



# Firefighting Solutions - On & Offshore



Helideck firefighting systems (DIFFS/RMS)

Foam Proportioners

Service

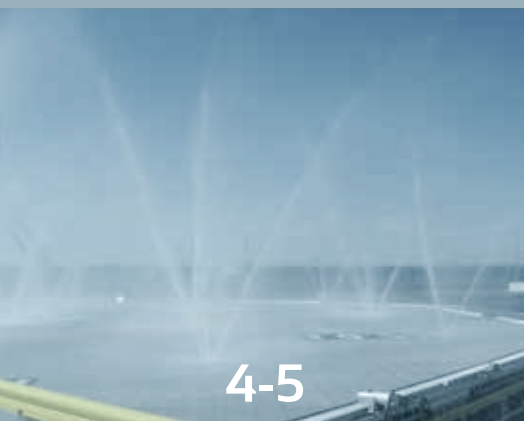
# Our focus

Matre's portfolio of systems and equipment for firefighting includes several innovative, effective and reliable solutions of foam systems used on industrial, marine and offshore installations. All our solutions provide an extremely accurate mix of foam concentrate and water, ensuring optimal criteria for fighting fires.

In order to provide the safety our customers require, we have combined and put into practice technology, experience and service. This provides insurance that the functionality of our products is not to be doubted when it really matters.



**DIFFS**



4-5

**FOAM PROPORTIONERS**



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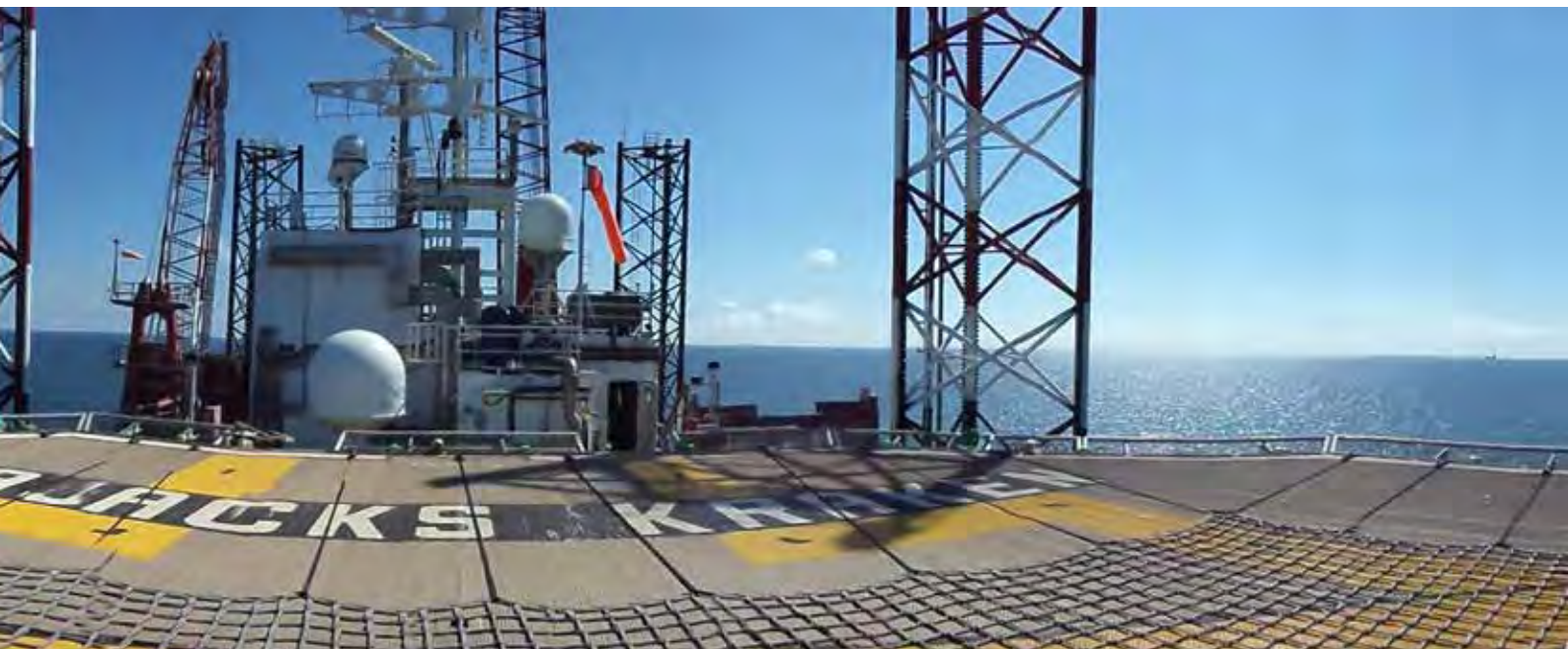
**FLEXI NOZZLE**



