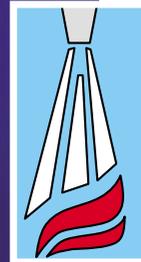
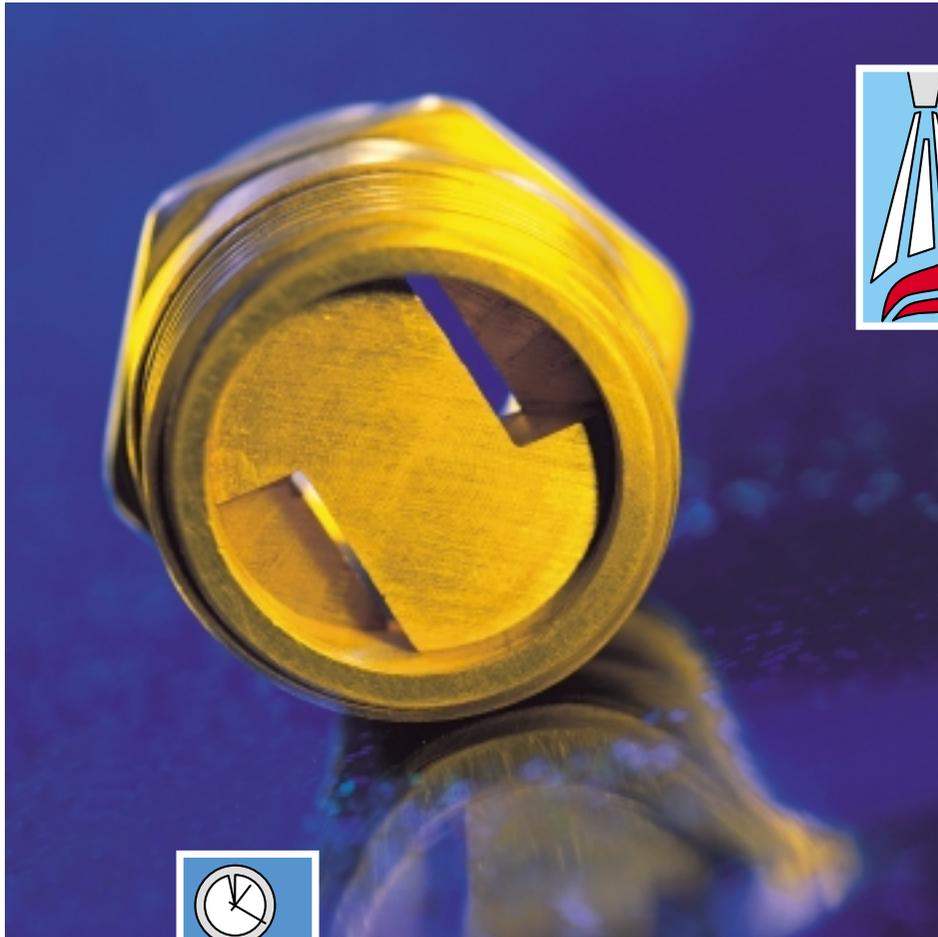


WATER SPRAY EXTINGUISHING SYSTEMS



THE NATURAL WAY TO PROTECT TECHNOLOGY AND THE ENVIRONMENT

Wherever water can be used as an extinguishing agent, it is the preferred choice of planners and engineers to ensure the successful protection of rooms and equipment. What makes water the "Number One" among extinguishing agents is its constant availability at a reasonable price.

Whatever is hot must be cooled down

Water spray extinguishes fires by cooling down the surface of the combustible material. For example, if a fire develops in a chemical plant, the water spray extinguishing system will cool down all the equipment that has been heated up by the heat from the fire. This process creates water vapour, which positively assists the cooling effect of the water spray and effectively fights the fire.

Water spray extinguishing systems are also suitable for protecting combustible liquids with flash points above 21°C. In these cases, the water cools down the surface of the combustible substance, putting the fire out quickly and effectively at its point of origin. Combustible liquids can also be extinguished with a water emulsion. The drops penetrate the surface of the liquid, reliably and quickly preventing the spread of the fire.

