

Sprinkler systems in stainless steel

Sprinkler systems consist of a series of interconnected self-activating fire-extinguishing devices that operate on a simple but safe principle. A network of pressurised pipes and sprinklers is fitted throughout all the parts of a building that have to be protected. In stand-by mode the individual sprinkler heads are sealed with a bulb containing liquid. If, in the case of fire, the ambient temperature around the sprinkler rises by around 30°C above the highest temperature to be expected under normal conditions, the glass bulb shatters. The water in the pipes, which is under pressure, then shoots out into the sprinkler, hits the deflector plate and is sprayed around the room from there. Once a sprinkler has been activated in this way, it has to be replaced with a new one before the system is again ready for operation.



Sprinkler models vary according to trigger temperature, sensitivity and the spraying pattern.

Special pressing tools are used for fitting stainless-steel sprinklers, to ensure a tight seal.



For high-specification applications, both sprinklers and jets are made of stainless steel. They can withstand temperatures of up to 1,100 °C and are specially designed for use in areas where standard sprinkler systems could be destroyed by the corrosive atmosphere. For this reason, stainless-steel sprinklers are mainly fitted in industrial buildings (e.g. paint or plastics factories, paper or wood mills, galvanising facilities) and waste-incineration plant.

Various grades of material, depending on specification, are used in stainless-steel sprinklers. The jets, for example, are made of stainless steel grade 1.4581, whereas the deflector plates are made of grade 1.4301.

Photos: Minimax GmbH, Bad Oldesloe, D (top), Geberit Mapress GmbH, Langenfeld, D (bottom).