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We address the individual customers' needs and use our insight to optimize the development and realization of the end result. Through our support system we solve our customers' challenges with better decision making and time saving action.

We have through many years earned our customers trust by delivering what we promise – *Technology to protect.*



## OTHER PRODUCTS



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## SERVICE



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## REFERENCES



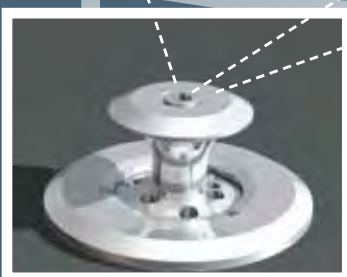
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# Deck Integrated Fire Fighting System

Matre Deck Integrated Fire Fighting System (DIFFFS) is specially developed to extinguish fire on helidecks. When activated, the system will extinguish a major spill fire on the helideck within 15 seconds. However – tests have shown that such fires in most cases are extinguished in less than 10 seconds. Our system can be activated by detection system or manual release panel. Rescue personnel can safely perform rescue operations on the helideck even when the system is fully activated.

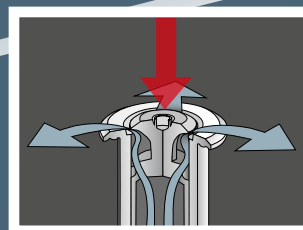
Matre DIFFFS is used onboard various offshore installations/vessels and superyachts. Several onshore projects have also seen the benefit of implementing Matre DIFFFS – e.g hospitals and similar institutions with helidecks.

Matre DIFFFS is designed in compliance with all applicable standards and regulations (CAP437, NORMAM27, ICAO, NMD, NORSOK).



## Matre Pop-Up Nozzle

Our pop-up nozzle is installed flush with the deck top surface. When the system is released the nozzles will be lifted up by the water pressure alone and make an effective spray distribution of water and foam mixture to the entire landing area. The nozzle can be delivered in various materials and can be installed into different types of helideck such as aluminum, steel and teak deck.



## Matre Anti-Block Pop-Up Nozzle

Even if one or more nozzles are blocked, the water flow from a blocked nozzle will remain the same. As a result our system will supply full water capacity on the helideck at all times. Our Nozzle is designed to be in accordance with CAP437 requirements.

## Test according to Cap 437

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### Extinguishers

Matre can offer both dry powder and CO<sup>2</sup> fire extinguishers in accordance with CAP 437 as a supplement.



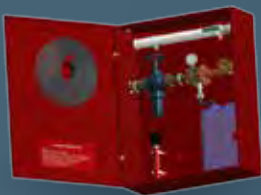
### Matre Control Panel

In case of a fire, the system can be released manually by Matre control/remote panels. Main control panels are normally located in the vessel/rig control room. The remote panels are placed at the emergency stairways of the helideck.



### Matre Dual Agent

The Dual Agent unit is a manually operated unit - skid mounted and enclosed in a heated cabinet. Only fire water connection needed. Very efficient for protection of process areas and helidecks where hydrocarbons and alcohols are present. This system combines a dry chemical agent for fast flame fighting and aqueous film forming foam (AFFF) for securing the fire area.



### Matre Hydrant Cabinet

The Matre Hydrant Cabinet contains foam tank, valve for water release, foam proportioner, foam branch pipe, nozzle and fire water hose. Foam insertion rate is 1% or 3%. Foam tank size depends on the chosen insertion rate.



