



Garage door systems and hinged doors  
Project hinged doors and frames  
**Industrial door systems**  
Docking and logistics systems

*Intelligent Door Solutions*



TO EUROPEAN  
STANDARDS  
EN 16034 AND  
EN 13241

# NOVOSLIDE INDUSTRY

FIRE- AND SMOKEPROOF SLIDING DOORS

TESTED SAFETY FOR FIRE  
BARRIERS IN INDUSTRIAL AND  
COMMERCIAL BUILDINGS

[www.novoferm.com](http://www.novoferm.com)



Underground garages, multi-storey car parks or other huge buildings require special doors. There are many reasons for this, with safety requirements playing an especially important role.

This type of fire barrier is covered by the European product standards EN 16034 ("Fire barriers") and EN 13241 ("Gates"). The new Novoferm NovoSlide Industry fire-resistant sliding door has been specially developed to meet these stringent European product standards.



The door can therefore be safely used throughout Europe as a CE marked product. The gate complies with all common time classes to meet the different building regulations requirements across Europe.



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## THE OPTIMAL SYSTEM FOR FIRE-RESISTANCE REQUIREMENTS

### SMOOTH LOOK ALSO FOR LARGE DOORS

Flat surfaces **1** and a concealed panel connection at the front provide a uniform, attractive look. Casing around the tracks and counterweight also give a particularly smooth appearance.

### UNOBTRUSIVE PASS DOORS

Pass doors **2** enable easy passage when the sliding doors are closed. Pass doors have neither sills nor base stopper profiles so there are no tripping hazards when passing through. The narrow-frame doors give an unobtrusive and elegant look.

### EASY TO INSTALL AND OPERATE

Novoferm fire-resistant sliding doors **3** feature many benefits. They are suitable for both low lintel and direct ceiling installation. When in use, the doors impress with their excellent running characteristics. Fire-resistant sliding doors are often large dimensioned. The modular design makes transport and installation easy so even large-size doors are simple to install.



## DOORS TO MEET YOUR NEEDS

Adapt a one- or two-leaf fire-resistant sliding door to your premises. We have a multitude of variants to make it possible. Do the doors mainly need to remain open? The hold-open system **4** with release mechanism ensures that the doors close in the event of a fire. In addition, optical and acoustic signal transmitter included in the standard provides additional safety for doors with hold-open systems.

## SILL-FREE FIRE PROTECTION

Novoferm continues to develop its combined fire resistance and smoke proof protection. For example, sills are unnecessary in the entire opening and storage area **5**, depending on the floor construction.



## NOVOSLIDE INDUSTRY FEATURES

HIGH-END  
EI<sub>2</sub> 120 FIRE  
PROTECTION

Fire-resistant sliding doors separate a building's individual fire compartments from each other. The NovoSlide Industry fire-resistant sliding door does this task particularly well due to its easy installation and excellent fire-resistant properties.

NovoSlide Industry fire-resistant sliding doors are comprised mainly of pre-assembled elements to make installation quick and simple. Each panel is equipped with a separate roller to save time when installing the individual panels in the tracks.

The NovoSlide Industry door has also been tested up to fire resistant class EI<sub>2</sub> 120 demonstrating its high fire-resistance. Temperatures in a fire test furnace exceed much more than 1,000 °C after 120 minutes. At such temperatures, not only the door on the side of the fire, but also the masonry in the test wall is extremely stressed. Even under these conditions, the sliding door must remain intact overall and comply with the very stringent requirements on sealing spaces and insulating heat.

### FEATURES

- ✓ Especially quick and easy to install
- ✓ Many factory pre-assembled elements save time at the installation site
- ✓ Simple installation of the panels, each with separate rollers
- ✓ Integrated seals between the panel joints eliminates the need for on-site panel sealing with silicone for S<sub>a</sub> and S<sub>200</sub>\*

\* Please refer to the technical table for an exception



## EUROPEAN STANDARD

Fire-resistant sliding doors as fire barriers are covered by the European product standards EN 16034 (doors, gates and windows – product standard, performance characteristics – fire and/ or smoke protection characteristics) and EN 13241 (gates - product standard, performance characteristics). These fire barriers are classified in accordance with EN 13501-2 (classification of building materials and elements regarding reaction to fire – Part 2: Classification using data from fire resistance tests). The new Novoferm NovoSlide Industry fire-resistant sliding door has been specially developed to meet these stringent European product standards.

According to the construction product regulation for the marketing of building materials in Germany and the European Union, materials covered by the European product standard must be supplied with a CE mark and a declaration of performance (DOP).

This applies to fire-resistant sliding fire doors in national and European regulations in the post-coexistence phase. Doors marked in this way can be used in all member states of the European Union (CEN).

In addition to the European standards, the relevant national statutory building requirements must always be observed which remain the responsibility of the individual countries and will not be harmonised at a European level.

In Germany, for example, the Model Administrative Provisions for Technical Building Rules (MVV-TB) define the statutory building requirements for fire-resistant and smokeproof doors.

In addition to the fire-resistance classes  $EI_2 30$  and  $EI_2 90$ , the MVV-TB also requires the properties of tight closing ( $S_a$ ) and durability of self-closing (C2).



Declaration of performance (DOP)



Fire Test, view after 130 minutes



## TYPE OVERVIEW

EI<sub>2</sub> 30



1-leaf



2-leaf



EI<sub>2</sub> 60



1-leaf



2-leaf



EI<sub>2</sub> 90



1-leaf



2-leaf



EI<sub>2</sub> 120



1-leaf



2-leaf





## TECHNICAL DESCRIPTION

Highly functional, attractive design and innovative details characterise Novoferm's fire-resistant and smokeproof sliding door systems. They are suitable for many structures

and fit harmoniously into different architectural systems in industrial and commercial buildings.

### CERTIFICATION (APPROVAL)

Each type corresponds to EN 16034 and EN 13241 and has been tested for its fire-resistant properties by an official testing laboratory in accordance with EN 1634. All 1-leaf doors are certified with corresponding smoke protection tests ( $S_a$  (tight closing – with 3-sided sealing system)) and durability tests (tested self-closing durability according to EN 12605 with 10,000 cycles (class C2)). Also available with optional smoke protection classification  $S_{200}$  (for full leaf doors without pass door).

### INSTALLATION

The wall in which the fire barrier is to be installed as well as its fixings must comply with the classification (see descriptions for individual door types). The floor in the door area must be non-flammable (building material class A1).

**Note: If the parking area of a sliding door has a casing applied on-site, inspection openings must be provided to enable maintenance.**

### TYPES OF LINTELS

- Standard model for normal headers requires approx. 250 mm headroom
- Customised models for direct ceiling installation with low lintel require at least 150 mm headroom
- Header panel for direct ceiling installation is 150 mm high. Please also refer to the planning aids on page 20

### DOOR LEAF

Made of 0.75 mm galvanized and specially machined thin sheet metal with fireproof insulation. Door leaf made of individual full-height units joined together, with smooth surface finish achieved by bonding the sheet metal jacket with the fireproof insulation (supplied as individual panels).

### SEAL

On three sides, with labyrinth-seal profiles. Additional sealing system between the individual panels to meet minimum  $S_a$  smokeproof requirements. Panel joints require no extra sealing.

### HARDWARE

Closed track system with one support roller system per panel for smooth door movement, closed track system with individually mounted support bracket constructions, including hydraulic end damper, closing weight in galvanised casing, internal floor guide as well as a handle and recessed shell handle, optional in stainless steel.

### CLOSING BRAKE (RADIAL DAMPER)

Controls the closing speed, adjustable between 0.08 and 0.3 m/ sec.



## AVAILABLE VARIANTS/ OPTIONAL EQUIPMENT

### HOLD-OPEN SYSTEM – HOLD OPEN AND RELEASE MECHANISM

For doors that mainly remain open, consisting of: Fire detectors in the quantity required by the approval, hold-open magnet, hold-open control panel with integrated push-button (surface-mounted) type FSZ (operation with 24 V direct current). The door closes automatically in the event of fire, otherwise by pressing the release button. Additionally equipped with an optical-acoustic signal transmitter as required by EN 12604.

**Note: Once installed, owners must ensure at their own expense that the hold-open system is approved and thereafter inspected at regular intervals by a certified specialist (type approval for the hold-open system). We offer appropriate service agreements.**

### PASS DOOR AND SMOKEPROOF PASS DOOR

Pass door EI<sub>2</sub> 30 to EI<sub>2</sub> 90 (up to EI<sub>2</sub> 120 in the test procedure), optional with S<sub>a</sub> smokeproof (sealing – 3-sided sealing profile), S<sub>200</sub> smokeproof (4-sided circumferential sealing method), installed in the door leaf between two elements, standard without lower sill, door size 1,000 x 2,000 mm clear passage dimensions. A sill-free pass door may be installed only if the clear passage is at least 2,500 mm and the sliding door height at least 2,300 mm.

Hardware: 2x three-part hinges with ball bearings, 1 door closer as per EN 1154, 1 mortice lock as per DIN 18250 with drawback-latch for profile cylinder, optional panic function, stainless steel flat handle set with short plates.

### ELECTRICAL OPERATOR

For opening with special control unit with separate 3-push-button in dead man control. The control unit is protected with a smoke detector in accordance with the new requirements. Closing via the release button of the hold-open system or separate button "close door"; open with a separate button "open door " (especially for larger doors when considerable effort is required for manual opening). The operator is deactivated in the event of fire and the door is automatically closed.

**Note: Owners must arrange at their own expense for specialists to perform the necessary inspections of doors with electrical operators (as per rules governing power operated doors).**

### DOOR PANEL SURFACE

Galvanised as standard, included door leaf edge profiles; optionally primed or with a RAL coating of your choice.

### HOOK LOCK

To secure the door when closed, with spring-mounted catch, key operated, designed for profile cylinders. Also possible with dead bolt contact.

### BUTT CEILING INSTALLATION

With header panel (150 mm high).

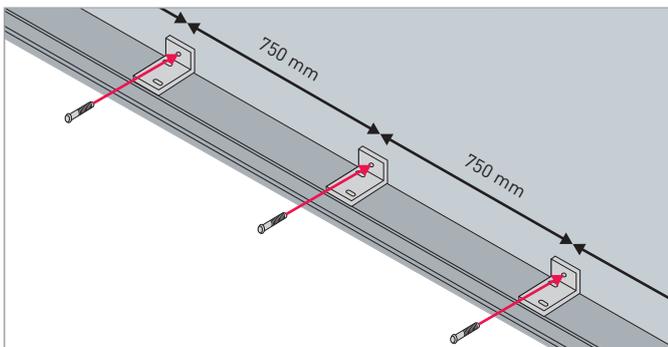


## EASY INSTALLATION

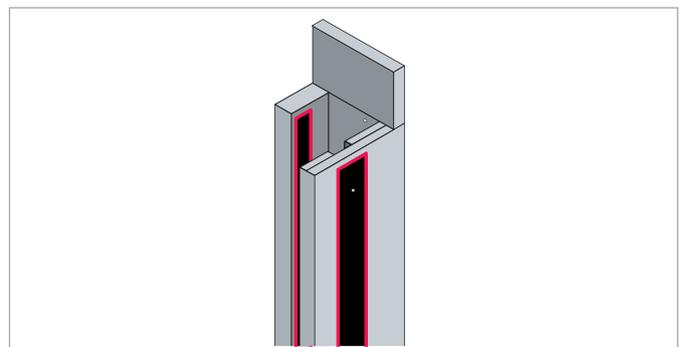
The NovoSlide Industry fire-resistant sliding doors are especially quick to install. Advanced technical details considerably speed up the process.

See examples here. All details can be found in the installation instructions.

