



### Fire protection solutions for refurbishment and modernisation

In the course of renovation measures, fire protection measures often also have to be brought up to the current state of the art.

However, contemporary structural fire protection and monument protection are often not compatible. The objectives are too different. Careful design and technical planning is required to harmonise the legal requirements for comprehensive personal protection with the requirements for the preservation of historically significant buildings.

Planners and architects often fail to find the right products and solutions to combine protection, design and benefits. In contrast to the planning of new buildings, the fire protection upgrading of historically significant buildings is difficult in many projects. Existing supply installations, new distribution boards and new concepts for personal protection on escape and rescue routes make the work anything but easy.

### **Customised solutions are standard for PRIORIT**

What other suppliers consider to be complex customised constructions is nothing unusual for PRIORIT, but standard. Since it was founded in 2000, the Hanau-based company has developed into a well-known industry player with over 160 employees and stands for innovative structural fire protection solutions.





## HIGH-RISE RESIDENTIAL BUILDINGS BERLIN

A fire served as the spark for an extensive renovation project. The building technology and installations were replaced to conform with current state of the art technology. This included separating the electrical installations on all floors of the stairwell.

The PRIOWALL wall system was used as a fire-resistant bulkhead to seal off the multi-storey installation shafts from the escape route. The integrated, large-format inspection opening closures offer optimal access both for inspection work and retrofitting in the shafts.

Project data	
Project location:	Berlin
Building:	High-rise residential building, renovation
Solution:	PRIODOOR ETX inspection closures, PRIOWALL wall system
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	90 minutes
Protective target:	Fire load damping for installations across multiple floors
Special features:	Green decorative surface, similar to RAL 6024 according to the colour scheme





Before: Original panelling without fire protection classification



During the construction work: Dismantling of the existing panelling



After modernisation: Fire-resistant wall system

Structural fire protection solution in combination with diverse colour design options – what would be a special project for other solution providers is a matter of course for PRIORIT.

Architects and developers took advantage of this option to choose a RAL shade of green to match the colour scheme. This shade is used in a wide variety of different points inside and outside of the building.



After modernisation: Fire-resistant wall system with decorative surface in a special colour to match the colour concept



# HIGH-RISE RESIDENTIAL BUILDINGS BERLIN

The original partition consisted of a flammable material with a painted surface without any fire protection classification.

The electrical distribution boards and lift electronics were separated from the escape route with the PRIOWALL wall system to make them fire-resistant and smoke-tight.

The large-format inspection opening closures offer optimum accessibility both for inspection work and for re-occupying the shafts.



Before: Original panelling without fire protection classification



During the construction work: Dismantling of the existing panelling

Project data	
Project location:	Berlin
Building:	Residential building, refurbishment
Solution:	PRIODOOR ETX inspection opening closures PRIOWALL wall system
Material:	Non-combustible panel with surface coating, classification A2 $-$ s1, d0 $$
Fire-resistance rating:	90 Minutes
Protective target:	Fire load insulation of the cross-storey installations in the stairwell



After modernisation: Fire-resistant wall system ensures optimum accessibility to the installations and at the same time offers protection against unauthorised access.





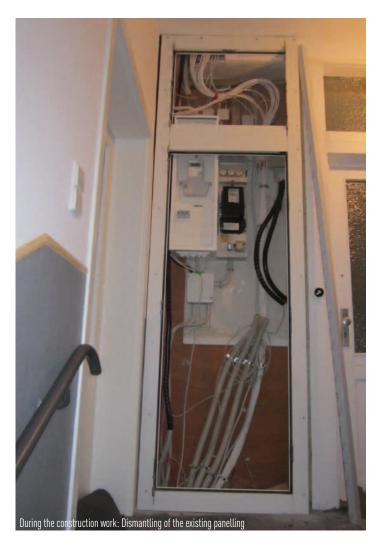


# **LISTED RESIDENTIAL BUILDING**STUTTGART

Refurbishment of a listed apartment block in Stuttgart.

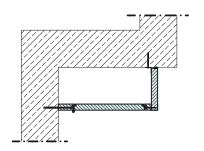
The old wooden partitioning of the electrical distributors and gas meters on the individual floors no longer met the fire protection requirements and had to be removed.

The PRIOWALL wall system was used in a ceiling-high design as a two-sided corner formation.