### Matre Foam Skid

The compact foam skid consists of a foam tank, valve for water release, foam proportioner and an automatic drain valve. Foam insertion rate is normally 1% or 3%. The skid can also be delivered as an isolated cabinet solution with integrated foam tank and heater. Foam tank size depends on the chosen insertion rate and helideck size.



**0 sec**  
System released



**5 sec**  
Visible reduction



**10 sec**  
Fire extinguished

CAA regulations strongly recommend that foam are to be produced at deck within 15 seconds and that a fire is under control within 30 seconds. Repeated tests of Matre DIFFS prove that a major fire is extinguished within 10 seconds, measured from when the water is on deck.

# Foam Proportioning Equipment

Matre has since the late eighties delivered specially designed foam proportioning equipment for use on industrial, marine and offshore installations.

Product development and a strong focus on safety and accuracy has led to our range of products. Our proportioners are often preferred in projects where flexibility and quality are crucial for the result.

The reliability of any foam proportioning system is essential in order to guarantee an effective operation. Matre offers a wide range

of proportioner models and sizes. We strive to deliver high quality products and meet our customer's challenges with proven equipment and solutions.

Our desire as a complete supplier of foam proportioner is to be in front with new developments and to ensure that we at all times can deliver reliable, cost effective solutions to the industry. We aim to keep our position as a supplier of high quality foam proportioning equipment.