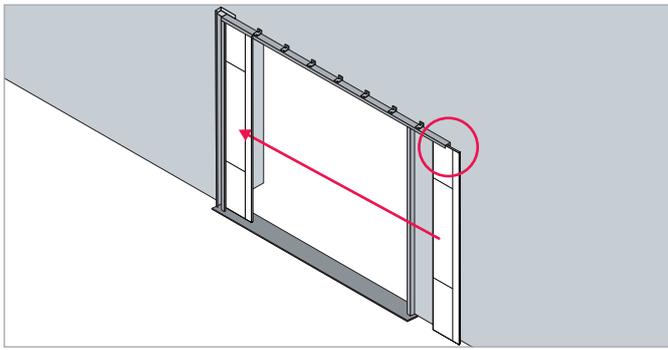
## ADVANTAGES



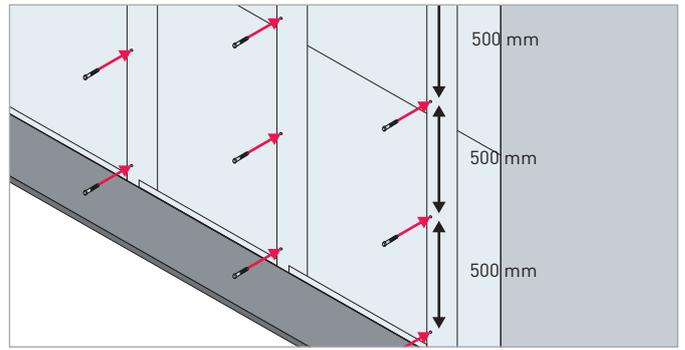
Easy installation due to single bracket mounting with extended 750 mm spacings, in the closing and parking area. Easy tolerance compensation during installation using long holes in the brackets and the track.



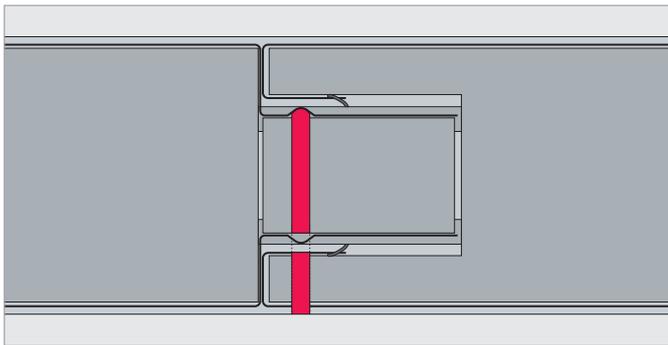
Reduced complexity due to factory pre-assembled elements including pre-mounted foam strips.



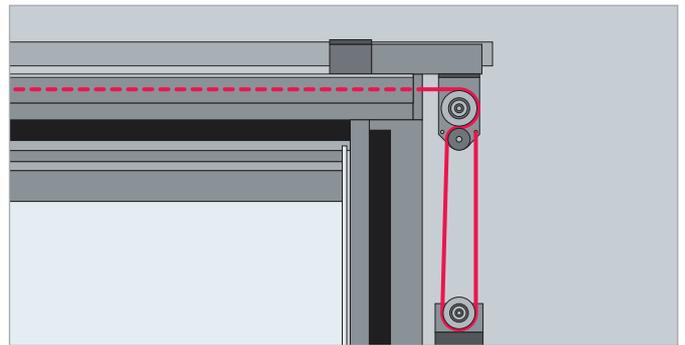
Simple installation of the panels, each with separate rollers.



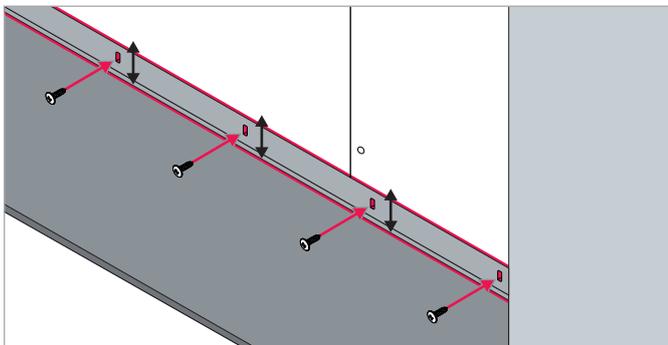
Panels connected to each other with 1-sided screw connection on the non-visible wall side (500 mm screw spacing).



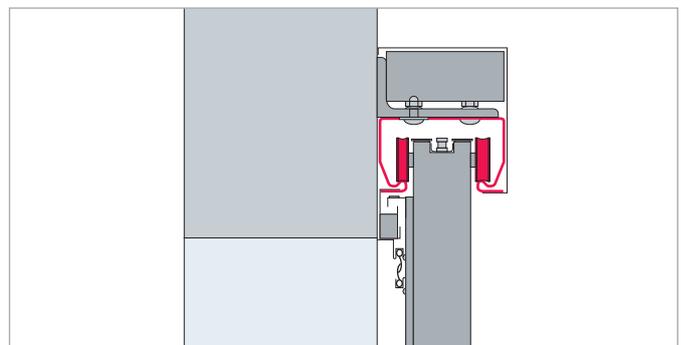
All bolting points prepared at the factory.



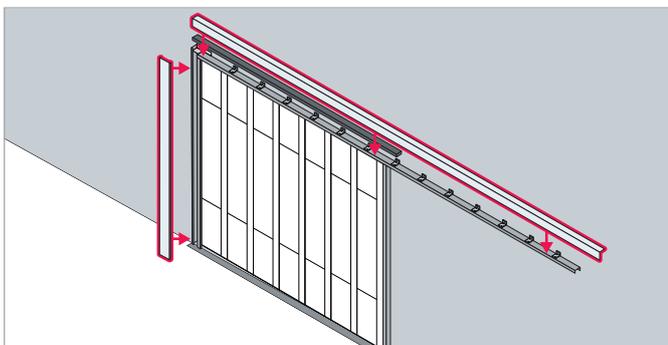
Simplified wire cable guide for the closing weight for easy installation.



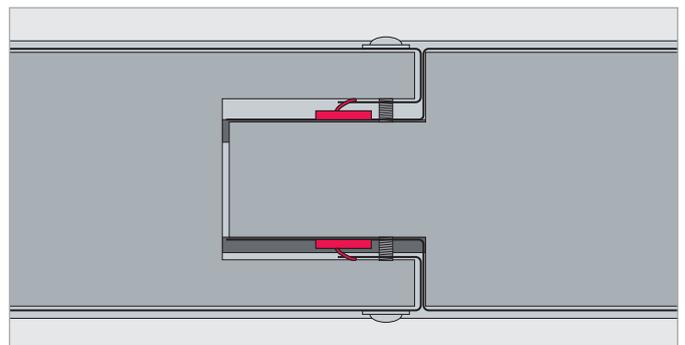
Quick and easy floor levelling via height-adjustable floor-end profile.



