



Undercover sprinkler pipe system –  
piping in concrete

*Cool down.  
Fire Protection by*

**MINIMAX**

# SYSTEMATICALLY

With the ideal components

## Concealed fire protection

Designed specifically to be embedded in concrete, the undercover pipe system is our response to the growing trend of integrating modern installations into ceilings in a harmonious and inconspicuous way. Both pipes and sprinklers can now be installed in a way that makes them almost invisible. The Undercover pipe system was designed for use with Minimax Undercover sprinklers, but can also be used with conventional sprinklers.



Undercover sprinkler pipe system embedded in concrete – with concrete mould still fitted



Undercover sprinkler pipe system embedded in concrete – with Undercover sprinkler installed

## A fully coordinated system

These plastic composite pipes have been designed for installation in concrete ceilings. They consist of three layers: a PE inner shell, an aluminium layer and a white PE outer shell. The pipes are not only pressure-resistant, but also extremely corrosion-resistant thanks to their inner and outer plastic shells – even when embedded in concrete, an aggressive material. The inner shell ensures a permanently smooth surface and thus reduces skin friction, allowing narrower pipes to be used.

The press fittings have been made using corrosion-resistant gunmetal and durable stainless steel sleeves. Unlike the fittings of other systems, they provide the advantage of not having to be wrapped before being embedded in concrete. What's more, the use of this high-quality material eliminates the risk of the long-term damage that can result from improperly wrapped fittings.



Undercover sprinkler pipe systems – the solution for installing sprinkler pipes in concrete ceilings



# INSTALLED

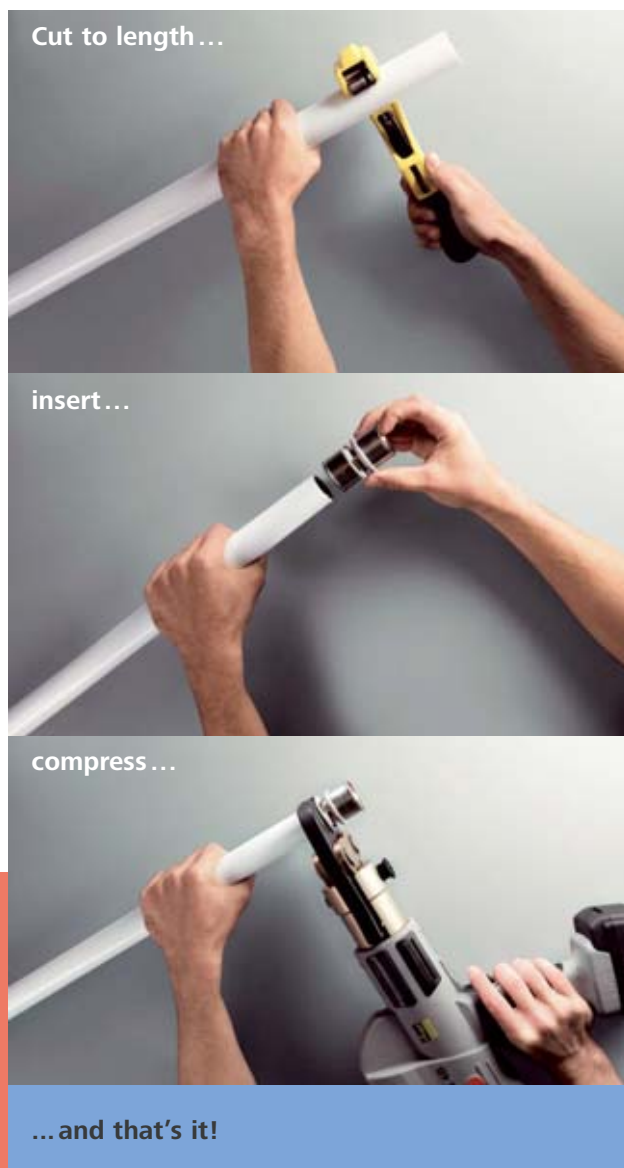
and concealed from view

SPRINKLER SYSTEMS

UNDERCOVER SPRINKLER PIPE SYSTEM

## Cut to length, insert, compress – and that's it!

The Undercover sprinkler pipe is simple to install – and pipes with smaller diameters can even be used directly from the 25-metre reel. The pipes and various fittings (elbows, joining pieces and connectors) are reliably connected using press fittings. The use of low-friction press connectors and elbows makes it possible to install pipes with smaller diameters, which minimises the risk of mechanical weakening of the ceiling and reduces the likelihood of interfering with structural reinforcement.



## Connectors and installation aids

Connectors and installation aids designed specifically for use in sprinkler systems allow pipes to be installed quickly and reliably.



## Specialist fittings

- 1 Feed elbows**  
For connecting pipes situated outside the concrete ceiling
- 2 Spacers**  
For supporting the Undercover sprinkler pipes when the concrete is being poured and ensuring the required distance from the surface is maintained (to protect against drilling)
- 3 Connection mould**  
For creating a cavity for the feed line, connecting fittings and testing the pressure during the concrete pouring process
- 4 Sprinkler elbow**  
For connecting sprinklers to pipes concealed in the concrete

The components of the Undercover sprinkler system are VdS approved (German Association of Property Insurers).



✓ certified products

# ADVANTAGES

## Almost invisible

### Unobtrusive installation

- ▶ As this fire protection system is installed in the concrete ceiling, it's nearly invisible and doesn't require a suspended ceiling.

### Unlocks potential savings

- ▶ Undercover sprinkler systems make suspended ceilings unnecessary, which means reduced storey heights and thus considerable savings in construction costs.
- ▶ Optimised system components developed specifically for use in sprinklers reduce the time required for laying pipes.

The Undercover pipe system enables installations costs that are comparable to those of conventional concealed-piping sprinkler systems but with an extended pipe system service life.

### Effectiveness

- ▶ The threaded sprinkler connector elbow allows a height adjustment of about 15 millimetres. In this way, the system can be adapted for installation into ceilings of non-uniform heights and subsequent plastering of the ceiling.
- ▶ Unlike adhesive systems, for example, installation is not affected by weather and can therefore be carried out on schedule.

### Reliability

- ▶ Made of composite plastic, the Undercover sprinkler pipes are resistant to pressure and corrosion and offer both a long service life and exceptional resilience to damage once installed.
- ▶ Specialised connection moulds allow leakage detection in installed pipes, even as the concrete is being poured.
- ▶ Unpressed fittings are "guaranteed to leak" and can therefore be detected quickly and early.

### Applications

- ▶ Sprinkler and EconAqua systems
- ▶ Wet systems without extinguishing agents
- ▶ For LH, OH1, OH2 and OH3 fire hazard classes and select OH4 fire hazard classes (exhibition halls, cinemas, theatres and concert halls)



The ultimate in versatile installation – even in hard-to-access locations

### Guaranteed to leak

The "guaranteed to leak" characteristic is an important test of quality when it comes to pipe systems with press fittings: filling the Undercover pipe system before the concrete is poured reveals any connections that have inadvertently been left unpressed, as these are guaranteed to leak.

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