



DRY CHEMICAL POWDER

FIRE EXTINGUISHING SYSTEM



Gas carriers have specific cargo containment and handling requirements due to the highly volatile nature of their cargo. In the event that flammable gases are ignited, extinguishing solutions that can be deployed quickly and effectively whilst minimising the risk to personnel and the environment is required. The Survitec Dry Chemical Powder Fire Extinguishing system (Survitec DCP system) breaks down the chemical reaction within the fire and suppresses the flames almost immediately. The system is an effective, non-toxic alternative which is harmless to people and the environment. The system is extensively and independently tested, ensuring regulatory compliance. It can be applied on merchant marine and offshore structures as the design is in accordance with IGC and IBC codes.

FEATURES

- PROVEN TIME RELEASE AND CAPACITY CAPABILITIES
- A WIDE RANGE OF PRESSURE VESSELS FOR POWDER
- CAN BE DEPLOYED BY HAND HELD HOSES, FIXED MONITORS, OR A COMBINATION OF BOTH
- TESTED IN MINUS 28 °C IN LONG PIPES
- PROVIDES COMPLETE COVERAGE TO ALL THE AREAS THAT NEED PROTECTION
- POWDER PENETRATES INTO THE SMALLEST AND EVEN PARTIALLY COVERED LOCATIONS
- CAN BE INSTALLED AS A CENTRAL, MODULAR OR HYBRID SYSTEM



DCP skid unit

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Reaching all exposed cargo area

The Survitec DCP system extinguishes fire using dry powder which is ejected from monitors and hose stations using nitrogen as the propellant.

The system can be deployed by hand held hoses, fixed monitors, or a combination of both. This provides complete coverage to all areas in need of protection, ensuring the penetration of powder into small or partially covered spaces.

With a flexible design the system meets the full range of flows. It can be installed as a central system, modular system or a hybrid system (a combination of central and modular). Design calculations are conducted for each project to ensure the requirements for flow rates and capacities are met.

Solution benefits

The Survitec DCP system is a flexible and high quality fire extinguishing system that is easy to install, has flexible piping options, is easy to operate and requires minimal maintenance.

Increased safety on gas carriers

The Survitec DCP system has proven time release and capacity capabilities. It has a wide range of powder pressure vessels available to meet the demands for various system sizes. Both monitors and the non-kinking hose with pistols ensure flexible powder delivery to immediately extinguish the fire. The system is safe, secure and installed on vessels worldwide.

Savings on installation cost

Optimal system design keeps material and installation costs low. Modular units provide a flexible solution, reduce piping routes, and eliminate the need for distribution piping. Components can be delivered on skid units for reduced installation time and cost. Standardised system components minimise maintenance and operational costs.

“
MED-approved and DNV-GL
type approved. Tested down
to -28° C in long pipes”

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System description

The Survitec DCP System comprises steel pressure vessel(s), cylinder banks with manifolds, distribution valves, gas release arrangements, hose stations, monitors, pressure gauges and safety valves.

After the system is released, nitrogen gas pressurises the tank, and nozzles fitted in the bottom fluidize the powder. When a certain pressure is achieved, the dry powder flows through the distribution manifold to the monitor or handheld hose line.

The central system is designed as a single or twin storage pressure vessel located centrally inside a powder room. The system can be used to discharge powder across the whole cargo area at required capacity, or linked together; the entire capacity can be used on a single area.

A central system feeds powder from the central storage tanks to the on deck hose stations and monitors.

The hose stations are organised in a way that all deck areas can be reached by two hose stations. These stations have a local release arrangement inclusive with 33 metres of hose and a powder pistol.

In modular systems each hose station unit and monitor unit has its own self-contained powder storage vessel.

The system can be remotely operated from the release boxes utilising pilot cylinders, or manually at the dry powder unit. This ensures that there is operational flexibility.

Extinguishing fire using dry chemical powder

The Survitec DCP System utilises dry chemical powder based on Potassium Sulphate in accordance with IMO Circ 1315. This ensure highest performance with flow capability and extinguishing effect. The powder is mixed with additives that protect against lumping and moisturising.

The Survitec DCP System is a highly effective medium to extinguish flammable gas fires.