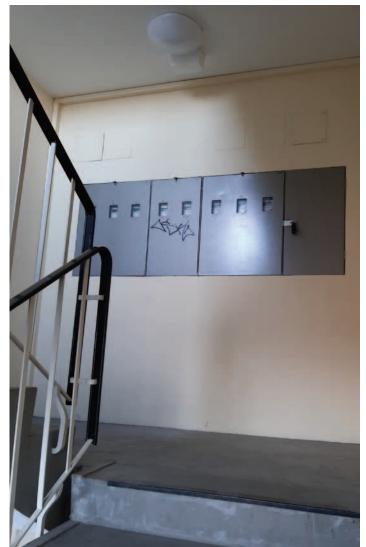


Project data	
Project location:	Stuttgart
Building:	Residential building, refurbishment
Solution:	PRIODOOR ETX inspection closures; PRIOWALL wall system
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	90 minutes
Protective target:	Cross-storey separation of the electrical installations in the stairwell
Picture outside:	Zinnmann [https://commons.wikimedia.org/wiki/File:StuttgartSenefelderstraße_45_ABC2.jpg]. https://creativecommons.org/licenses/by-sa/4.D/legalcode



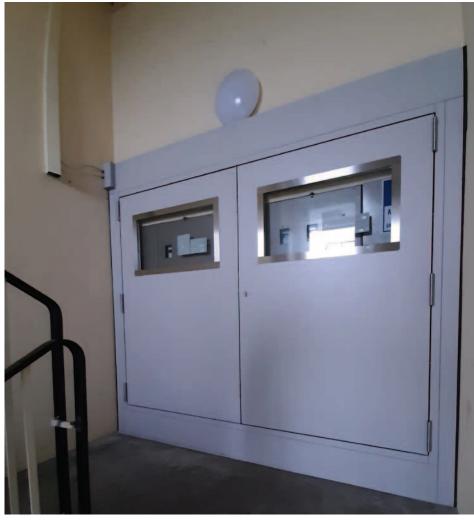
## HIGH-RISE RESIDENTIAL BUILDINGS HAMBURG

The cross-floor installation and the electrical meters in the stairwell had to be separated in accordance with the latest fire protection requirements. The PRIOWALL wall system and the large-format inspection opening closures were used to clad the distribution boards in a fire-resistant manner in accordance with the requirements.



After modernisation: Fire-resistant wall system

Before: Original panelling without fire protection classification



The fire-resistant wall system ensures safe separation of the risk of fire from electricity meters and electrical distribution boards. Precisely positioned glass elements make it easy to read the meter readings while protecting access at the same time.

The industrially prefabricated, precisely fitting fire protection elements enable quick installation.

After modernisation: Fire-resistant wall system

Project data	
Project location:	Hamburg
Building:	Residential building, refurbishment
Solution:	PRIODOOR ETX inspection closures; PRIOWALL wall system
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	90 minutes
Protective target:	Fire-resistant separation of electrical meters in the stainwell
Special features:	Installation of fire-resistant glass in the inspection opening closures





### **APARTMENT BLOCK**KARLSRUHE

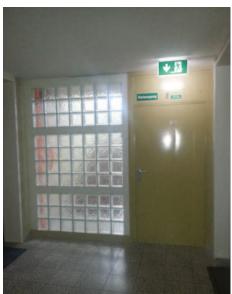


Construction of a fire-resistant partition between the stairwell and corridors. This solution combines three components from the modular fire protection system 42: PRIOWALL wall construction elements, PRIODOOR ETX-RDA smoke extraction flap and PRIODOOR FSA fire protection closure.

At the same time, a smoke extraction shaft with smoke extraction dampers was installed.