Water dissolves and bonds

Aggressive gases can be generated during a fire, such as hydrochloric acid gases in the combustion of the plastic PVC (polyvinyl chloride).



Since many of these fire gases are water-soluble, the substances are bonded and carried away in the extinguishing water. In this way, TOTAL WALTHER water spray extinguishing systems reduce corrosion damage and maintain the operating capability of your machinery and plant.

Certain reaction products can decompose when they are heated, releasing high levels of energy. When necessary, this reaction column is cooled with 10l/min/m² of water.

Water spray protection for transformers using a spray cage



WHERE DOES WATER SPRAY PROVIDE PROTECTION?

For several decades now, TOTAL WALTHER water spray extinguishing systems have been successfully used to protect aircraft hangars, power stations, transformers, cable ducts, and turbine areas, and for local protection in the chipboard and foamed material industries.

Our water spray extinguishing systems protect large stages in theatres and other buildings used for public events, as well as “safety curtains”. The first-class extinguishing ability of finely distributed water makes it especially effective as protection for conveyor systems and for mineral oil and gas tanks.

A winning combination

In working areas which are vulnerable to ignition over large areas, we base the protection concept on TOTAL WALTHER water spray systems with the addition of sprinkler systems or MicroDrop® extinguishing systems.

MicroDrop® – a “fine” spray solution

Our innovative and environment-friendly MicroDrop® extinguishing systems take the development of TOTAL WALTHER’s water spray technology one stage further. The very fine spray pattern makes optimal use of the extinguishing potential, while at the same time reducing the consumption of water. MicroDrop® extinguishing systems are compatible with sprinkler and deluge systems, so connection is trouble-free.



On high reaction columns, nozzle rings must be used to position the water spray protection at several different heights.

An acceptance spray test in a chemical factory: in this case, a water spray extinguishing system has been used to protect a mixing and pumping station.



WATER SPRAY EXTINGUISHING SYSTEMS: EQUAL TO EVERY CHALLENGE

The convincing system for reliable fire protection

Unlike sprinkler systems, TOTAL WALTHER GmbH's modern water spray extinguishing systems operate with open extinguishing nozzles. Depending on the size of the machinery installation or the room, a certain number of nozzles are combined to form extinguishing zones. If a fire breaks out, water flows out of all the nozzles into the protected area via a deluge valve, so that it can fight the fire quickly and reliably.

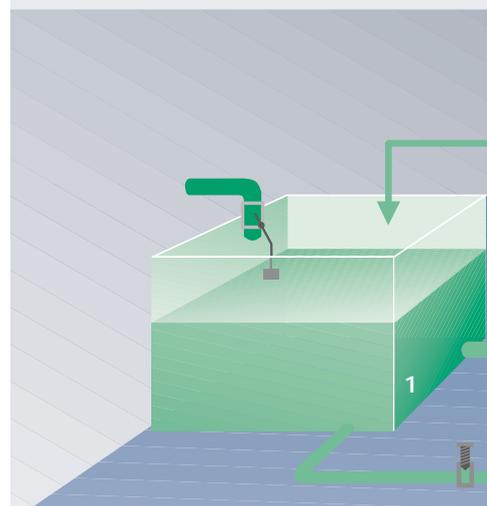
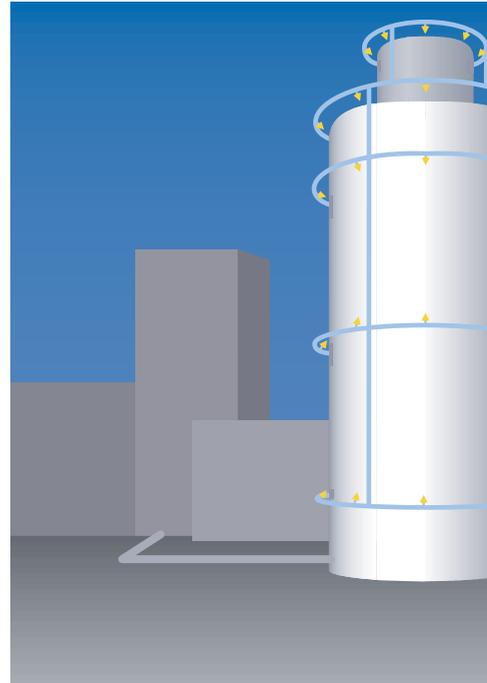
From a reliable source

For water spray extinguishing systems to operate effectively, the water supply must provide the required amount of water at the correct pressure. To achieve this, the extinguishing system is connected to a reliable public water or industrial water mains network.

