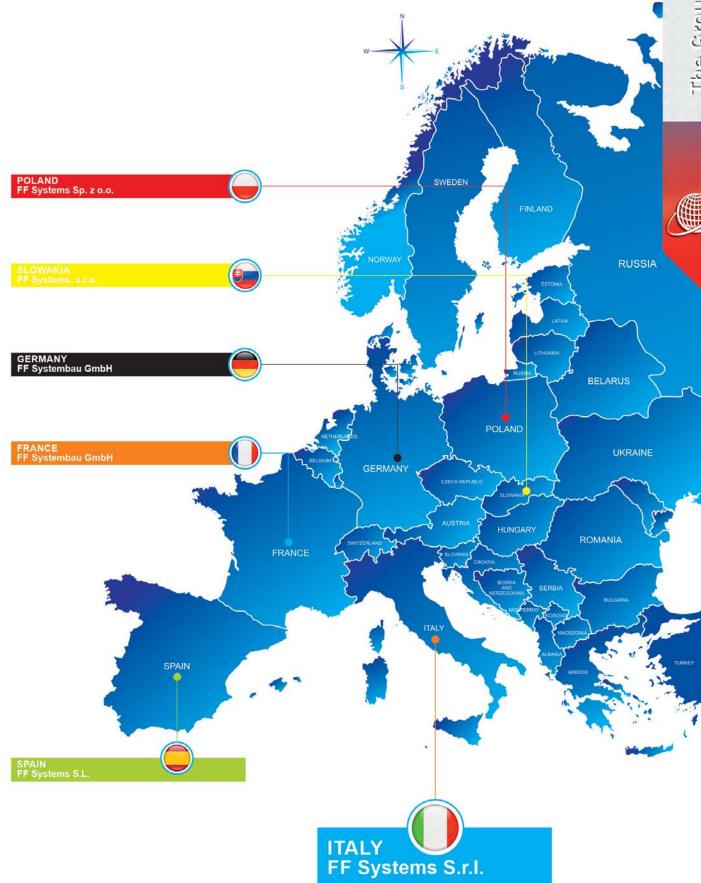


FF Systems - Around





FF Systems - Passive fire protection

Some information

FIRE REACTION

The reaction to fire is the degree of participation of a given material to the fire to which it is subjected.

Through strict tests it is measured its ability to feed a fire and the propagation of fumes.

The tests give results that are catalogued associating the characteristics to the fire, summarized for what mainly concerns our products, in the following table:

Ει	uro Class	Description
	A1	Material with no contribution to fire therefore not combustible
	A2	Material with no contribution to the fire, therefore non-combustible, but with phenomena of smoke production and/or dripping

FF Systems standard Systems	STANDARD coating	coating on REQUEST
F1,F2,F3,F4,F5,JM,JL,JT,MW	A2	A1
F6,AQA	A1	- <u></u>

FIRE RESISTANCE

We can refer to two types of constructions which are:

- The structural element, i.e. the construction that possesses a load-bearing characteristic with respect to the building
- The compartment that instead does not have load-bearing characteristics, but only of division

La The fire resistance is the duration in minutes in which the tested element maintains the characteristics required by European legislation, while the letters preceding these values represent the influential properties in the fire protection. In summary:

R	Е	1	w	S	
Load-bearing capacity	Tightness	Insulation	Irradiation	Smoke tightness	

Therefore for all products that do not have load-bearing capacity we will not indicate the R.



FF Systems - Passive fire protection

Some information

COOPERATING OR NON-COOPERATING STRUCTURE

A collaborating structure is that element which participates in the fire resistance together with another and/or other elements, forming a package which cannot be separated.

A NON-collaborating structure, on the contrary, participates in the fire resistance individually, without the need to refer to other structures.

Therefore:

- Cooperating ceiling also refers to the ceiling described in the fire resistance test and has no protection in the gap between ceiling and false ceiling
- Non-cooperating ceiling (membrane) does not refer to any ceiling and its protection will already be in the gap itself
- Counter wall increases the fire resistance of an element (another wall) with which it cooperates for the purposes of the test
- Self-supporting ceiling or cavity instead protects immediately behind it installations or elements, with which it does not cooperate for the purposes of the test.

Passive protection, due to the fact that systems are increasingly being integrated into buildings, requires certified and safe inspection systems.

FF Systems solutions are tested by the best accredited laboratories and are accompanied by certifications, that comply with European regulations on fire safety.

DIRECT SCOPE OF APPLICATION

The direct application scope describes the possible changes to the tested sample without the need for any further testing or approval.

It is present in the classification reports, which are the only document that the manufacturer is required to provide.







Page 9

Access panel fire resistance EI30/EI60/EI90/EI120

For drywall partitions System F4 EI30/EI60/EI90/EI120



Page 11

Access panel fire resistance EI30

For shaft walls System F5 EI30



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Access panel fire resistance EI60

For shaft walls System F5 El60



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Access panel fire resistance EI90/120

For shaft walls System F5 EI90/120







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Access panel fire resistance E160

For ceilings System F6 EÍ60



Page 16

Access panel fire resistance E190

For ceilings System F6 EÍ90



Page 17

Access panel fire resistance EI120

For ceilings System F6 EÍ120



Page 19

Access panel fire resistance for solid walls EI90/EI120

for solid walls System BMW EI90/EI120



Page 20

Access panel Jumbo System fire resistance **EI30**

for plasterboard walls, shaft walls and solid brickness System Jumbo BS E130









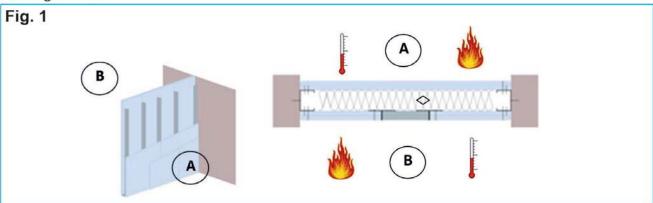


FF Systems Italia

FF Systems - Introduction to the use of the F4 system

PARTITION WALL WITH PANELS

A partition wall is a compartment with both sides in plasterboard that acts as a non-load-bearing dividing element.

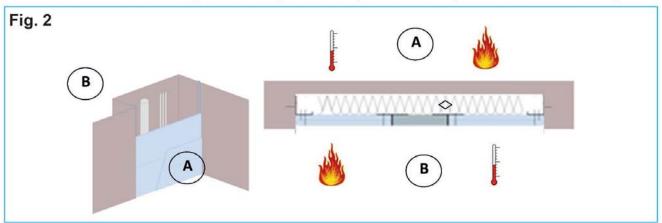


A wall serves to protect a room 'A' from a room 'B' and vice versa, but what is inserted in the cavity (�) is not protected for fire protection purposes (figure 1).

The access panel F4 FF Systems allows the possible access to the wall cavity, maintaining the fire resistance from 'A' to 'B' and vice versa (figure 1).

COUNTER WALL WITH PLATES

A counter wall is a cladding with a single side of plasterboard spaced from the existing wall.



A counter wall serves to increase the already intrinsic resistance of an existing wall, which is covered and which divides and protects a room 'A' from a room 'B' (figure 2).

What is inserted (♦) between the wall and the counter wall is not protected!

The access panel F4 FF Systems allows access between the wall and the counter wall while maintaining the fire resistance from 'A' to 'B' and vice versa (figure 2).

Tests carried out according to EN 13501 / use only with flap / pull-out door.



Access panel fire resistance El30/El60/El90/El120

System F4 - For drywall partitions



Description

The access panel consists of aluminium profiles, with plasterboard inlay GKF 12.5 mm (El30) or 25 mm (El120/El90/El60/El30) and two latches.

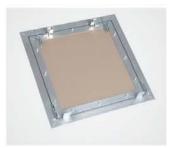
Both, an outer and an inner frame of the access panel consist of four single frames, which are firmly connected due to a special welding process. The access panel is equipped with two catchwires. In order to avoid accidents, this safety-system has to be secured after each opening.

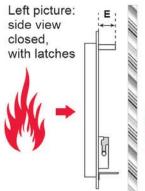
A joint gap of 1.5 mm is visible between outer frame and door leaf, which is equipped with a circumferential fire-resistant seal (foaming). The concealed snap locks open the access panel when pressure is applied to the flap on the spring loaded latch side.



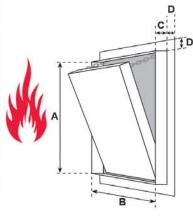








measurement



Capabilities

In non-load bearing, room-enclosing stud walls of the fire resistance class:

- El30 with double layer cladding 12.5 mm
- EI30/EI60/EI90/EI120 with double layer cladding 2 x 12.5 mm

Tested in accordance with the "European Norms EN 1364-1, EN 1634-1 and EN 1634-3".

Dimensions

The access panel fire resistance is available in the following standard sizes. Dimensions A and B as follows:

- 200 x 200 mm
- 300 x 300 mm
- 400 x 400 mm
- 500 x 500 mm
- 600 x 600 mm
- tested up to 1000 x 1000 mm

Dimensions D and E remain constant. Dimension C corresponds to the respective cladding thicknesses.

Particular advantages of our system

■ Economical solution

A and B = inside frame

C = 25 mm

D = 28 mm

E = 40 mm

- Delivery at short notice on request
- Quick and easy installation
- Solid aluminium frame
- Sophisticated solution
- Flush installation in drywall partitions

produciamo soluzioni



Customized solutions

Customized sizes can be produced in every dimension upon enquiry.

Locks

The access panel can be equipped with the following types of locks:



Four-square lock with white collar



Round-cylinder lock with key

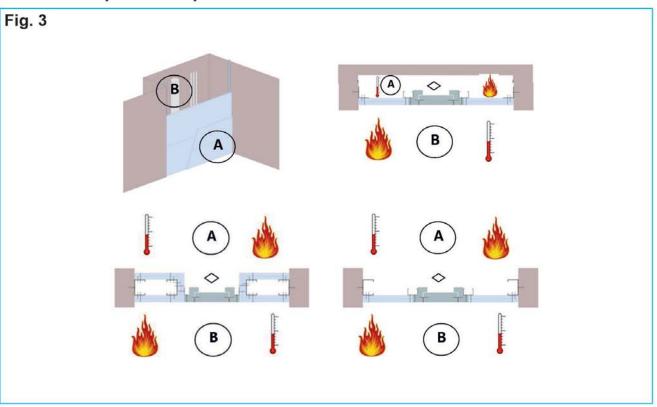


Profile cylinder lock with metal collar

FF Systems - Introduction to the use of the F5 system

CAVITY OR SELF-SUPPORTING CEILING WITH SLABS

A cavity or self-supporting septum is a single-sided covering that, for fire prevention purposes, is not connected to any wall that may be behind it.



The F5 FF Systems is tested for use in this type of construction.

The claim on this inspection hatch is very high, as it has to stand alone for fire resistance on both sides. The F5 FF Systems access panel has been tested according to the European standard EN 1364-1 independently of the structure in which it is inserted.

A technical cavity directly protects everything behind it and the test does not consider any existent walls. The F5 FF Systems thanks to the passing of strict fire tests, if installed correctly, allows us to inspect everything that may be immediately behind the trapdoor, with the relative fire resistance achieved (figure 3).

Everything that is inserted immediately behind the trapdoor is protected and vice versa (figure 3).

Tested according to EN 1364-1 / use only with flap opening / removable door.



Access panel fire resistance

System F5 - 30 - For shaft walls



Description

The access panel consists of aluminium profiles with plasterboard inlay GKF 25 mm (EI30).

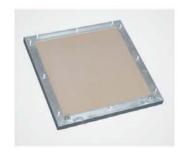
Both, an outer and an inner frame of the access panel consist of four single frames, which are firmly connected due to a special welding process. The access panel is equipped with two catchwires. In order to avoid accidents, this safety-system has to be secured after each opening.

A joint gap of 1.5 mm is visible between outer frame and door leaf, which is equipped with a circumferential fire-resistant seal (foaming). The concealed snap locks open the access panel when pressure is applied to the flap on the spring loaded latch side.









Capabilities

In non-load bearing shaft walls of the fire resistance class EI30 with single-side cladding 25 mm.

Tested in accordance with the "European Norms EN 1634-1 and EN 1634-3".

Dimensions

The access panel fire resistance is available in the following standard sizes. Dimensions A and B as follows:

- 200 x 200 mm
- 500 x 500 mm
- 300 x 300 mm
- = 600 x 600 mm
- = 400 x 400 mm
- tested up to 800 x 800 mm

Dimension D remains constant. Dimension C corresponds to the cladding thickness.

Particular advantages of our system

■ Economical solution

C = 25 mmD = 55 mm

- Delivery at short notice on request
- