can be hard - as the reaction forces created by the jet, particularly at operating pressures over 7 bar can make the load on the handle difficult for a single operator to manage. For this reason a counter weight is often fitted to manual monitors to help balance the load of the reaction forces, particularly when a foam cannon is fitted.



* LMB40

The Angus LMB40 bronze fire monitor features a simple and reliable design using a hand lever to control horizontal and vertical movement. The monitor can be fastened in position by engaging the locking nuts. The picture shows the LMB40 with a self-inducing nozzle.

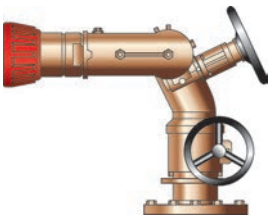




For operator safety, we would recommend manually operated monitors featuring screw down locking nuts to control the rotational and vertical movements are limited in size to a max of 4" barrel or flows up to 8,000lpm.

Geared Monitors

Geared monitors are used for a number of applications, and in particular for trailer mounting. The gears make the horizontal and vertical movement of the monitor easy to change. Geared monitors are therefore ideal for protecting a variety of small, high risk areas in a terminal at different heights and distances (small fuel storage tanks and bunds for example). In fixed monitor applications, geared monitors can be used on risks demanding high application rates of water or foam. As the geared hand wheels make it easy to control the monitor precisely.



* FWM

The Angus FWM (Foam Water Monitor) is a geared monitor featuring separate foam and water cannons for maximum performance.

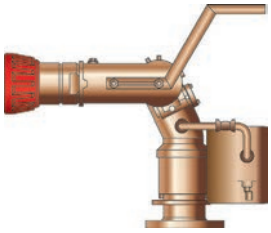
The water jet barrel throws water up to 50m making it ideal for cooling of small tanks.

The foam jet barrel delivers expanded foam up to a range of 40m. Changing the application from water to foam is easily achieved with a flick of the leaver on the selection valve.

- Available in 4 models, giving foam solution flow rates of 1300lpm to 3600lpm at 7bar.
- Each unit has a separate standard water barrel giving a flow of 1500lpm.
- Built-in foam induction system with variable settings.
- Stainless steel foam and water barrels.
- Fixed or trailer mounting options available.

Oscillating Monitors

Oscillating monitors are often found protecting the most hazardous area of a site or platform. They can be turned on remotely via a water valve allowing the user to remain at a safe distance. The automated sweeping action enables the monitor to cover a wide risk area. Angus Oscillating monitors are supplied with a permanent pelton wheel water driven motor, which provides the power for the horizontal oscillation movement. No outside power source is needed.



✳ OM80

Born from the need for a high specification, rugged monitor suitable for use in the harsh conditions of the North Sea oil fields, the Angus OM80 is engineered to the highest standards to provide exceptional operational reliability.

- Features a sealed for life gearbox with adjustable sweep angle between 45° and 120° in 15° intervals and oscillating speed control.
- Compact low profile configuration particularly suitable for installation on towers, aircraft hangars, offshore platforms for helideck protection and other areas where space is limited.
- Dry and wet test kits are available for periodic testing of the oscillating function of the monitor.

Remote Control Monitors

Remote control monitors are specified to protect high hazard areas where access for personnel is obstructed. They are widely used at Jetty Terminals and Marine Docks to protect the means of escape from the jetty, control room or loading arm areas. As a result, RCMs are designed so that the monitor and the controls are located separately at significant distances from each other. The monitor will be located in the hazard zone, whilst the panel controlling the movement and the nozzle function will be located at a safe distance.

The choice of power to operate remote control monitors includes hydraulic power (provided by either a water driven pelton wheel motor, or electric pump), or all electric power.

✳ RCM 1

The Angus Hydraulic Remote Control Monitor system comprises a monitor and control panel with built in power pack. A solid system featuring advanced engineering especially designed to offer reliable and safe remote control operation at up to 300 metres away from the risk. The RCM is manufactured using state of the art techniques and is rigorously tested at Angus Fire's production facility before shipment.

- Totally independent water turbine driven or electric prime mover options
- Control panels are available to operate either one or two monitors
- Nominal maximum throughput 4,500lpm at 16 bar
- Bronze & stainless steel construction – ideally suited for marine applications
- Can be fitted with the LTN nozzle for water or non-aspirated foam or the FMC cannons, with or without blabbermouth.

Portable Monitors

Sometimes it is more convenient to provide a rapid response by moving a portable monitor from hazard to hazard. Portable Monitors are generally lightweight, self-inducing using either low expansion foam or water. They offer entry level fire fighting for protecting hydrocarbon and other risks that require either finished foam or water applied from a safe distance. The choice depends on the size and type of risk and the application rate recommended to achieve extinguishment.