During the construction work: Dismantling of the existing panelling



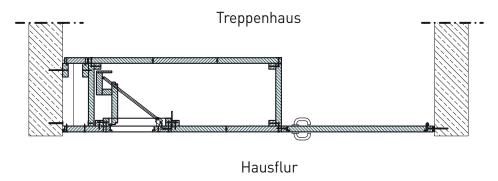
Before: Original panelling without fire protection classification



Core drillings for the construction of a smoke extraction shaft



During the construction work: Construction of the smoke extraction shaft with wall elements only 42 mm thick



Project data	
Project location:	Kartsruhe
Building:	Residential building: refurbishment
Solution:	Wall system with access door and smoke extraction flap
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	90 minutes
Protective target:	Fire-resistant partitioning of stairwells and corridors; smoke control and functional integrity
Special features:	Creation of drainage shafts with PRIOWALL wall elements, cable shaft; surface white, similar to RAL 9010



After modernisation: Fire-resistant wall system with smoke extraction flap and a fire protection closure (access door)



## **RESIDENTIAL TOWER BLOCK** FLENSBURG

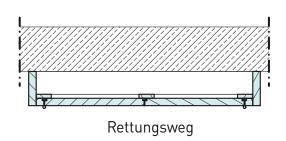
The electricity meter boxes in the corridors of a high-rise residential building were modernised. Here, an enclosure with PRIOWALL wall elements was retrofitted over an existing, nonflush-mounted distribution board.





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Project data	
Project location:	Flensburg
Building:	Residential building, refurbishment
Solution:	PRIODOOR ETX inspection closures; PRIOWALL wall system
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	90 minutes
Protective target:	Fire load insulation of the cross-storey installations on the escape routes
Special features:	Inspection closures with wall







After modernisation: Fire-resistant wall system



After modernisation: Enclosure with fire-resistant double-leaf inspection opening closures







### RESIDENTIAL BUILDING REGENSBURG

When buildings are refurbished, the technical building equipment often does not meet today's requirements and protection targets, but rather the usual standard at the time of construction.

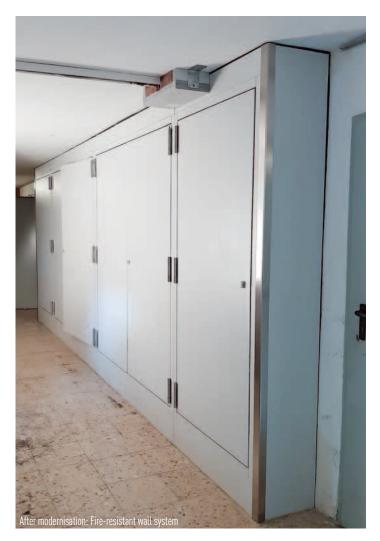
In older residential buildings, this includes the electrical installations in particular. To secure the escape route, fire protection concepts usually require fire-resistant separation of the installations.

This is also the case here. Fire protection was also to be improved as part of the refurbishment of the building services. The electrical distribution boards in the basement are located within the required stairwell. This meant that in the event of a fire in the electrical distribution boards, the first escape route would no longer have been passable.

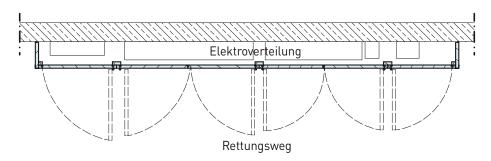
The decision was made in favour of a partition from PRIORIT's "fire protection modular system 42", as the corridor width in the assembly area was very limited and full accessibility to the electrical distribution boards had to be guaranteed. The "System 42" is a modular wall and room construction system with a very thin wall thickness of just 42 mm, which enables a fire resistance of 30 or 90 minutes. The single-layer wall, ceiling, door and in-

spection elements can be combined with each other. This means that almost all designs and construction types can be realised.

The individual elements are made of a panelled construction material with a non-combustible surface classified A2-s1, d0 in accordance with EN 13501-1. The integrated large-format inspection closures offer optimum accessibility both for inspection work and for re-fitting the installations. The prefabricated elements can be erected almost dust-free in a quick and clean construction method, taking into account the existing building structure and connection to structural conditions.







Project data	
Project location:	Regensburg, Wohnhaus
Solution:	Wall system with inspection opening closures and integrated cable penetration seals
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	30 minutes
Protective target:	Fire-resistant enclosure of electrical systems (fire load insulation)
Contractor:	G+H Nürnberg (Systempartner PRIORIT)

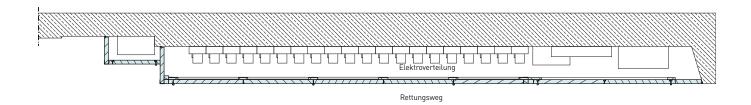
## **RESIDENTIAL BUILDING**MUNICH

In the course of modernisation work, the electrical distribution boards and electricity meters in the basement of a high-rise residential building had to be fireproofed.

