

General

The German safety regulations BUV 8.15 and UVV 65 demand that chlorine gas installations be equipped with an effective water sprinkler system to suppress any escaping chlorine gas. The sprinkler system is usually controlled by the gas warning device; manual actuation from outside the chlorine gas installation must also be possible.

Scope of supply

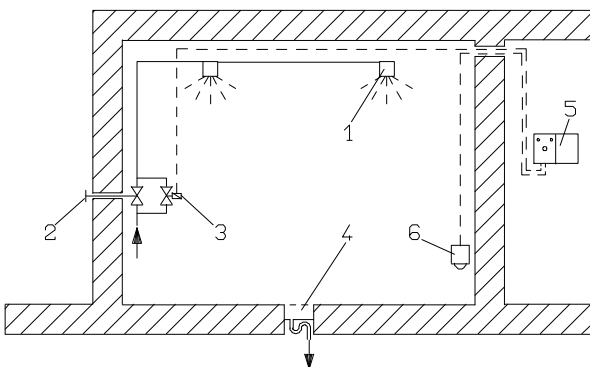
The sprinkler system is supplied in individual parts and installed in accordance with the conditions prevailing on site. All the required connections for valves and nozzles are enclosed.

PVC pipes of DN15 are used for the piping.

Description	Part No.	Sprinkler System Assembly	
		24113815	24113831
Atomizer nozzle	10360	2	2
Manual shutoff valve	12482025	1	1
Spindle extension	13851	1	1
Solenoid valve 230V/50Hz/8W	82029	---	1

Installation

The system can be installed as shown in the following drawing.



Legend

- 1 Atomizer nozzle
- 2 Manual shutoff valve with spindle extension
- 3 Solenoid valve
- 4 Floor drain
- 5 Chlorine gas warning device
- 6 Chlorine gas sensor

The number and arrangement of spray nozzles depends on the prevailing conditions. The spray nozzles have a spray angle of 120°. The number of nozzles installed must be sufficient to fill the entire room with a veil of water.

The sprinkler system valves can be installed inside or outside the chlorine gas installation. Installation inside the premises may be advisable to protect against frost. Manual actuation from outside the installation must be possible in all cases. To this end, the handwheel of the manual shutoff valve is routed to the outside of the wall via a spindle extension.

Automatic operation

If a solenoid valve is used, it is connected in parallel to the manual shutoff valve so that the sprinkler system can be activated by hand or automatically at any time. The solenoid valve is usually switched via the alarm relay of the gas warning device.

Minor leakages of chlorine often occur when changing the chlorine cylinders. To prevent excessively frequent activation of the sprinkler system, automatic operation can be interrupted while changing the cylinders, provided that the sprinkler system is reactivated automatically when the cylinder change is complete. This can be achieved, for example, by installing a door contact switch (Part No. 77010) in the electrical feed line to the solenoid valve.

Water supply

The nozzles require a supply pressure of at least 3 bar. The water consumption per nozzle equals 30 l/min.

The chlorine gas installation must be equipped with a floor drain with stench trap suitably dimensioned for the volume of spray water encountered. Local regulations must be observed if the spray water is drained into the sewage system.

Protection for equipment

All the equipment in the chlorine gas installation must be adequately protected against the ingress of water. IP54 is the minimum type of protection required for electrical equipment. Equipment without this type of protection must be protected by appropriate hoods.

Startup

A function test should be performed after the electrical and hydraulic installations are complete. Particular care should be taken to ensure that the entire chlorine gas installation is filled by the water veil.

Shutdown

To protect the sprinkler system from frost damage, it must either be drained of water in winter or the piping must be routed so that it is safe from frost.

Faults

Faults in the sprinkler system are generally only caused by contamination of the water supply.

If the solenoid valve does not close, it must be disassembled and cleaned.

Experience has shown that the spray nozzles do not become clogged, since the water channels are adequately dimensioned.