PRIORIT
Fire | Resistant | Components

# Reference report
# EDGE Suedkreuz, Berlin

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Bild: Linus Lintner

# Fire protection in a hybrid wood building

**History:**
**With the Suedkreuz Berlin office complex, project developer EDGE Technologies GmbH shows how density can be increased in major cities with innovative design solutions.**

The building complex, constructed using a modular hybrid wood building method, is not only pioneering in terms of its design and DGNB platinum certified sustainability; it has also received Germany's first WELL Core & Shell Gold certificate. This certification standard, which focuses on the health and well-being of building users, applies not only to the construction of the building but is instead reviewed at regular intervals throughout its entire life cycle.

As a pioneering step in sustainability, the use of concrete was restricted to a minimum in the buildings, which were designed by Tchoban Voss Architects. Suitable, primarily recycled materials and intelligent building operation technologies were used to significantly improve the buildings' CO2 footprints.

All of these factors contributed to create a project with impressive visual appeal and sustainability, offering a modern work environment and outstanding well-being for building users.

**Design:**
Due to the complex overall concept, the goal was to combine requirements for fire protection products located in public areas with high applicable standards for function, design, and sustainability.

**Implementation:**
s part of the fire protection concept, an excess pressure smoke extraction

system was constructed for the purpose of extracting smoke from outflow shafts. The openings of these shafts are sealed with smoke dampers specially designed to seal off outflow shafts as part of a smoke pressure system. The goal of using these is to keep safety stairwells free from smoke.

The smoke dampers were installed in the lift anterooms, an area which sees particularly high traffic. The different placements and designs of the smoke extraction shafts required smoke dampers to be installed both horizontally and vertically. Large-format, single-leaf and

fire-resistant PRIODOOR EXT-RDA (for vertical installation) and EXT-RDA-H (for horizontal installation) smoke dampers were used. In case of a fire, the controller of the on-site smoke pressure system opens the smoke dampers automatically. Maximum dimensions of up to a width of 1000 mm x height 2500 mm in the vertical designs and 2100 mm x 1000 mm in the horizontal design offer large-format, clear, unimpeded outflow areas for flue gases. In normal


operations, the dampers are smoke proof and have a fire resistance rating of over 90 minutes.

**Different installation situations:**
Due to the structural situation, smoke dampers in different dimensions and designed for different positioning needed to be used.

The PRIODOOR ETX-RDA-H was installed horizontally under the finished ceiling, flush with the wall.

The dampers installed vertically (EXT-RDA), in contrast, were installed set back in the wall. Fall protection grates could be installed in the alcoves created on site in order to comply with the specified railing height.

The colour selected for the smoke dampers was the standard base white similar to RAL 9016 available from PRIORIT. The grates were painted in a shade of green matching the colour scheme.

In addition, two electrical systems located in the lower levels were renovated to make them fire-resistant during the same project. Components from the PRIORIT fire protection system 42 were chosen to provide the desired flexibility. "System 42 is a modular wall and room construction system with a very low wall thickness of just 42 mm that can be used to achieve fire-resistance ratings of 30 or 90 minutes. The single-layer wall, ceiling, door and inspection elements can be combined with one another. Almost any design and type of construction can be implemented. Heights of up to 4 m can be constructed easily in custom lengths and depths. Subsequent renovations were completed with wall, door and ceiling elements, as well as cable bulkheads and ventilation modules.

**Conclusion:**
The newly constructed building offered a highly sophisticated exterior and interior design.

The smoke dampers needed to be integrated both functionally and visually into this appealing and high-quality overall concept. PRIORIT smoke dampers were selected for their particularly large, clear outflow area, high-quality construction and different installation options.