The required volume of water may also be taken from pressure tanks or from storage tanks or intermediate tanks with pumps.

Into action via the panel

Automatic fire detection and extinguishing control panels are used to activate the extinguishing process. Furtheron, the extinguishing system can also be released manually. If the high-sensitivity detectors recognize a developing fire, a signal is automatically transmitted to the deluge valve: this immediately initiates the extinguishing process via the extinguishing nozzles. At the same time, an alarm can be given to the fire brigade, or to a constantly manned location inside or outside the premises. This integrated fire protection system from TOTAL WALTHER GmbH has been in operation for many years with a highly successful record.



RELIABLE TECHNOLOGY FOR EFFECTIVE ACTION

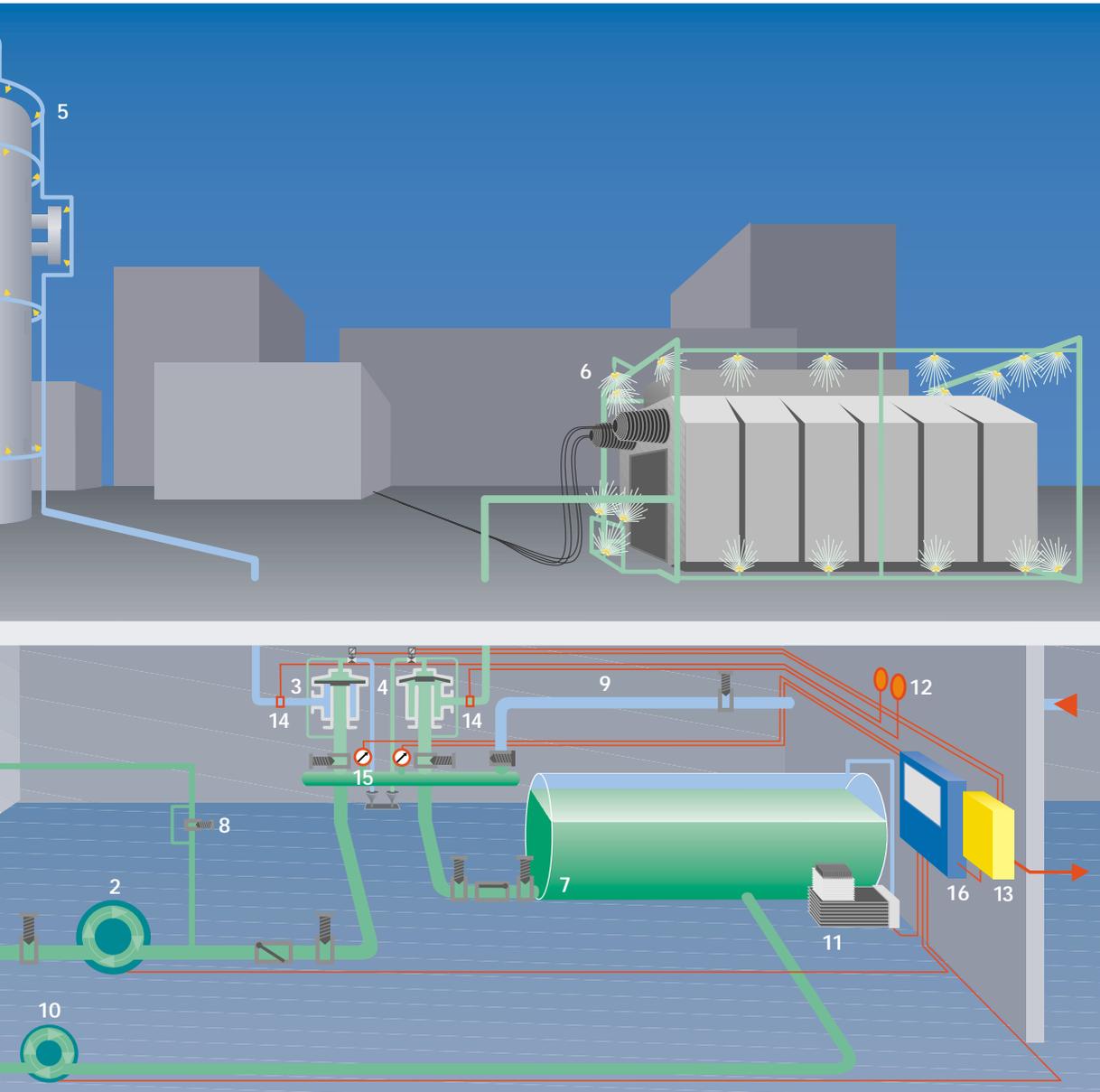


Diagram of a water spray extinguishing system with an exhaustible water supply (pressure tank) or an inexhaustible water supply (storage tank and pump, with automatic in-fill):

- 1 Storage tank
- 2 Pump set
- 3 Closed deluge valve
- 4 Open deluge valve

5 Ringmain with water spray extinguishing nozzles around a process engineering installation

- 6 Water spray cage with spray nozzles to protect a transformer
- 7 Pressure tank
- 8 Pump test line with measurement device
- 9 Fire brigade hose connection

10 Filling pump for tank

- 11 Compressor
- 12 Mechanical alarm bells (on VdS systems)
- 13 Detection and control panel
- 14 Alarm pressure switch
- 15 Pressure switch to start pump
- 16 Electrical switch cabinet

FAST-ACTION FIRE PROTECTION IN DETAIL: VALVES, DETECTORS ...

Alongside the extinguishing nozzles, the central elements in water spray extinguishing systems are the special deluge valves which ensure that extinguishing water is rapidly supplied in the event of a fire. The latest generation of TOTAL WALTHER valves can be activated pneumatically, hydraulically or electrically, according to choice. To ensure smooth operation, our specialists base the fire detection and extinguishing technology on the same type of operation.

A choice of control

By installing special extinguishing control cards, it is possible for the deluge valves to be activated with different types of timing:

- ◆ operation for limited periods,
- ◆ continuous operation,