Special roller design compensates for unevenness in the wall and header areas.



Simple screwless track cover as standard. Flush with counterweight casing.



Integrated seals between the panel joints eliminates the need for on-site panel sealing with silicone for  $S_a$  and  $S_{200}^*$ .

\* Please refer to the technical table for an exception

# FIRE-RESISTANT AND SMOKEPROOF SLIDING DOORS – 1-LEAF

		El <sub>2</sub> 30	
Characteristics	Full leaf in a modular design	•	
	Galvanized leaf and edge profiles	•	
	Classification (approval)	Corresponds to EN 16034 and EN 13241; tested for fire-resistant properties by an official testing laboratory in accordance with EN 1634-1	
Versions	El <sub>2</sub> 30	•	
	El <sub>2</sub> 60		
	El <sub>2</sub> 90		
	El <sub>2</sub> 120		
	S <sub>a</sub> smokeproof (full leaf)	◦ Up to 8,500 x 6,000 mm • In Germany (up to 8,500 x 6,000 mm)	
	S <sub>200</sub> smokeproof (full leaf)*	◦ Up to max. 26,8 m <sup>2</sup>	
	With door closing brake (radial damper)	•	
	Also with hold-open system	◦	
Description	Approved dimensions	Clear opening from upper edge of finished floor 1,000 x 2,000 to 8,500 x 6,000 (max. 50 m <sup>2</sup> )	
	Door leaf Approx. 72 mm thick, 0.75 mm sheet metal, unit weight approx. 54 kg/m <sup>2</sup>	•	
	Required overlap of clear passage opening by door leaf	At the sides per	≥ 150 at the door inlet ≥ 190 in parking area
		At the lintel	≥ 120
		For low lintel	≥ 120
	Parking area for open door (Counterweight position in the front of the door)	CP + 490	
	Required lintel height	Standard lintel wall installation	≥ 250
		Low lintel ceiling installation	≥ 150
		Direct ceiling installation: Header panel provided by the customer	≥ 150
	For pillars in parking area, requisite distance from firewall	Without pass door	≥ 200
		With pass door	≥ 230
	Sill for opening and storage area	Only required with S <sub>200</sub> smokeproof doors: <b>Recessed:</b> Sill recessed in the ground only on-site prior to door installation, after consultation with Novoferm <b>Surface-mounted:</b> Flatness tolerance of finished flooring with surface-mounted sills in opening and storage areas according to DIN 18202, Table 3, Line 4 <b>Optional:</b> No sill is required for smooth, level floors without joints in the opening and storage areas	
Additional features	Pass door S <sub>a</sub> including door closer	◦	
	Pass door S <sub>200</sub> including door closer*	◦ Up to max. 26,8 m <sup>2</sup>	
	Pass door in reveal	—	
	Hook lock	◦	
	Flush side inlet panel	—	
	Low lintel	◦	
	Direct ceiling installation	◦	
	Electrical opening aid	◦	
	Glazing	—	
	Free-running function	—	
	Ceiling/ niche flaps	—	
	Safety braking strip	—	

El <sub>2</sub> 60	El <sub>2</sub> 90	El <sub>2</sub> 120
•	•	•
•	•	•
Corresponds to EN 16034 and EN 13241; tested for fire-resistant properties by an official testing laboratory in accordance with EN 1634-1	Corresponds to EN 16034 and EN 13241; tested for fire-resistant properties by an official testing laboratory in accordance with EN 1634-1	Corresponds to EN 16034 and EN 13241; tested for fire-resistant properties by an official testing laboratory in accordance with EN 1634-1
•	•	•
◦ Up to 8,500 x 6,000 mm • In Germany (up to 8,500 x 6,000 mm)	◦ Up to 8,500 x 6,000 mm • In Germany (up to 8,500 x 6,000 mm)	◦ Up to 8,500 x 6,000 mm • In Germany (up to 8,500 x 6,000 mm)
◦ Up to max. 26,8 m <sup>2</sup>	◦ Up to max. 26,8 m <sup>2</sup>	◦ Up to max. 26,8 m <sup>2</sup>
•	•	•
◦	◦	◦
Clear opening from upper edge of finished floor 1,000 x 2,000 to 8,500 x 6,000 (max. 50 m <sup>2</sup> )	Clear opening from upper edge of finished floor 1,000 x 2,000 to 8,500 x 6,000 (max. 50 m <sup>2</sup> )	Clear opening from upper edge of finished floor 1,000 x 2,000 to 8,500 x 6,000 (max. 50 m <sup>2</sup> )
•	•	•
≥ 150 at the door inlet ≥ 190 in parking area	≥ 150 at the door inlet ≥ 190 in parking area	≥ 150 at the door inlet ≥ 190 in parking area
≥ 120	≥ 120	≥ 120
≥ 120	≥ 120	≥ 120
CP + 490	CP + 490	CP + 490
≥ 250	≥ 250	≥ 250
≥ 150	≥ 150	≥ 150
≥ 150	≥ 150	≥ 150
≥ 200	≥ 200	≥ 200
≥ 230	≥ 230	≥ 230
Only required with S <sub>200</sub> smokeproof doors: <b>Recessed:</b> Sill recessed in the ground only on-site prior to door installation, after consultation with Novoferm <b>Surface-mounted:</b> Flatness tolerance of finished flooring with surface-mounted sills in opening and storage areas according to DIN 18202, Table 3, Line 4 <b>Optional:</b> No sill is required for smooth, level floors without joints in the opening and storage areas	Only required with S <sub>200</sub> smokeproof doors: <b>Recessed:</b> Sill recessed in the ground only on-site prior to door installation, after consultation with Novoferm <b>Surface-mounted:</b> Flatness tolerance of finished flooring with surface-mounted sills in opening and storage areas according to DIN 18202, Table 3, Line 4 <b>Optional:</b> No sill is required for smooth, level floors without joints in the opening and storage areas	Only required with S <sub>200</sub> smokeproof doors: <b>Recessed:</b> Sill recessed in the ground only on-site prior to door installation, after consultation with Novoferm <b>Surface-mounted:</b> Flatness tolerance of finished flooring with surface-mounted sills in opening and storage areas according to DIN 18202, Table 3, Line 4 <b>Optional:</b> No sill is required for smooth, level floors without joints in the opening and storage areas
◦	◦	◦
◦ Up to max. 26,8 m <sup>2</sup>	◦ Up to max. 26,8 m <sup>2</sup>	◦ Up to max. 26,8 m <sup>2</sup>
—	—	—
◦	◦	◦
—	—	—
◦	◦	◦
◦	◦	◦
◦	◦	◦
—	—	—
—	—	—
—	—	—
—	—	—

#### OPERATING AIDS AND SPECIAL EQUIPMENT ON REQUEST

Note: The upper horizontal smoke seal protrudes approx. 40 mm into the clear passage opening. Please note different lintel heights.