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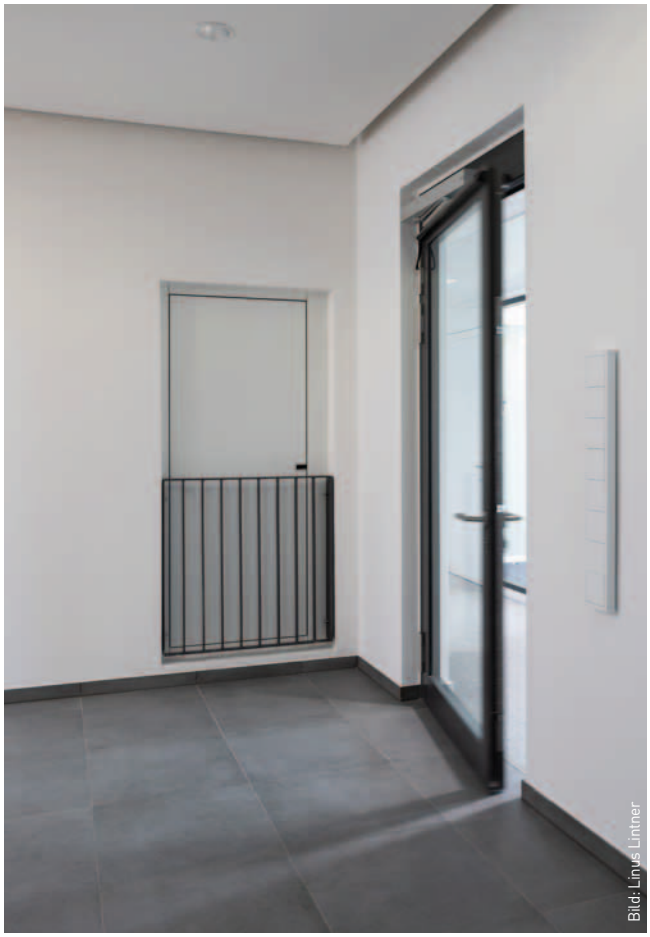
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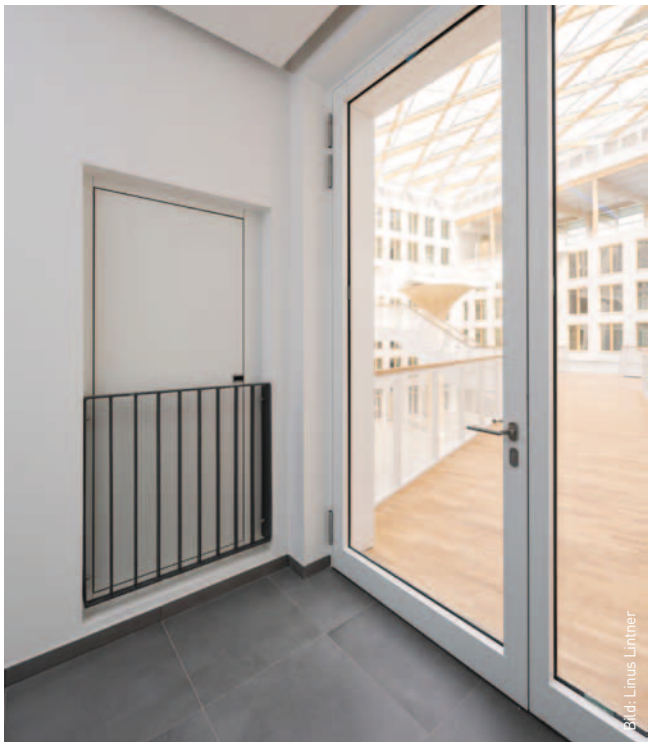
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## Project data

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| **Project location:** | Berlin |
| **Building:** | EDGE Suedkreuz |
| **Year of construction:** | 2019 to 2022 |
| **Product:** | PRIODOOR ETX RDA and ETX RDA H smoke extraction dampers (horizontal and vertical installation), wall and room construction system 42 PRIOWALL, PRIOCEIL, PRIODOOR |
| **Solution:** | Horizontally and vertically installed smoke extraction flaps as well as individual conversions with the wall and room construction system 42 from PRIORIT AG |
| **Material:** | Non-combustible panel with surface coating, classification A2 – s1, d0 |
| **Fire-resistance rating:** | 90 minutes |
| **Protective target:** | Keeping lift vestibules smoke-free as well as fire load insulation of existing electrical installations in stairwells |
| **Architect:** | Tschoban Voss |
| **Developer:** | EDGE Technologies |
| **TGA:** | Rud. Otto Meyer Technik GmbH & Co. |
| **Photos:** | Linus Lintner |

Further information on the project can be found at the following link:
➔ edge.tech/suedkreuz