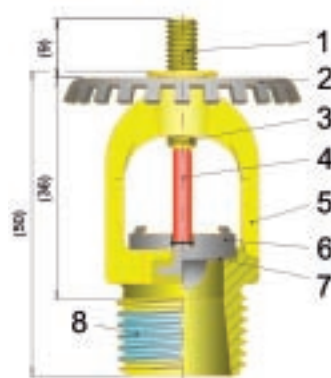


SMALL

75 years experience at the development of sprinklers, numerous patents, trade mark rights and ap-provals are documenting the leading role of Minimax in this segment. Sprinklers of the new production series sprinkler 21 are smaller, bear the CE marking and are easy and could be assembled fast and comfortable. The testing of the operational function and the and the effectiveness of the sprinkler are regular carried out for example by trials with full scale fires.

Function



The functional principle of Minimax sprinklers is very straightforward and safe. They are mounted corresponding to the applicable regulations into a network of pipes which covers the areas to be protected in height of the ceiling. Normally each sprinkler head is sealed and will only open when it reaches a certain temperature. An important component of the

sealing is a glass bulb which is filled with a liquid which will expand when heat from a fire occurs. This robust glass bulb will only burst when the surrounding temperature increases approximately 30 °C above the normal maximum room temperature due to the effects of a developing fire. In this way the pressurized extinguishing water which is free to flow out of the piping network onto the sprinkler's spray deflector to be distributed evenly on the fire. It also must be emphasized that only the sprinklers mounted directly above the fire will open.






1. Pintel 2. Spray deflector 3. Threaded pin
4. Glass bulb 5. Sprinkler body 6. Cone 7. Seal
8. Preapplied thread seal

Sprinkler assembly

The Minimax sprinkler 21 is a compact component with the total height of only 50 mm which can be inserted harmonically in every roof construction due to the wide range of available surface finishes and various escutcheon plate designs.

Release temperatures

Minimax offers sprinkler bulbs with five different release temperatures with which temperature ranges from 57 °C to 141 °C can be protected. The opening temperature for each sprinkler bulb is determined by the air volume which is encapsulated within the glass bulb and is indicated by differently coloured liquids. Of course all Minimax sprinklers of the new production series sprinkler 21 already have the VdS approval.

	Orange: 57 °C (135 °F)
	Red: 68 °C (155 °F)
	Yellow: 79 °C (175 °F)
	Green: 93 °C (200 °F)
	Blue: 141 °C (286 °F)

Response sensitivity

The time span up to the release of the sprinkler is expressed in RTI values (Response Time Index). Lower values represent quicker releases. Sprinklers with quicker response behavior (Fast Response) are recommended for risks where a quickly spreading fire is to be expected and generally for areas where danger to life for a large number of people is existing.



The constant high quality of Minimax sprinklers is guaranteed by a computer controlled production line.

Sprinkler design

Minimax sprinklers are offered in numerous designs and with special spray characteristics in order to fight effectively the various types of fires which could occur. Many models have also been developed to fulfil the requirements presented by special structural conditions, e.g. stainless steel.

Spray sprinkler, upright, SU

Standard sprinkler for areas where the sprinkler network is visible, e.g.: manufacturing areas or storing areas.
k-factor: 57, 80 thread: R 3/8"
k-factor: 115 thread: R 1/2"



Spray sprinkler, pendent, SP

for areas in which the sprinkler piping network is installed in the space directly above the false ceiling, e.g. in department stores or office floors.
k-factor: 80, 115 thread: R 1/2"



Flat spray sprinkler, upright, FU

for areas with visible sprinkler piping networks and structural conditions which could obstruct spraying, e.g. wall projections, beam or girder constructions.
k-factor: 80 thread: R 1/2"



Flat spray sprinkler, pendent, FP
especially designed for areas with grid or mesh ceilings so that, in the case of fire, a sufficient water coverage can be guaranteed.
k-factor: 57 thread: R 3/8"
k-factor: 80 thread: R 1/2"

Horizontal side wall sprinkler, extended coverage, WWH

for areas where sprinkler piping network cannot be mounted on the ceiling due to structural reasons, e.g. hotel rooms.
k-Wert: 80 Anschlussgewinde: R 1/2"



Safety twin sprinkler, pendent, DS-1
for areas with high safety requirements with regard to faulty releases e.g. EDP centers.
k-factor: 57 thread: R 1"

Dry sprinkler, pendent, DP

for frost endangered areas which are protected by a dry system and where upright sprinklers cannot be mounted in the sprinkler piping system.
k-factor: 80 thread: R 1".



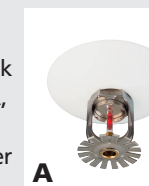
All threads R 3/8", R 1/2" and R 1" are out led as Whitworth raw threads in accordance with DIN 2999.

Sprinkler accessories/fitings

Minimax offers not only the sprinkler alone but also accessories aligned and suitable for the sprinkler 21.

Escutcheon plates

for the decorative capping of openings associated with the installation of pipework and sprinklers. Available in the designs: A, D, E and F. Designs: • plastic, white • aluminum, mat silver anodized • Steel, powder coated, white or different colors



Sprinkler guard

to protect against accidental damage.



Deflector shield

to shield against cooling created by the water discharge from sprinklers mounted on a higher level, e.g. in racks.



Sprinkler wrench

Tool to assemble and dismantle sprinklers in the correct and proper manner: available as a complete tool and as attachment for a ratchet.



Reserve supply cabinet

to store the stipulated reserve sprinklers, the sprinkler tools and the sprinkler log-book.



& STRONG

ADVANTAGES

Compliance with the valid norms

- ▶ In accordance with DIN EN 12259-1 sprinklers with the K-factor 115 can be also produced with 1/2" connection threads. A standardized external marking then must be attached. This is the so-called pintel, which protrudes out of the spray deflector with a length of 8-12 mm.

Reduced design variety

- ▶ Sprinklers with 1/2" threads are produced with K-factors 80 and 115, and sprinklers with the smaller 3/8" thread are produced with K-factor 57.
- ▶ As all necessary K-factors can be achieved, the amount of different thread sizes is reduced to 3/8" and 1/2".
- ▶ The process of riveting the spray deflector with the sprinkler body has been improved, resulting in a constant total height and an exact centering and alignment of the spray deflector.

Simplification of the assembly

- ▶ One of many advantages is the pre-applied thread seal. Sealing with Teflon strip or a liquid sealant on the construction site is no longer necessary. The sprinkler can be screwed directly into the pipe system, reducing the installation time considerably.
- ▶ Simplified assembly by a standardized sprinkler wrench.



Quality improvements

- ▶ We have further improved the production and the quality of our 3 mm and 5 mm sprinkler bulbs.
- ▶ Soak-test: this is a 100% check of the sprinkler bulbs after the completion of each sprinkler. During this test the sprinkler bulb is heated. If the enclosed air changes into liquid, the sprinkler bulb is all right. However, if the air bubble increases in size and does not change into liquid, the sprinkler bulb is damaged, e.g. tip rupture and therefore rejected.
- ▶ Higher resistance against aggressive environmental influences by improvement of the design.
- ▶ The improved sprinkler bulbs are an essential part of the new sprinkler 21 with VdS approval in the designs varieties SP, SU, FU and FP.

CE marking

- ▶ For the MX sprinklers of the production series sprinkler 21 the EC conformity assessment procedure was carried out in accordance with the Building Products Guideline. The sprinklers correspond to DIN EN 12259-1 and therefore bear the CE marking.



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PB03WA_01/07.04/OPH

Sprinkler 21 – the new generation

Safe for certain.

MINIMAX