Project data	
Project location:	Munich
Building:	Residential building, refurbishment
Baujahr:	2019
Solution:	PRIODOOR ETX inspection closures; PRIOWALL wall system
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	90 minutes
Protective target:	Fire-resistant enclosure of the entire electrical meter system of the residential building in the stairwell
Special features:	Customised production in the factory and on site



Before







After modernisation: The fire-resistant wall system with large-format inspection closures offers safety and optimum accessibility to the electricity meters at the same time.

After modernisation: Fire-resistant wall system







### HIGH-RISE RESIDENTIAL BUILDINGS DRESDEN

Several almost identical high-rise residential buildings had to be upgraded in terms of fire protection. This included the partitioning of the lift lobbies.

The fire protection concept provided for a fire-resistant partition on all floors between the lift vestibule and a corridor.

The modular fire protection system 42 was used as an alternative to creating a solid partition wall.

In this case, the individual elements from the 42 mm system were: PRIOWALL measuring (H  $\times$  W) 2,650  $\times$  2,510 mm in an I design, surface colour white similar to RAL 9010 with a double-leaf fire door, each with a large glass element in the active leaf.

The fire doors were equipped with door closers and closing sequence control with hold-open system as well as stainless steel lever handle sets.

The installation was quick and virtually dustfree thanks to precisely prefabricated elements.

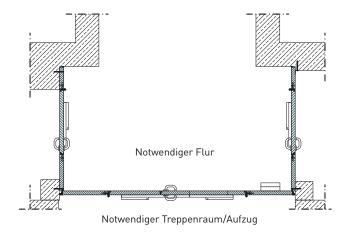
### **Residential construction**







Project data	
Project location:	Dresden
Building:	Residential building, refurbishment
Solution:	PRIODOOR ETX inspection closures; PRIOWALL wall system
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	90 minutes
Protective target:	Fire protection separation between the lift vestibule/stainwell and the residential units









### **KURSTIFT** BAD BRÜCKENAU

Electrical installations and building services shafts pose a very high fire risk. As in almost all high-rise apartment buildings, the installations, fuses and electricity meters for the individual flats are located in the corridors. In the existing building, these were separated with panelling without fire protection classification. This is no longer state of the art – neither in terms of fire resistance nor non-combustibility of the building materials.

This inventory resulted in the requirement to install new cladding that can be individually planned, is visually appealing and at the same time comprehensively fulfils the fire protection requirements. In addition, the installation was to be carried out with as little disruption to the daily routine as possible.

System 42 is a modular wall and room construction system with a very low wall thickness of only 42 mm, which enables a fire resistance of 90 minutes.

The single-layer wall, ceiling, door and inspection elements can be flexibly combined with each other. This means that almost all designs and types of construction can be realised.

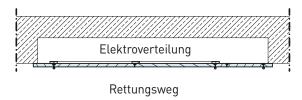
The individual elements consist of a panel building material with a non-combustible A2-s1, d0 surface, classified according to EN 13501-1. By

using this non-combustible composite material, no additional fire loads are introduced into the building.

The PRIOWALL wall system was used to seal off the electrical installations, meter systems and fuses from the corridors in a fire-resistant and smoke-tight manner. The integrated large-format inspection opening closures provide optimal accessibility for both inspection work and reoccupancy.

The dismantling of the existing cladding and the installation of the new partition wall was carried out professionally and on schedule by PRIORIT





system partner Hüfner Brandschutz GmbH. Thanks to the precisely fitting prefabricated elements, the work could be carried out during ongoing operations without any significant dust or noise nuisance for the residents.

Project data	
Project location:	Bad Brückenau
Building:	Kurstift, senior citizens' residence
Solution:	PRIOWALL wall system; PRIODOOR ETX inspection doors;
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	90 minutes
Protective target:	Fire-resistant separation of electrical installations and meter units of the flats in necessary corridors
Special features:	Assembly work during operation
Building contractor:	Hüfner Brandschutz GmbH

### **HOSPITAL** LÜBBECKE

Fire protection is particularly important in hospitals, as patients are often restricted in their freedom of movement. In the event of a fire, these people would be particularly at risk. This also applies to visitors who are only in the buildings for a short time and are often unfamiliar with the local conditions. In the event of a fire, it is difficult for them to escape by the quickest and shortest route.

