

## NESS Fire Extinguishing Systems

### Extinguishing and cooling a thermal oil fire in the heater

Thermal oil is used above its flash point in thermal oil systems. It is combustible. When there is a leak inside a thermal oil heater, e.g. in the coil, the thermal oil can burn. Once ignited it will continue to burn even when the fuel burner is off, as long as there is enough oxygen and a continuous leakage of thermal oil.

There are two effective ways to extinguish such a fire, either with argon or with water mist. In both variants, the fire is extinguished by removing oxygen. When extinguishing with water mist, the fire is smothered with a fine water mist. In addition to the almost unlimited availability of water, the heat source is cooled down by evaporating the water droplets. A renewed ignition of the fire is prevented, due to this decrease in temperature.

### Your advantages at a glance

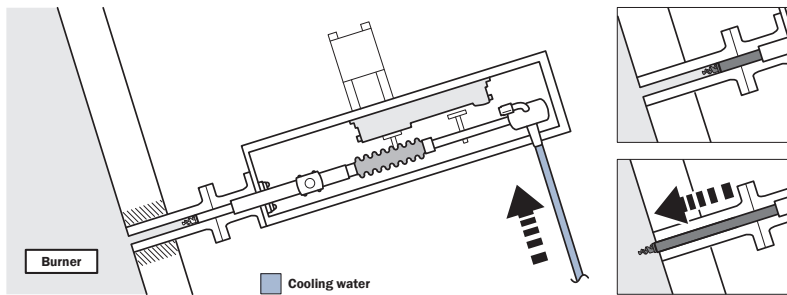
- Automatic extinguishing system
- Fail-safe
- Retrofittable
- 2-in-1 solution -
- Extinguishing and cooling system



Heater with Argon Fire Extinguishing System

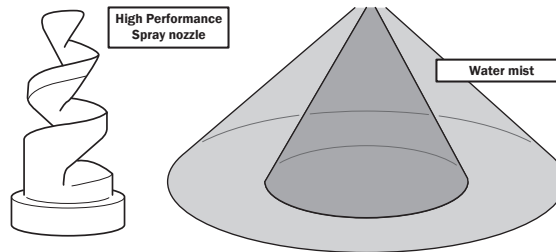
Functionality Water Mist Fire Extinguishing and Cooling systems:

Two effective ways to extinguish a fire



**#1** Water mist:  
Extinguishes the flames through fine water mist and additionally cools the source of the fire

**#2** Argon: Smothers the fire by removing oxygen



## Optimally equipped for the worst case scenario

Thermal oil leaking into a hot heater can be dangerous, even when there is no flame. Light ends, evaporating at temperatures of 250°C or below, can accumulate inside the heater. Together with the oxygen in the air, they can form an explosive mixture which may ignite on hot surfaces.

automatic self-test program uses compressed air to test the nozzle and the moving mechanism periodically.

### **NESS Water Mist Fire Extinguishing and Cooling Systems (NEWM)**

The NESS Water Mist Fire Extinguishing and Cooling System sprays a fine water mist into the hot heater. This flushes the heater, reduces the oxygen concentration and simultaneously cools the heater, through the evaporation of the water droplets. The retractable steel nozzle for the water mist automatically moves into the heater in case of fire, but can also be triggered manually. An

### **NESS Argon Fire Extinguishing Systems (NEA)**

In the case of fire, it can be extinguished with the removal of oxygen in the thermal oil heater. For this, inert gases can be used. One of these gases is argon and is best suited for its characteristics. Argon is considerably heavier than air, which is the best way for heaters to vent through a closed-base.

When setting up the extinguishing system, attention must be paid to the correct dimensioning, in order to determine the required gas volume. The extinguishing system works fully automatically and can also be triggered manually.