- ◆ intermittent ("interval") operation.

Systematic activation

In pneumatic or hydraulic water spray systems, sprinklers with mechanical locking devices are often used to activate the extinguishing section valves. As soon as the glass bulb or fusible link is heated up to its activating temperature by the heat from the fire, the locking mechanism on the deluge valve is released and the extinguishing water can flow onto the fire.



Deluge valve set for electrically activated electro-mechanical trip activation

Open/closed diaphragm control valve with pipework for electrical and manual operation



Deluge valve with complete pipework for pneumatic activation



Control valve with trimming for electrical activation, including manual activation, primarily for use in the power station sector



... AND NOZZLES



TOTAL WALTHER GmbH's specialist engineers and water spray experts will offer you professional advice on every detail of your tailor-made fire protection concept, assisting you from installation and commissioning all the way through to maintenance of your system.

*Conventional
sprinkler activator
for fire detection*

TOTAL WALTHER GmbH offers a wide range of nozzles to protect various equipment both indoors and outdoors.

A cloud of water droplets

If a fire breaks out, open-air transformers must be completely enveloped by a cloud of droplets. The appropriate nozzle ensures that the entire surface of the object is wetted. The type of water discharge is also influenced by various "K factors" (the flow rate through the nozzle per minute at 1bar), and it can be regulated to suit the requirements with the help of the water pressure.



*Our range of water
spray nozzles for
every application*



*TOTAL WALTHER full
conical nozzles with
various flow rates*

AND OUR MAINTENANCE AND SERVICE TECHNICIANS ARE AT YOUR DISPOSAL ALL DAY, EVERY DAY



Branches all over Germany make it easy for you: our specialists and technicians are nearby ready to help you personally on site.

With its team of approximately 150 service employees TOTAL WALTHER GmbH is on hand to look after your safety and security right 24 hours a day. You can reach us on our Hotline day and night and at week-ends for immediate service assistance.

Fire extinguishing and security systems have a name:
TOTAL WALTHER GmbH.



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