\*1-sided sealing of the panel joints is required for S<sub>200</sub> sliding doors ≥ 15.1 m<sup>2</sup> and for S<sub>200</sub> sliding doors with pass door.

# SLIDING FIRE-RESISTANT AND SMOKEPROOF DOORS - 2-LEAF

		EL <sub>2</sub> 30	
Characteristics	Full leaf in a modular design	•	
	Galvanized leaf and edge profiles	•	
	Classification (approval)	Corresponds to EN 16034 and EN 13241; tested for fire-resistant properties by an official testing laboratory in accordance with EN 1634-1.	
Versions	EL <sub>2</sub> 30	•	
	EL <sub>2</sub> 60		
	EL <sub>2</sub> 90		
	EL <sub>2</sub> 120		
	S <sub>a</sub> /S <sub>200</sub> smoke proof (full leaf)	Undergoing testing	
	With door closing brake (radial damper)	•	
	Also with hold-open system	◦	
Description	Approved dimensions	Clear opening from upper edge of finished floor 2,000 x 2,000 to 8,500 x 6,000 (max. 50 m <sup>2</sup> )	
	Door leaf: Approx. 72 mm thick, 0.75 mm sheet metal, unit weight approx. 54 kg/m <sup>2</sup>	•	
	Required overlap of clear passage opening by door leaf	At the sides per	≥ 190 in storage area
		At the lintel	≥ 120
		For low lintel	≥ 120
	Parking area for open door	Half of the CP +600 per leaf	
	Required lintel height	Normal lintel wall installation	≥ 250
		Low lintel ceiling installation	≥ 150
		Direct ceiling installation: Header panel, provided by the customer	≥ 150
	For pillars in parking area, requisite distance from firewall	Without pass door	≥ 200
		With pass door	≥ 230
Sill for opening and storage area	Only required with S <sub>200</sub> smokeproof doors: <b>Recessed:</b> Sill recessed in the ground only on-site prior to door installation, after consultation with Novoferm <b>Surface-mounted:</b> Flatness tolerance of finished flooring with surface-mounted sills in opening and storage areas according to DIN 18202, Table 3, Line 4 <b>Optional:</b> No sill is required for smooth, level floors without joints in the opening and storage areas		
Additional features	S <sub>a</sub> /S <sub>200</sub> pass door including door closer	—	
	Pass door in reveal	—	
	Hook lock	◦	
	Low lintel	◦	
	Direct ceiling installation	◦	
	Electrical opening aid	◦	
	Glazing	—	
	Free-running function	—	
	Ceiling/ niche flaps	—	

CP = Clear passage dimensions OKF = Upper edge of finished floor • = Standard ◦ = Option — = Currently unavailable All sizes in mm.