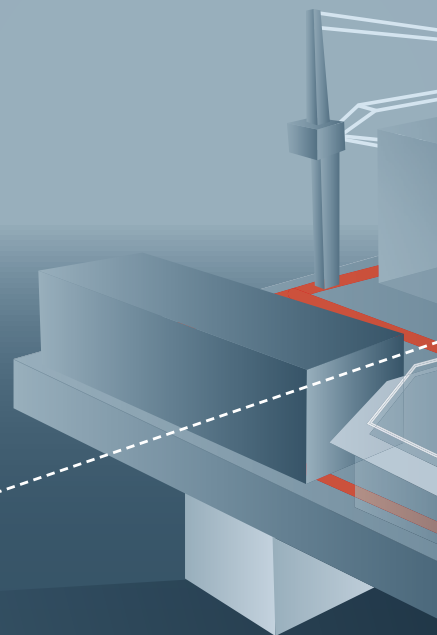
**Matre Foam Inductor**

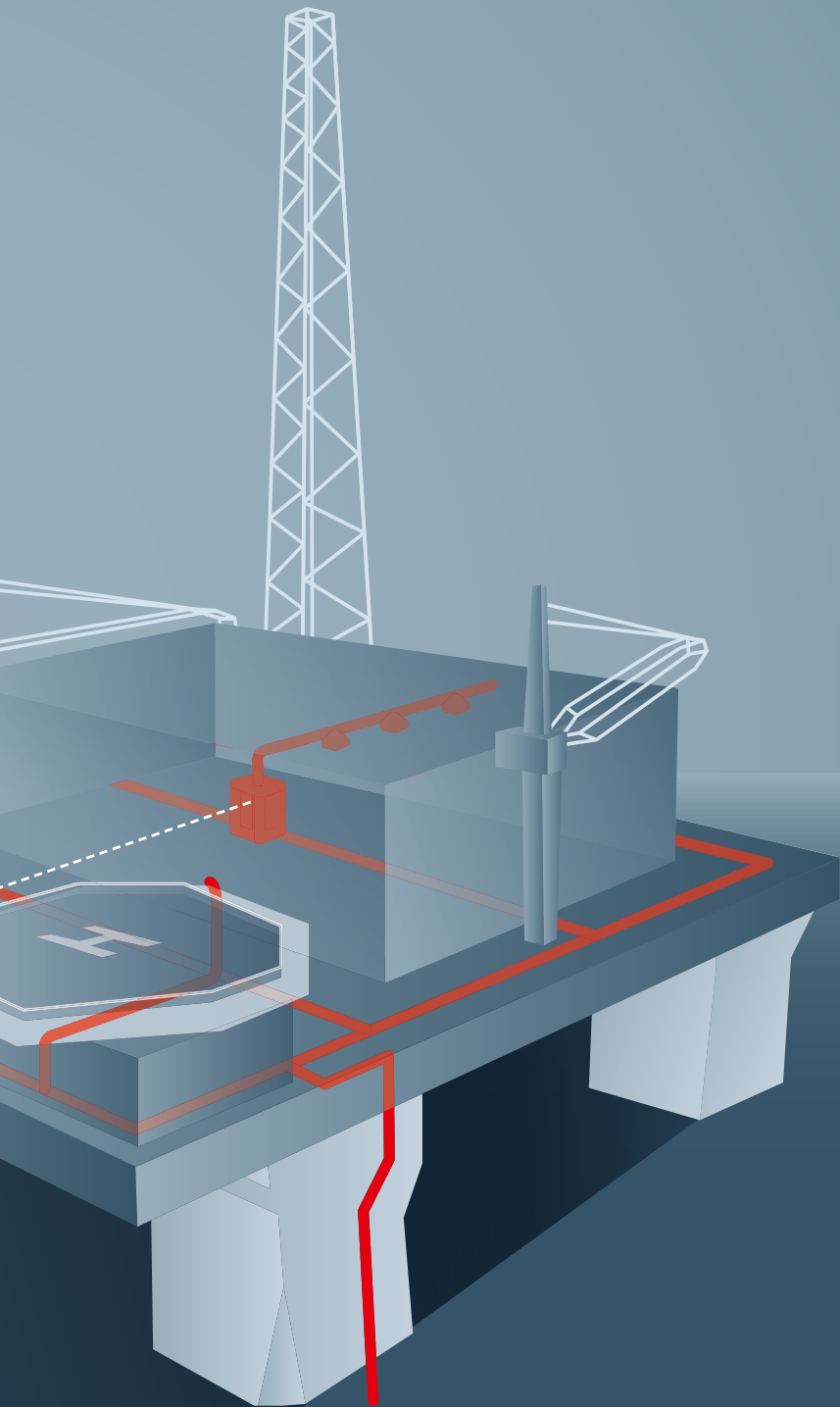


**Matre Balanced Pressure Proportioner**



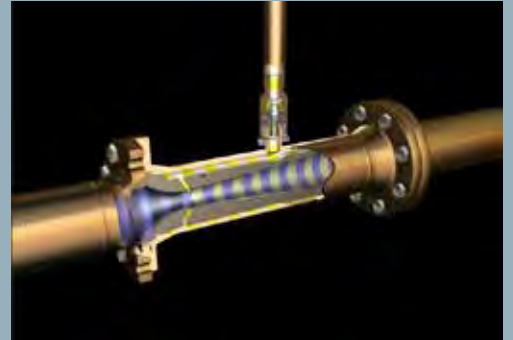
**Matre Turbine In-line Proportioner**





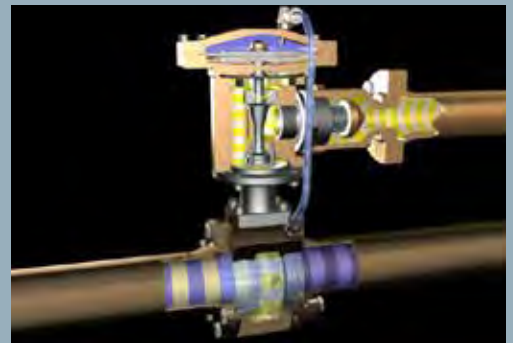
## Matre Foam Proportioning

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### Matre Foam Inductor:

Ventury type. Pressurised foam not required. Foam is soaked up from an atmospheric foam tank. Fixed water flow only.



### Matre Balanced Pressure Proportioner:

Pressurised foam required. Foam pressure 1 - 10 bar higher than inlet water pressure. Very accurate foam insertion over a wide water flow range.



### Matre Turbine In-line Proportioner:

Water driven turbine connected to a foam pump. Foam is soaked up from an atmospheric foam tank. No external power needed. No waste of fire water. Variable water flow.

# Matre Flexi Nozzle

Our flexi nozzle is a high capacity deluge nozzle. With our innovative design it is possible to adjust the water capacity, spread angle and jet direction. The larger models of the nozzle operates as a fixed monitor with water capacity up to 4000 LMP and reaching a length of 60m when in jet position with water/foam solution. Matre Flexi Nozzle is used on several on- and offshore applications.