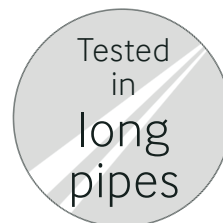
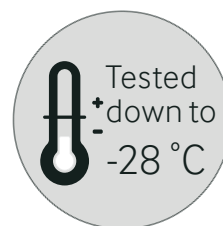
When powder is released directly to a fire, the extinguishing effect is caused by suffocation and an anti-catalytic effect, a chemical intervention into the combustion process.

The dry powder is non-toxic and stable at both low and high temperatures. However, it should be kept tightly closed and stored in a dry location in order to prevent absorption of moisture.



Approvals

- MED -B&-D (EC) certified, fulfilling the mandatory IMO MSC.1/Circ. 1315
- DNV-GL type approval certificate
- DNV QS - Certificate of assessment - EC

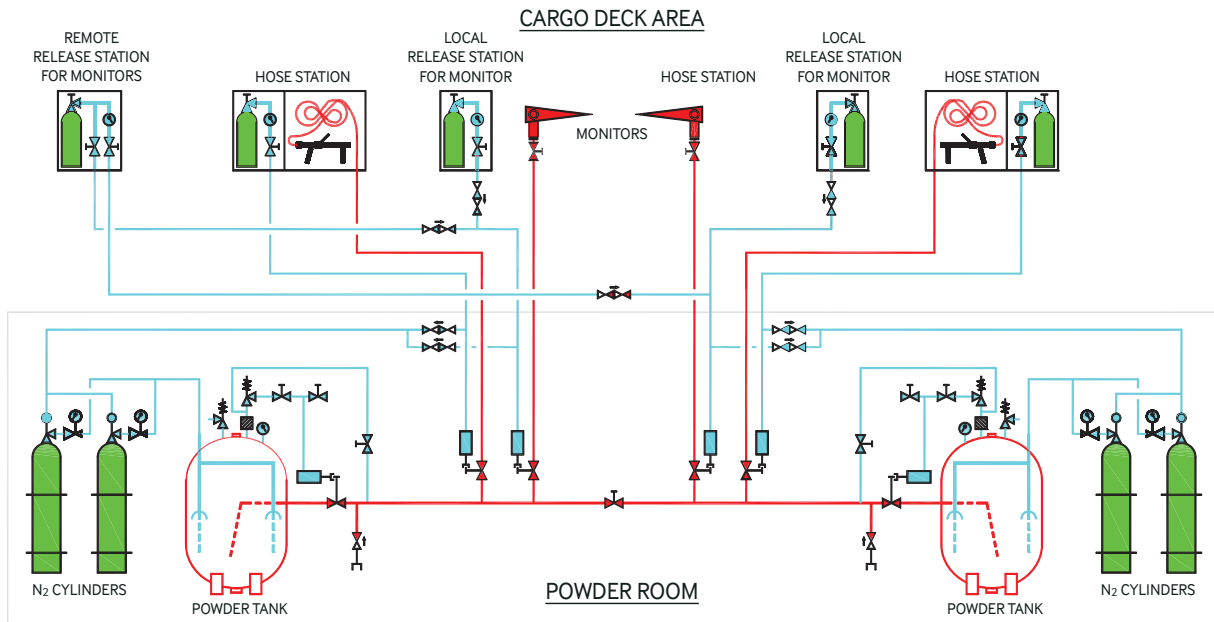


- Up to 190 metre pipe and 33 metre hose for handheld pistol
- Up to 140 metre pipe for monitor

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Standard configuration



Tanks

TECHNICAL DATA	
Material	steel
Capacity [kg/s]	160 - 2,500
Pressure class	PN16
Certification	as required by Class

Cylinders

TECHNICAL DATA	
Material	steel
Capacity [ltrs]	50
Pressure [bar]	200
Certification	as required by Class

Monitor

TECHNICAL DATA	
Material	stainless steel
Capacity [kg/s]	10 - 25
Flange connection	DN50 and DN65

Cabinets

TECHNICAL DATA	
Material	Stainless steel
Type of operation	pneumatic

Powder

TECHNICAL DATA	
Type	BC Karate (Potassium Sulphate)

Pistol

TECHNICAL DATA	
Material	stainless steel
Capacity [kg/s]	3.5