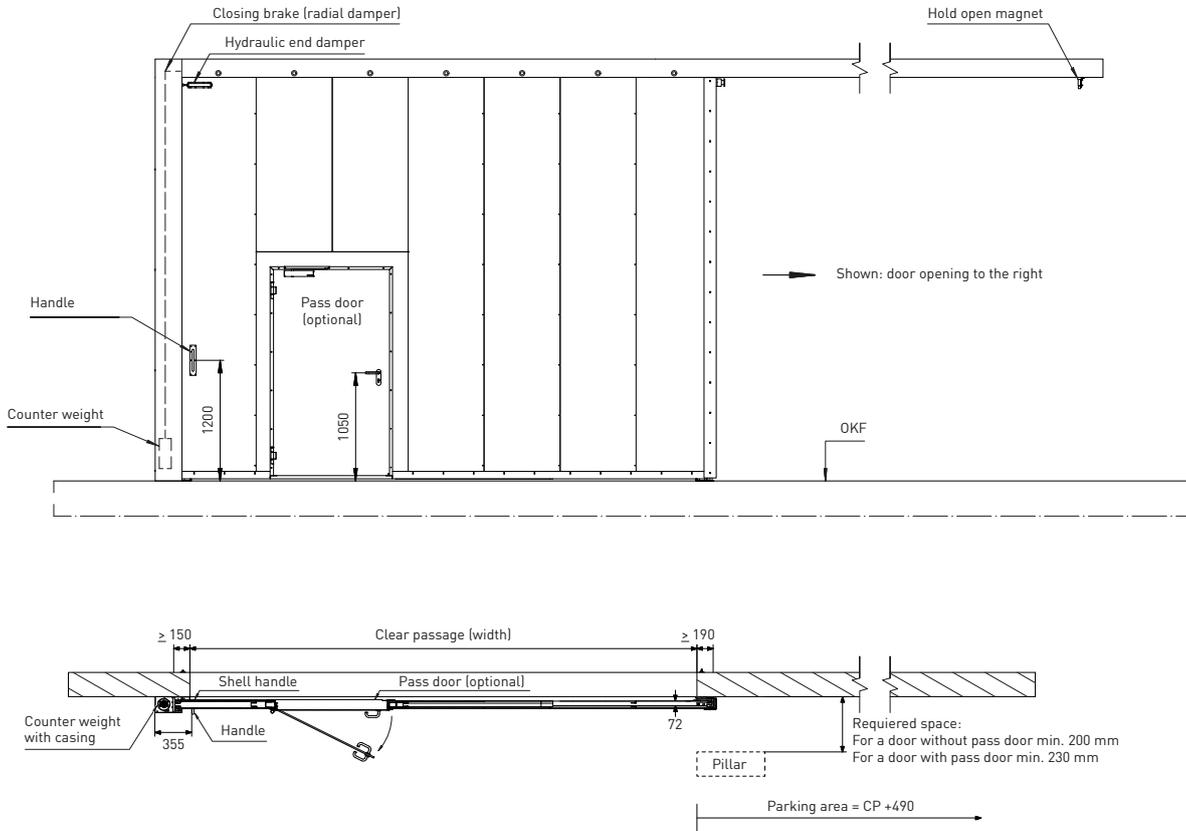
El <sub>2</sub> 60	El <sub>2</sub> 90	El <sub>2</sub> 120
•	•	•
•	•	•
Corresponds to EN 16034 and EN 13241; tested for fire-resistant properties by an official testing laboratory in accordance with EN 1634-1	Corresponds to EN 16034 and EN 13241; tested for fire-resistant properties by an official testing laboratory in accordance with EN 1634-1	Corresponds to EN 16034 and EN 13241; tested for fire-resistant properties by an official testing laboratory in accordance with EN 1634-1
•		
	•	
		•
Undergoing testing	Undergoing testing	Undergoing testing
•	•	•
◦	◦	◦
Clear opening from upper edge of finished floor 2,000 x 2,000 to 8,500 x 6,000 (max. 50 m <sup>2</sup> )	Clear opening from upper edge of finished floor 2,000 x 2,000 to 8,500 x 6,000 (max. 50 m <sup>2</sup> )	Clear opening from upper edge of finished floor 2,000 x 2,000 to 8,500 x 6,000 (max. 50 m <sup>2</sup> )
•	•	•
≥ 190 in storage area	≥ 190 in storage area	≥ 190 in storage area
≥ 120	≥ 120	≥ 120
≥ 120	≥ 120	≥ 120
Half of the CP +600 per leaf	Half of the CP +600 per leaf	Half of the CP +600 per leaf
≥ 250	≥ 250	≥ 250
≥ 150	≥ 150	≥ 150
≥ 150	≥ 150	≥ 150
≥ 200	≥ 200	≥ 200
≥ 230	≥ 230	≥ 230
Only required with S <sub>200</sub> smokeproof doors: <b>Recessed:</b> Sill recessed in the ground only on-site prior to door installation, after consultation with Novoferm <b>Surface-mounted:</b> Flatness tolerance of finished flooring with surface-mounted sills in opening and storage areas according to DIN 18202, Table 3, Line 4 <b>Optional:</b> No sill is required for smooth, level floors without joints in the opening and storage areas	Only required with S <sub>200</sub> smokeproof doors: <b>Recessed:</b> Sill recessed in the ground only on-site prior to door installation, after consultation with Novoferm <b>Surface-mounted:</b> Flatness tolerance of finished flooring with surface-mounted sills in opening and storage areas according to DIN 18202, Table 3, Line 4 <b>Optional:</b> No sill is required for smooth, level floors without joints in the opening and storage areas	Only required with S <sub>200</sub> smokeproof doors: <b>Recessed:</b> Sill recessed in the ground only on-site prior to door installation, after consultation with Novoferm <b>Surface-mounted:</b> Flatness tolerance of finished flooring with surface-mounted sills in opening and storage areas according to DIN 18202, Table 3, Line 4 <b>Optional:</b> No sill is required for smooth, level floors without joints in the opening and storage areas
—	—	—
—	—	—
◦	◦	◦
◦	◦	◦
◦	◦	◦
◦	◦	◦
—	—	—
—	—	—
—	—	—

#### OPERATING AIDS AND SPECIAL EQUIPMENT ON REQUEST

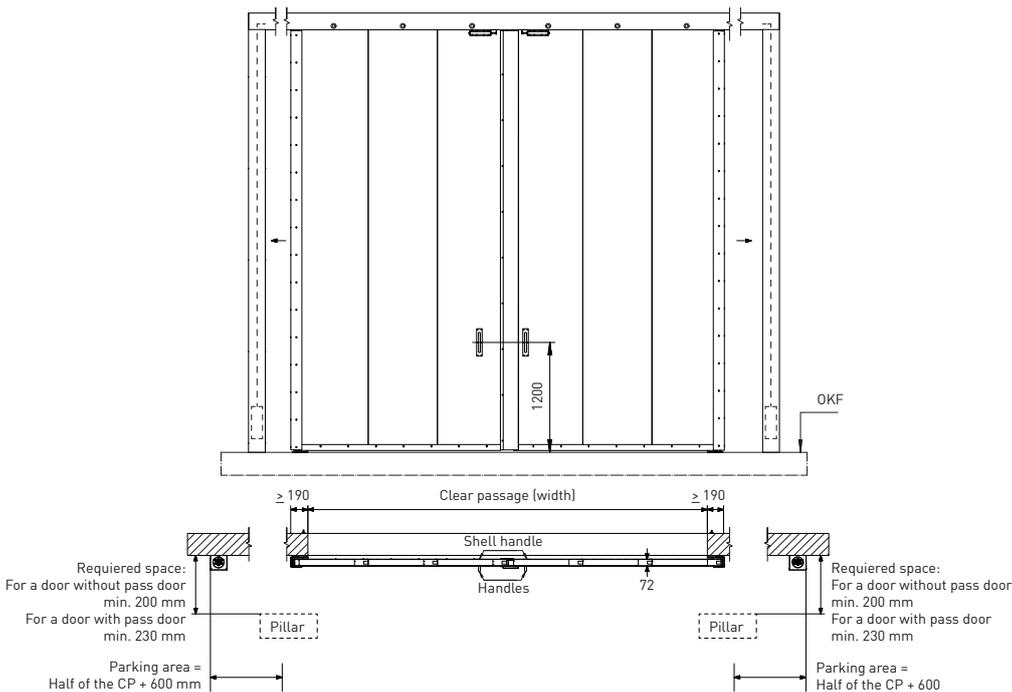
Note: The upper horizontal smoke seal protrudes approx. 40 mm into the clear passage opening. Please note different lintel heights.

