

Monitors

Warden Hydraulic Remote Controlled Monitor Systems

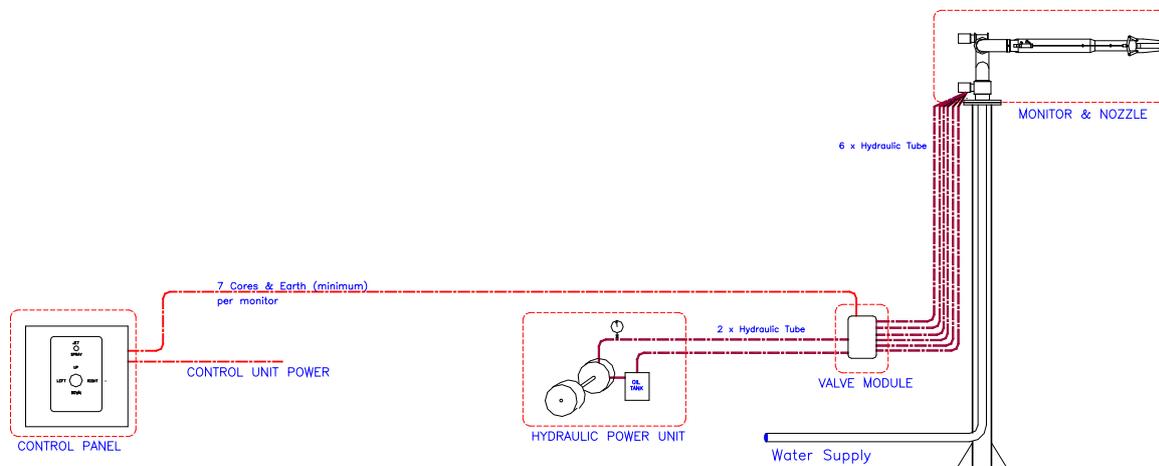
Description

The range of Warden hydraulic remote controlled monitors is used in both mobile and fixed monitor systems. These monitors can be used with Orion Model 6000RH and 8000RH fog nozzles and Orion Foam Lord model FLD2-65RH and FLD2-80RH nozzles and with FF-Series aspirated foam nozzles.

The complete monitor system comprises a minimum of five elements:

- The nozzle selected for the application
- The Warden monitor
- The hydraulic valve module
- The hydraulic power unit
- The control panel.

There are a number of options for each element of the hydraulic monitor system. These options are offered to provide customers with the maximum flexibility in building the monitor system that suits their needs.



Design Philosophy

The Orion Warden Monitor systems are specially designed to be modular. The modular concept provides flexibility in the selection and location of components for any monitor application

The installation cost is a significant part of the total cost. The Orion modular concept provides a reduction in installation man hours and installation material, thus contributing substantial cost savings.

ORION FIRE ENGINEERING PTY LIMITED

ABN 80 002 538 696

26A LYN PARADE PRESTONS NSW 2170 AUSTRALIA

Tel (61) 2 9426 7900

FAX (61) 2 8783 5400

Visit our Website www.orion-fire.com.au Email: sales@orion-fire.com.au

Remote Control monitor systems are frequently installed in areas with high corrosion potential. Orion is committed to supplying systems that reduce the cost of ownership. To minimise system maintenance hours and cost the Orion Warden monitors provide the lowest total cost of ownership by minimising system maintenance. Orion achieve this by the selection of materials that are corrosion resistant and by protecting those elements where we can not optimise material selection such as electric motors and control valves

Nozzle Selection

Selection should consider agent to be discharged, flow rate required, throw and discharge pattern required.

Orion has a wide range of nozzles for use with the monitors. The Orion nozzles available can discharge water only, un aspirated foam solution, aspirated foam. Nozzles can be self-inducting and may be fitted with remote controlled spray pattern adjustment. Special nozzles are available for dry powder systems

Monitor Selection

There are three monitor selection options and the selection will depend on the size and type of nozzle to be used:-

- The Warden 6290 is a 60mm waterway monitor with a maximum flow of 2,000 lpm. This monitor is designed for use with Model 3000RH fog nozzle or FLD2-50RH foam inducting fog nozzle.
- The Warden 8290 is an 80mm waterway monitor with a maximum flow of 4,400 lpm. This monitor is very versatile and may be used with Model 6000RH & 8000RH fog nozzles, Model FLD2-65RH and FLD2-80RH foam inducting fog nozzles and all aspirating foam nozzles from FF-1000SDH to FF-4000SDH.
- The Warden Model 8290H. This monitor is the same as the model above but is fitted with handwheels for manual operation.
- Special nozzles and Warden monitors with sealed swivels are available for dry powder application

If the flow rate required is larger that the Warden range of monitors can handle (See the Friction Loss Curve on the Data Sheet) our Ranger hydraulic remote controlled monitors will provide an excellent range of high capacity monitors.

Warden Monitors are available in standard bronze construction or manufactured from high performance manganese aluminium bronze.

Hydraulic Valve Module

Two types of hydraulic valve modules are available as well as custom designed options.

- Weatherproof valve module. This module contains three electric operated hydraulic control valves housed in a stainless steel enclosure with a minimum IP rating of IP56. The three hydraulic valves control the two axes of monitor movement and the nozzle spray pattern
- Explosion Proof valve module. This module has the same functionality as the weatherproof valve module but the enclosure is explosion proof as well as having a

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minimum IP rating of IP56. The explosion proof enclosure can be certified to a number of different codes.

Option includes modules with valves to control other equipment such as water and foam concentrate valves.

The hydraulic valve module is separated from the pump unit to enable it to be located near the monitor. Since six (6) hydraulic tubes are required to connect the valves to the monitors and only two (2) from the pump to the valves it is more cost effective to locate the valves near the monitor in a location that is easy for maintenance. It is also possible to use one pump unit with more than one monitor if the monitors are sufficiently close together. There is a cost saving with the hydraulic power unit in this instance.

Hydraulic Power Units

Three types of hydraulic power unit are available:-

- Weatherproof: The electric motor used to power the monitor has a minimum IP rating of IP56 and the unit is housed in a weather resistant housing to protect vulnerable part of the equipment from direct exposure to the effects of weathering.
- Explosion proof: Similar to the weatherproof model but using explosion proof motor and electrical equipment. A number of electrical approvals are available.
- Both the above units require a 3 phase supply of 380 to 480 volts.
- Water turbine driven: When reliable electric power is not available it is possible to use the fire system water to run a water turbine to power the hydraulic pump.
- Dual power units that include both electric and water turbine driven pumps.

In addition, power units can be engineered to with the capacity to power more than one monitor at a time. This is cost effective where monitors are located in close proximity.

Control Panels

Control panels are generally custom designed for the application. It is cost effective to incorporate all system functions in one integrated control panel. Panels can be made for multiple monitors, for indoor, outdoor and explosion proof applications and also using manual control valves.

Where long cable runs are used, with multiple monitors or when multiple control points are used our FireNet control system can be integrated with our hydraulic monitors to minimise installation costs and add functionality.

Control system power such as 24 or 110 V AC or 24 V DC is required.

Conclusion

Orion monitor systems have a well-earned reputation for superior performance, reliable long-term operation in harsh environments, flexibility and lower total cost of ownership when compared with other systems that are available. We achieve this through careful design that focuses on selecting quality materials, protecting vulnerabilities and making our systems as modular and flexible as possible. By making our systems modular and flexible we allow the individual systems to be optimised for each installation. When our customers have a unique requirement we can customise the design of any modules to suit individual requirements.

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