A customised fire protection concept is therefore usually required. This must take into account the special protection needs of the aforementioned groups of people.



Before: Original panelling without fire protection classification



Before: Original panelling without fire protection classification





After modernisation: Fire-resistant wall system

Project data	
Project location:	Lübbecke
Building:	Hospital, refurbishment
Solution:	Inspection closures PRIODOOR ETX PRIOWALL wall system
Material:	Non-combustible panel with surface coating, classification A2 $-$ s1, d0 $$
Fire-resistance rating:	90 minutes
Protective target:	Fire load insulation of existing electrical distribution boards
Special features:	Large-format, double-leaf inspection doors with ventilation modules

After modernisation: Fire-resistant wall system



### **SCHOOL**DRANSDORF

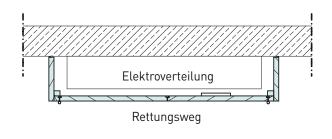
An electrical distribution board is located in the basement of a school in such a way that in the event of a fire, the escape route would have become impassable due to smoke and heat development.

This made it necessary to safely separate the distribution board from the escape route. Additional requirements arose from the cramped installation situation and the need for cable ducts. A solution was therefore sought that would fulfil the requirements of being fire-resistant and smoke-tight, would allow a cable penetration seal to be installed, would require little space and could be adapted to the structural conditions.



Before: Original panelling without fire protection classification

Project data	
Project location:	Dransdorf
Building:	School; Education
Solution:	PRIOWALL wall system; PRIODOOR ETX inspection closures;
Material:	Non-combustible panel with surface coating, classification A2 $-$ s1, d0 $$
Fire-resistance rating:	90 minutes
Protective target:	Fire protection separation of the distributors from the escape route
Special features:	Assembly work during operation





After modernisation: Fire-resistant wall system



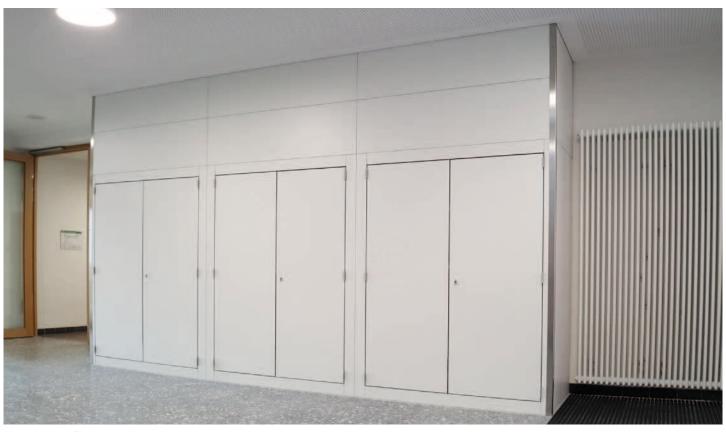
# GRAMMAR SCHOOL LUDWIGSBURG

Fire-resistant enclosure of existing electrical distribution boards in the escape route





During the construction work: After dismantling the existing panelling



After modernisation: Fire-resistant wall system



After modernisation: Fire-resistant wall system

Project data	
Project location:	Ludwigsburg
Building:	School, refurbishment
Solution:	Inspection closures PRIODOOR ETX PRIOWALL wall system
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	90 minutes
Protective target:	Fire-resistant partitioning of electrical distribution boards on escape routes
Special features:	U-shaped construction at a height of 3.50 m



### **CENTRAL STATE ARCHIVES**STUTTGART



The Central State Archive is housed in a building subject to historical preservation requirements.

Electrical installations and distributors are located in an emergency stairwell. These were structurally separated from the escape route but had no fire protection classification.

Electrical installations, which are in some case located under stairs, are a tricky challenge.

All requirements for visual design, fire protection, and historical preservation were handled using the PRIOWALL modular and individually adaptable wall and room construction system. The adaptability of this system is also ideal for tricky structural situations, as in this case.

Thanks to the pre-fabricated elements, installation was quick and almost dust-free. Despite

this, it was still possible to adapt the wall elements on site to the structural conditions.