# PLANNING AIDS

## EI<sub>2</sub> 30/ EI<sub>2</sub> 60/ EI<sub>2</sub> 90/ EI<sub>2</sub> 120 – 1-LEAF MODEL

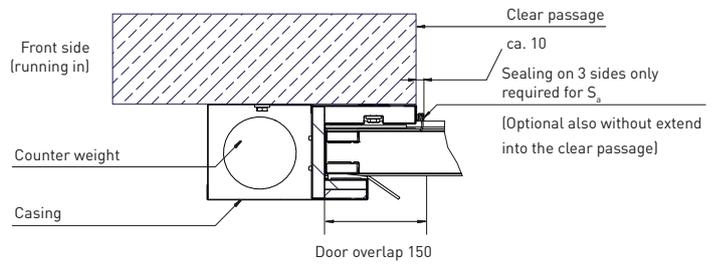
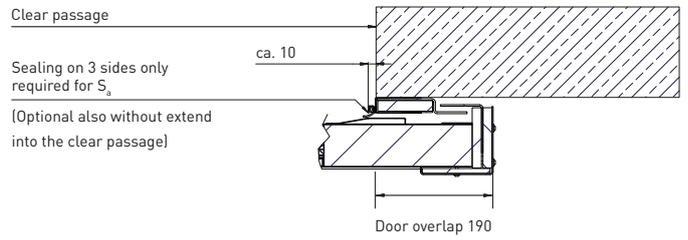
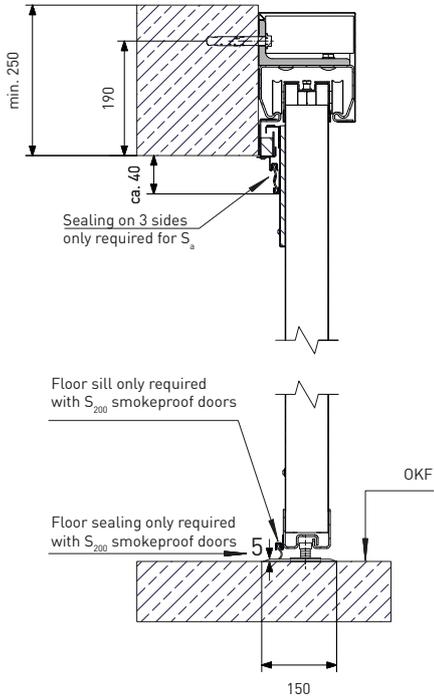


## EI<sub>2</sub> 30/ EI<sub>2</sub> 60/ EI<sub>2</sub> 90/ EI<sub>2</sub> 120 – 2-LEAF MODEL



CP = Clear passage OKF = Upper edge of finished floor All sizes in mm.

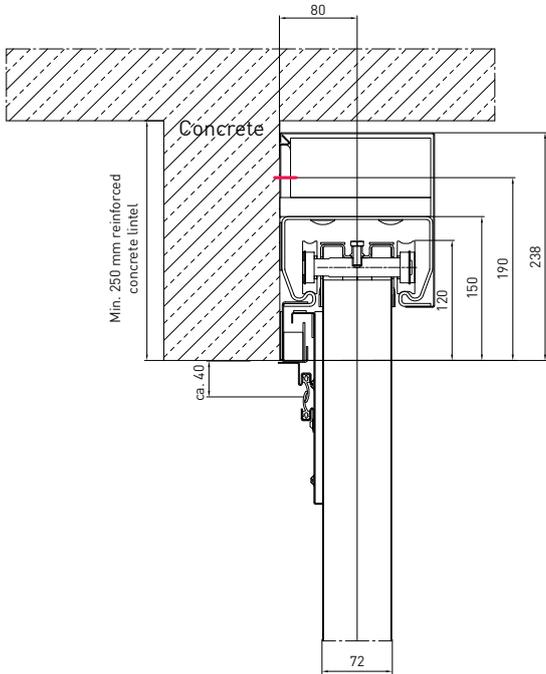
# TECHNICAL DETAILS SMOKE PROOF



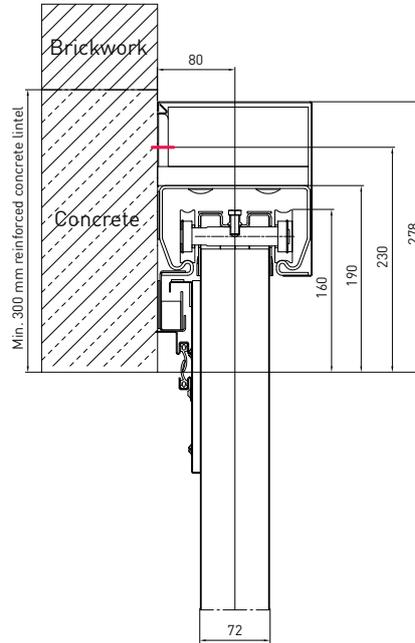
All sizes in mm.

# TYPES OF FIXING AND SPACE REQUIREMENT

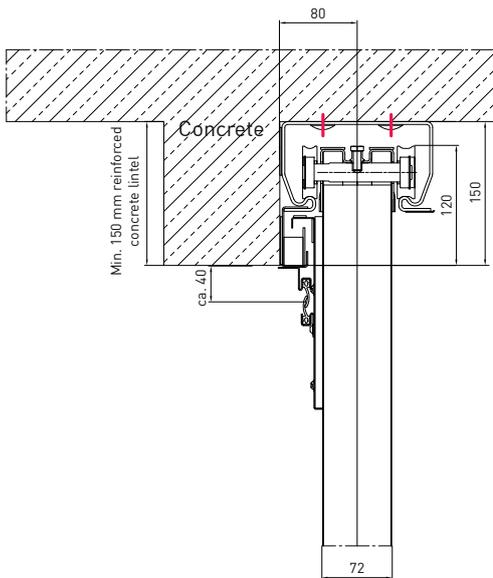
**COMMON LINTEL WALL INSTALLATION (STANDARD)**



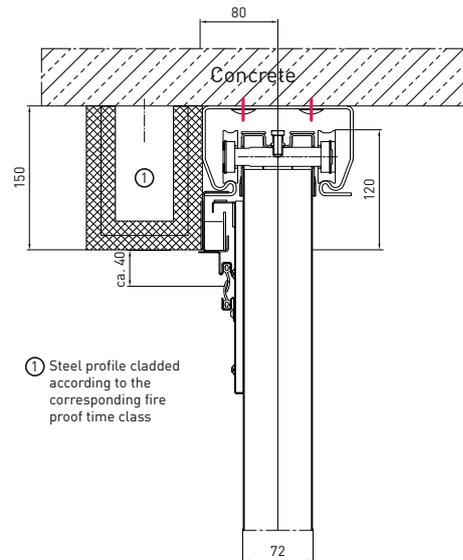
**COMMON LINTEL WALL INSTALLATION WITH CONCEALED SMOKE SEAL**



**LOW LINTEL CEILING INSTALLATION WITH EXISTING LINTEL**



**LOW LINTEL CEILING INSTALLATION WITH HEADER PANEL**



① Steel profile cladded according to the corresponding fire proof time class

 Concrete
  Brickwork
 All sizes in mm.

