



Credit: Harald Pettersen - Statoil

## DELUGE SYSTEM (Multi Zone)

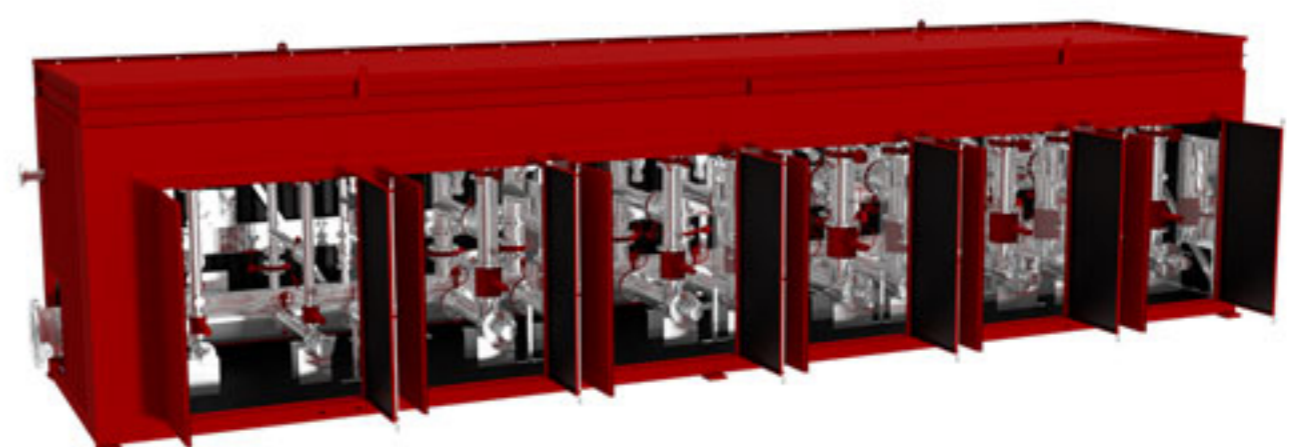
The Firenor multi zone deluge skid system offers exceptional fire protection for high risk areas where rapid fire spread is a potential scenario, by allowing quick discharge of water with or without foam in case of emergency. While this system is designed for high risk fire suppression, it is also excellent for cooling purposes, general area protection, and protection of high risk objects during a fire. Additionally, the design of this system can be customized to protect against pool fires by mixing foam into water at a precise flow.

### SYSTEM DESIGN

A deluge system consists of a network of dry pipework and open nozzles that is connected to a water supply through a normally closed on-off or a pressure regulating deluge valve. Every system standardly comes equipped with all necessary valves and instrumentation for operation, maintenance and testing purposes. The system can be customized to conform to any required safety integrity level and can be delivered full flow pre-tested. In addition to the Firenor standard design, the multi zone deluge system can be customized to meet specific project requirements. Customizations include deluge system piping on open frame or inside cabinet for environmental protection purposes, and the choice of pneumatic, hydraulic, or electrical signals for the release mechanism.

### VERIFICATION

Every system can be customized, upon request, for compliance with applicable rules, regulations and project specific requirements. Full documentation for any tailor-made products are available and include all necessary certifications, third party verifications such as DNV/GL, BV, ABS, etc., and full scale test reports, if required.



*Deluge, Multi Zone*



## ◀ DELUGE SYSTEM (Multi Zone)

### FEATURES

- Outlets from 2-12 inches
- Regulating or non-regulating deluge valve
- Flexible design
- Compatible with various hazardous area classifications and regulations (ATEX, UL, CSA etc.)
- Compatible with IEC 61508 for Safety Integrity Level 2 or 3
- Full-scale tests up to 35000 LPM
- Working environment friendly design

### MATERIAL

Every Firenor system is available in the following materials:

- |                           |          |
|---------------------------|----------|
| • Galvanized carbon steel | • Duplex |
| • Copper nickel           | • SS316  |
| • Super duplex            | • 6Mo    |
| • Titanium                | • GRE    |

### FOAM SUPPLY

The foam supply for this system can be provided by a separate tank outside or inside the skid, or from a central foam system, depending on the exact project specifications. The foam can be mixed with a variety of solutions listed below:

- Turbine foam proportioner
- Balanced pressure foam proportioner
- Foam inductor
- Constant flow orifice

### NOZZLES

Deluge skid nozzles can be supplied with the system and are available in options such as medium velocity, high velocity, and open sprinkler heads.

Firenor can design the nozzle placement for such a system and will carry out all necessary hydraulic calculations before installation and delivery.

### DOCUMENTATION

The engineering department produces documentation relevant to all phases of the project. Documentation normally includes the following:

- |                |                |
|----------------|----------------|
| • Quality plan | • Calculations |
| • ITP          | • Certificates |
| • Drawings     | • Reports      |
| • Data sheets  | • User manual  |
| • Indexes      | • MRB          |



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