Typical applications for a foam bipod include bund and small tank protection, rail and truck loading gantries, waste and oily pits. Whereas Ground Monitors are ideal for water cooling.

* Titan/Bipod Monitor

Angus manufactures a range of bipod monitors, that are portable and easy to set up. They are designed to deliver either a well expanded foam blanket for fire extinguishment or a water jet for cooling. Bipod monitors are often deployed to protect small fuel tanks – (NFPA 11 permits foam monitors to be the primary means of protection on tanks under 18m diameter). The range includes the Titan, FC18B and FC27B.

- The largest monitor Titan will put foam onto the top of a 20m high tank from a distance of 30m.
- The flow rate of each monitor is :

  Titan - 4500lpm @ 10bar

  FC18B - 1800lpm @ 7bar

  FC27B - 2700lpm @ 7bar
- FC18B & FC27B feature a four inlet light alloy collecting head for use with 2.5" hose.
- Titan monitor has two 4" inlet for use with 4" hose.

* PGM

The Angus Portable Ground Monitor is a compact, light weight but robust monitor with excellent stability and low maintenance. Ideal for rapid deployment by one person. It is intended for use in the medium output range, typically up to 1800lpm. With its folding stainless steel ground frame it can easily be stowed in a vehicle locker.

- Two valved inlets
- Option to use foam branchpipe
- Screw down collar allows adjustment in use
- Jet spray nozzles capacity 900l or 1800l a minute
- Swinging flap valve permits use of a single hose if required
- Weighs only 7kg

Monitor Nozzles

The most common type of nozzles fitted to monitors are the Fog/Jet style, which are manufactured from a variety of materials including brass and gunmetal. They can be adjusted to throw either a straight jet or a wide spray of water or a non-aspirated foam fan. Fog/Jet Nozzles can be used with either water or foam solution. Due to the limited entrapment of air in the stream it is recommended that a film forming foam is always used.

The Angus LTN nozzles in gunmetal, pictured on the right, are available with four different flows ranging from 900 to 3300lpm. A self inducing version with a flow rate of 1900lpm is also available.

- Each nozzle provides a constant flow rate
- Particularly suited for use in coastal and offshore environments

Angus Fire also manufactures higher capacity nozzles that can be used on trailer mounted monitors with flows up to 20,000lpm in jet/spray options. These can throw water 90m or more.

LTN Nozzles

Monitor Cannons

Foam cannons are used to produce a well expanded foam for fighting hot deep seated tank fires. They are also used for vapour suppression on fuel spills at loading terminals and in bunds surrounding fuel storage tanks. Made of stainless steel, Angus monitor cannons start at a flow of 800lpm and max out at 15,000lpm. Self-inducing options are also available.

A useful extra, is the availability of a blabbermouth or spreader over the mouth of the cannon which allows the discharge rope of foam to be flattened into a wider pattern for broader coverage.

The Angus LTC range in stainless steel, pictured on the left, is available in 5 different flows ranging from 1800 to 7500lpm. All versions are available as a self inducing option.

Monitors fitted with Angus LTC cannons are also provided with a counter weight for ease of use.

Selecting the right monitor

Angus Fire has developed a special computer modelling software package to calculate the most appropriate monitor solution for your application. To select the right monitor, nozzle or cannon for your requirements contact us with your details and we will run the software to provide you with the best option.

Big Flow System

Big Flow is a mobile, pumping system that is capable of feeding large volumes of water over extremely long distances. The system comprises a high flow monitor, a number of large capacity water/foam pumping options, large diameter hose and hose deployment devices, which in combination, provide versatility and superior range to attack hazards from a safe and effective distance.

At the heart of the Big Flow System is the Iron Man high capacity monitor. The Iron Man is a foam and water monitor mounted on a trailer, capable of delivering various flows with interchangeable tips up to 40,000lpm, which can throw water or foam in excess of 120m depending on conditions. The Iron Man monitor can achieve the high application rates and throws needed to fight a full surface tank fire. This makes the Iron Man an essential back up to the fixed foam systems for protecting large open floating roof tanks.

In addition to fire protection the Big Flow system can also be used in flood relief as it is capable of moving large volumes of water away from flooded residential and critical infrastructure areas.

Angus Fire Profile

Angus Fire is a global leader in firefighting technology. In more than 100 countries Angus Fire supplies fire safety products and services to customers operating in a wide range of industries such as oil companies, international airports, harbours, ports, military bases, power stations, and of course to fire and rescue services. Angus is a global name with an impressive history of over 220 years in the firefighting industry. It is this rich heritage and associated expertise, which put Angus Fire at the forefront of the fire industry and makes the company the preferred partner with firefighters worldwide.

bsi. ISO 9001 Quality Management
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bsi. ISO 14001 Environmental Management
EMS 576644

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