# INSTALLATION OPTIONS

## REQUIRED FIRE WALLS OR MINIMUM WALL THICKNESSES – 1 LEAF

Door type	EI <sub>2</sub> 30/ EI <sub>2</sub> 60/ EI <sub>2</sub> 90			EI <sub>2</sub> 120					
	Lintel installation (Reinforced concrete)	Direct ceiling installation	Low lintel installation	Lintel installation (Reinforced concrete)		Direct ceiling installation		Low lintel installation	
Door size Wall type ▼	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>	≤ CP 4.670 x 4.560	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>	< CP 4.670 x 4.560	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>	< CP 4.670 x 4.560	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>
Masonry EN 1996-1-1, compressive strength class > 12, reinforced concrete lintel	≥ 175*	≥ 175*	≥ 175*	≥ 175*	≥ 240*	≥ 175*	≥ 240*	≥ 175*	≥ 240*
Concrete DIN EN 1992-1-1, strength class > C12/C15	≥ 140	≥ 140	≥ 140	≥ 140	≥ 200	≥ 140	≥ 200	≥ 140	≥ 200
Porous concrete blocks EN 771-4, compressive strength class 4, according to DIN V 4165-100, reinforced concrete lintel in the opening and parking area	≥ 175*	≥ 175*	≥ 175*	≥ 175*	≥ 240*	≥ 175*	≥ 240*	≥ 175*	≥ 240*
Reinforced porous concrete slabs EN 4166 at least of gross density class > 0.65 or strength class P4.4, reinforced concrete lintel in the opening and parking area	≥ 175*	≥ 175*	≥ 175*	≥ 175*	≥ 240*	≥ 175*	≥ 240*	≥ 175*	≥ 240*

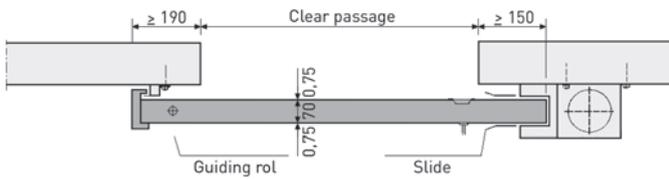
## REQUIRED FIRE WALLS OR MINIMUM WALL THICKNESSES – 2 LEAF

Door type	EI <sub>2</sub> 30/ EI <sub>2</sub> 60/ EI <sub>2</sub> 90			EI <sub>2</sub> 120					
	Lintel installation (Reinforced concrete)	Direct ceiling installation	Low lintel installation	Lintel installation (Reinforced concrete)		Direct ceiling installation		Low lintel installation	
Door size Wall type ▼	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>	≤ CP 4.670 x 4.560	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>	< CP 4.670 x 4.560	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>	< CP 4.670 x 4.560	≤ CP 8.500 x 6.000; max. 50 m <sup>2</sup>
Masonry EN 1996-1-1, compressive strength class > 12, reinforced concrete lintel	≥ 175*	≥ 175*	≥ 175*	≥ 175*	≥ 240*	≥ 175*	≥ 240*	≥ 175*	≥ 240*
Concrete DIN EN 1992-1-1, strength class > C12/C15	≥ 140	≥ 140	≥ 140	≥ 140	≥ 200	≥ 140	≥ 200	≥ 140	≥ 200
Porous concrete blocks EN 771-4, compressive strength class 4, according to DIN V 4165-100, reinforced concrete lintel in the opening and parking area	≥ 175*	≥ 175*	≥ 175*	≥ 175*	≥ 240*	≥ 175*	≥ 240*	≥ 175*	≥ 240*
Reinforced porous concrete slabs EN 4166 at least of gross density class > 0.65 or strength class P4.4, reinforced concrete lintel in the opening and parking area	≥ 175*	≥ 175*	≥ 175*	≥ 175*	≥ 240*	≥ 175*	≥ 240*	≥ 175*	≥ 240*

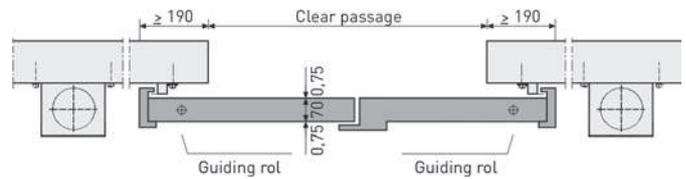
\* Running-in and counter running-in system screwed through the wall. All sizes in mm.  
Important: With porous concrete, a reinforced concrete lintel is vital in the opening and parking area.

## CONSTRUCTION TYPES

### 1-LEAF

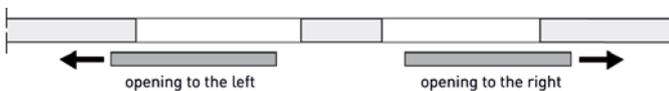


### 2-LEAF

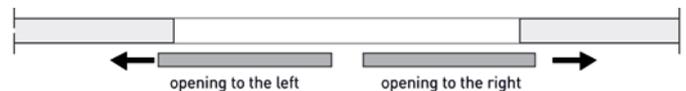


## OPENING TYPES

### 1-LEAF



### 2-LEAF



All sizes in mm.

## PLANNING AIDS

- Observe the requirements for construction and classification of the fire walls according to the installation instructions.
- Provide lateral space required to placing the leaf when the sliding door is open (parking area), if necessary also including closing weight with box.
- Take into account sufficient distance between any pillars, casing or other structures provided in the parking area of the sliding door (for door structure including handle and in the lintel area for door closing brake or electric operator, also for pass door with door closer).
- For masonry and porous concrete, a concrete lintel is required in the opening area of the door. For porous concrete, a reinforced concrete lintel is also required in the parking area. For porous concrete and brickwork walls the running-in and the counter running-in system must be screwed through the wall (threaded rod and screw-nut).





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