The nozzle is normally used when a specific area has to be covered with foam and water.

Our flexi Nozzle is available in the sizes 1 1/4" to 4" with flow range from approx. 200 l/min. to 4000 l/min. The nozzle is normally delivered in material SS316 but can be delivered in other materials on request.



## Other products

Matre produces and supplies a wide range of specialized products for the individual customer. These are developed in close cooperation with our clients. The advantage of sharing ideas and solutions at an early development phase gives the end user the benefit of having a product which is 100 % suited for the job.

We have through many years been the main supplier of cooling water pumps to one of the leading producers of ship engines. We also supply pumps for sprinkler systems, as well as temperature and pressure calibration equipment (EO) for DNV GL vessels. This is used worldwide by our many customers.

Our solid experience within machining with the smallest amount of tolerances is a much sought after quality in the market. This has led to our close cooperation with one of the leading operators within subsea sensory systems, to which we deliver critical parts.



# Worldwide service & support

To ensure optimal performance and extended lifetime for the quality products and systems delivered by us, we offer our customers several service solutions.

Matre provides a worldwide field service, commissioning of new firefighting equipment onboard rigs and vessels, general maintenance of Matre equipment, annual inspections of DIFFS, maintenance of major deluge systems as well as retrofits, conversions and modifications of existing helideck systems. In addition we also offer in-house repairs and services of both Matre firefighting equipment and EO equipment (Calibrators) at our facility in Bømlo.



## Pumps



## Calibration equipment



## Machining services



# References



© Exxon Mobil

## Hibernia

One of the world's largest oil producing platforms located offshore Newfoundland. We delivered Matre's turbine in-line foam proportioners in sizes from 3 to 10 inches in requested high material grade 6Mo. Our water driven turbine has been implemented into all the deluge skids, providing accurate foam mix to dedicated areas onboard the Hibernia platform.



© Salt Ship Design

## Viking Neptun

We have since early in the nineties delivered Matre Deck Integrated Fire Fighting System (DIFFS) to various offshore vessels. DIFFS is the most efficient system in the market for fighting fire on helidecks. DIFFS consists of a compact foam skid, specially designed pop-up nozzles installed flush with the deck, and control panels which are located around the helideck.



© C. Costa – [www.oceanships.de](http://www.oceanships.de)

## Elisabeth Knutsen

We delivered DIFFS with turbine in-line foam proportioners and pop-up nozzles to Elisabeth Knutsen's helideck, a midship deck on the port side. There was a demand for high accuracy and reliability, and our equipment was regarded to be the safest and best to use.



© Helge Hansen - Statoil ASA

## Kollsnes

The process facility at Kollsnes in Øygarden west of Bergen, Norway, receives and processes the gas from Troll, Kvitebjørn and Visund fields. We have supplied large series of Matre Foam Inductors to be installed into Kollsnes' fixed fire fighting systems. The delivery consists of Matre Foam Inductors delivered in sizes from 6 inches, and from high standard quality steel.



© Vidar Langeland - BA

## Haukeland University Hospital

Matre has participated in equipping the helideck at Haukeland University Hospital in Bergen, Norway. The hospital and the ambulance helicopter pilots need a reliable system they can trust in case of a fire, and consequently chose our equipment. Previously, helicopters landed on Grønneviksøren, but now they use the helideck as landing site. This has significantly improved the possibility to assist patients in acute need of treatment.



© Eni Norge/News On Request

## Goliat

Goliat (Eni Norge) will be the first oil producing installation in the Barents Sea, operating at the world's most northerly offshore oil field. Goliat is also the world's largest and most advanced cylindrical floating, production, storage and off-loading unit (FPSO). The platform is specifically designed and engineered for operation in the Barents Sea. New technology is developed in a number of areas, both to reduce risk to personnel and the environment, but also to be able to deal with any emergency situation. We have supplied Matre's turbine in-line foam proportioners to this project.



- ▶ Norway (Head office)
- ▶ Netherlands
- ▶ Russia
- ▶ United Arab Emirates
- ▶ Singapore

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