To come as close as possible to the original appearance and colouring, the decorative surfaces of all elements were produced in a shade of blue similar to RAL 5000. This allowed us to create a visually appealing, yet durable surface design. Precise positioning of the individual elements ensured optimal access to the distributors and installations for maintenance work or retrofitting.



Before: Original panelling without fire protection classification



 $PRIOWALL \ wall \ system \ with \ PRIODOOR \ ETX \ inspection \ opening \ closures \ and \ PRIODOOR \ FSA \ fire \ protection \ closure \ in \ Alpine \ blue \ for \ protection \ closure \ in \ Alpine \ blue \ for \ protection \ closure \ in \ Alpine \ blue \ for \ protection \ closure \ in \ Alpine \ blue \ for \ protection \ closure \ in \ Alpine \ blue \ for \ protection \ closure \ in \ Alpine \ blue \ for \ protection \ closure \ in \ protection \ closure \ protection \ closure \ protection \ closure \ protection \ closure \ protection \ prot$ separating electrical distribution boards and fire compartments in the escape route.

Project data	
Project location:	Stuttgart
Building:	Central State Archives, renovation
Solution:	PRIOWALL wall system, PRIODOOR EXT inspection closures, PRIODOOR FSA fire protection closure
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	90 minutes
Protective target:	Separating fire compartments and fire-resistant housings of electrical systems in escape and rescue route in consideration of historical preservation requirements
Special features:	Alpine lake blue surface according to historical preservation requirements, wall elements adapted on site, maintaining the glass partition in the upper area



PRIOWALL wall system with PRIODOOR ETX inspection opening closures and PRIODOOR FSA fire protection closure in Alpine blue for separating electrical distribution boards and fire compartments in the escape route.



Precisely prefabricated elements, special colour similar to RAL 5000; wall elements can be individually adapted to the structural conditions on site.







# **SORTIMO INTERNATIONAL GMBH**ZUSMARSHAUSEN

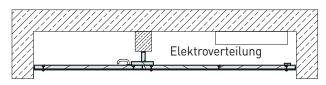
In the case of Sortimo, small storage rooms, electrical distribution boards or accesses to installation shafts existed on each level of a multi-storey building, without fire protection classification. In the existing building, these areas were separated from the necessary stairwell by wooden panelling, which constituted an additional fire load. This satisfied neither the requirements of the current building regulations, nor the relevant Model Pipework Guidelines [Muster-Leitungsanlagen-Richtlinie – MLAR] with regard to fire resistance and non-flammability of the construction materials.

System 42 is a modular, non-combustible wall and room construction system with a very small wall thickness of 42mm, which enables a fire resistance of 90 minutes. The single layer wall, ceiling, door and inspection elements can be combined flexibly with each other. As a result, almost all designs and types of construction can be achieved. Complex escape tunnels with installation shafts and non-combustible wall panelling can be built just as easily as storage areas separated in terms of fire protection.

With PRIORIT's modular fire protection system, it was possible to offer SORTIMO an almost optimal solution: A fire-resistant, non-combustible wall construction system with integrated inspection opening closures and penetration seals – individually designed and produced, with an oak veneer surface. The precise-fitting prefabricated elements were installed on site on-schedule and properly by factory installers. The tailor-made wall system fulfils all fire protection requirements while impressing with its first-class appearance.







Rettungsweg

Project data		
Project location:	Sortimo International GmbH, Zusmarshausen	
Building:	Administration buildings, industry	
Solution:	PRIOWALL wall system with PRIODOOR ETX inspection opening closures	
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0	
Fire-resistance rating:	90 minutes	
Protective target:	Fire load insulation of installation shafts and stored goods on the escape and rescue route	
Special features:	Oak veneer surface	

### **SIEMENS RESEARCH CENTRE** ERLANGEN

Because of structural changes and changes in use, areas in a corridor around the circumference needed to serve as an emergency corridor and escape route under building law. In the past, this corridor was not suited for use as an escape route, since there were different fire loads and fire hazards in the ceiling and behind the metal wall covering.

Cables, ventilation ducts and pipelines carrying different media were installed in the ceiling. Electrical distributors, storage areas, and cables, ventilations, and pipelines were installed behind the wall coverings. All of these elements increased the complexity of the structure, which was not easily reduced.

These installations and storage areas needed to be separated in accordance with modern technical requirements.

### Solution:

To create an escape corridor (escape route) clear of the different fire loads, a fire-resistant wall construction system from PRIORIT was designed made of non-combustible panels.

A total of 19 alcoves needed to be made fireresistant and covered with the wall system.

The wall system was designed in different shapes (I, L and U-shapes) in widths of 1,215 to 10,600 mm.



Before: Original panelling without fire protection classification





The individually planned and visually appealing wall systems with integrated inspection opening closures fulfil the fire protection requirements



The wall system consists of single-layer, only 42 mm thick elements with a surface coating



Electrical distribution boards, cables and ventilation and pipework were disconnected in accordance with current technical requirements, but remain accessible



The prefabricated elements enable quick assembly

Project data	
Project location:	Erlangen
Building:	Siemens research centre, laboratory building
Solution:	PRIODOOR EXT inspection closures; PRIOWALL wall system
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	30 minutes
Protective target:	Fire-resistant separation of fire loads of different kinds (electrical distributor units, storage for laboratory materials, gas canisters, supply lines carrying different materials)
Special features:	PRIORIT elements were constructed in I, L, and U shapes





### PADERBORN CATHEDRAL PADERBORN

The cathedral's sacristy and anteroom were fully renovated from March to December of 2017. The anteroom, in particular, had been in poor shape and not very inviting for quite some time. In this case, the primary goal was to ensure necessary coverings under fire protection requirements for the electrical main distribution and the electrical connections for the lights, PA system, bells, media and fire protection technology that had previously been covered in only a provisional housing. This equipment serves essentially as the "control centre" for the entire Paderborn cathedral.

In the case of the Paderborn Cathedral, an

extensive range of technological components, including a main distributor, PA system, and central fire alarm system, as well as a small storage area needed to be housed in the entryway area to the sacristy anteroom. At the same time, both the rising cable bundles and existing electrical systems as well as the storage area needed to remain easily accessible.

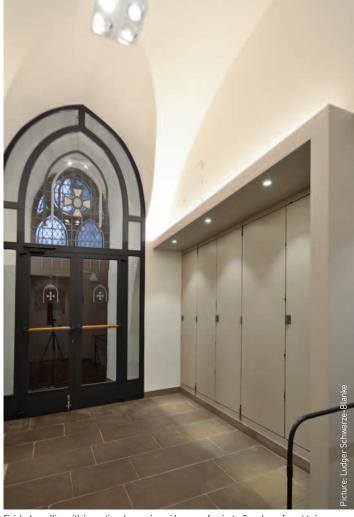
The architect and developer formulated their requirements early on in the planning phase to preserve original, existing historical elements such as the doors and floor while still covering the fire hazards posed by the electrical systems in compliance with building

regulations. The structural measures needed to blend in harmoniously with the overall concept. This was not a simple task.

To make the best use of the available space in the anteroom to the sacristy, the team chose drywall construction in combination with System 42 from PRIORIT AG. This interplay made it possible to create easily accessible areas, ceiling-high partitions and a cantilever for indirect lighting.

System 42 is a modular, non-combustible wall and room construction system with a very low wall thickness of just 42 mm that can be used

### **Monument protection**



Finished panelling with inspection closures in a wide range of variants. From large-format to inconspicuous, visually adapted to the respective requirements, they enable almost optimal accessibility for subsequent occupancy or maintenance work





Cladding adapted to the colour concept protects the escape route from fire and smoke in the event of a fire in the electrical distribution system, while the large openings provide optimum accessibility.

to achieve fire-resistance ratings of 30 or 90 minutes.

The single-layer wall, door and inspection elements can be combined in a flexible manner and used to create a wide range of different designs.

Project data	
Project location:	Paderborn
Building:	Monument protection, refurbishment
Solution:	PRIOFLEX inspection closure system 5 leaf without centre bridge; PRIODOOR ETX inspection closures; PRIOWALL wall system; PRIODOOR ETX A inspection closures
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire-resistance rating:	30 minutes
Special features:	Exterior surface in the special shade Cashmere 702







### **Production and safety**

The ISO 9001 certification gives security. All PRIORIT fire protection product development and manufacturing processes comply with internationally recognised rules. You can count on that! That's for sure!

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