



Low-Pressure CO₂ Fire Fighting System

For Large Engine Rooms

Low-pressure CO₂ vs high-pressure CO₂















Comparison low-pressure CO₂ – high-pressure CO₂ for an engine room of 35,000 m³

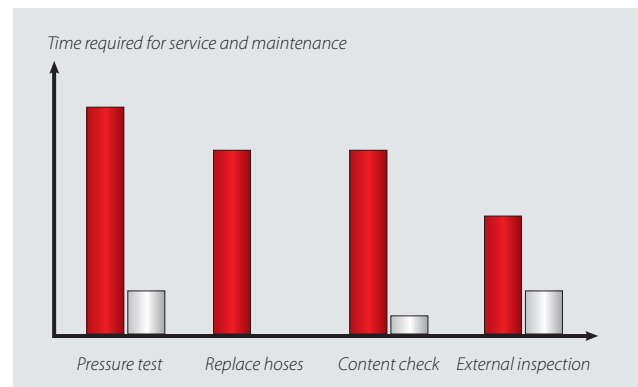
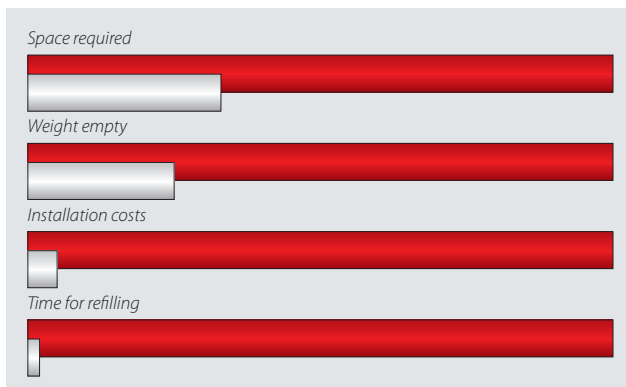
Kg of CO₂ = 25,000

High-pressure CO₂

Low-pressure CO₂

REQUIRED	
 <p>556 cylinders</p>	 <p>1 tank</p>
SIZE OF CO ₂ ROOM	
 <p>120 m²</p>	 <p>40 m²</p>
WEIGHT (EMPTY)	
 <p>55,500 kg (with racks)</p>	 <p>13,500 kg</p>
WEIGHT (FILLED)	
 <p>80,500 kg</p>	 <p>38,500 kg</p>
INSTALLATION TIME	
 <p>Approx. 1,200 man hours</p>	 <p>60-80 man hours</p>
TIME REQUIRED FOR REFILLING	
 <p>More than 500 man hours</p>	 <p>Approx. 12 hours</p>

High-pressure CO₂ ■ Low-pressure CO₂ ■



Low-pressure CO₂ fire fighting

– the optimal solution for fire protection of large engine rooms



Danfoss Semco low-pressure CO₂ systems are specially made for use where large machinery spaces above 25,000 m³ require protection with CO₂. Low-pressure CO₂ systems are the optimal solutions with one tank replacing a large number of CO₂ cylinders. The tank, the valves, compressors, and associated controls are supplied prewired and ready assembled on a common steel frame.

Advantages of low-pressure CO₂ for large engine rooms above 25,000 m³

- One single tank replaces a large number of CO₂ cylinders
- More than 50% reduction in weight and space required
- Significantly reduced time for refilling
- Operation and service advantage for the ship-owner
- Installation advantage for the shipyard



Danfoss Semco A/S

History

Danfoss Semco A/S is a global leader in the sale, development, production and service/commissioning of certified fixed fire fighting systems. In 2006, two leading firms in the field, Danfoss A/S and Semco Maritime A/S, joined forces to form the present company, with Semco Maritime boasting over half a century of expertise in designing and installing fixed fire fighting systems. All the while, Danfoss has developed and delivered key components for the high-tech systems.

Today Danfoss Semco is an integral part of the Danfoss Group, Denmark's largest industrial manufacturing company with a daily output of more than 250,000 finished components. With more than 24,000 employees worldwide, Danfoss is truly a global company.

Business areas

Our company is located in Odense, Denmark, and operates three main business areas.

Our water mist division comprises two business areas: the marine division and the industrial and commercial division. The former has pushed the boundaries for development and design to offer a wide range of solutions for numerous application areas on almost any type of vessel.

Within the industrial and commercial area, Danfoss Semco has a successful track record with different applications, ranging from complex fire fighting systems for museums and heritage sites to industrial applications, office buildings and universities.

Our gas and foam division is one of the world's largest low-pressure CO₂ based fire fighting systems supplier for the marine industry. This division supplies gas, foam and dry chemical powder systems worldwide.

In-house manufacturing of key components

Danfoss Semco operates in-house research, development and manufacturing facilities of all critical components to ensure uncompromising performance and cost-effective systems. This puts us in a unique position to maintain our technological leadership in the future.

Proven experience

Danfoss Semco has supplied fire fighting systems to more than 1,500 vessels, including world class ships, such as:

- *Allure of the Seas* and *Oasis of the Seas*, the world's largest cruise liners when built
- *Mærsk Mc-Kinney Møller*, the world's largest container ship when built
- *INS Vikrant*, the largest and first aircraft carrier built in India for the Indian navy
- *Seven Viking*, ship of the year 2013
- *The Atlantic Mercy*, Mercy Ships' newest hospital ship for delivering free healthcare



Danfoss Semco is a trusted supplier of LP CO₂ fire fighting systems to major ship owners for container vessels and car carriers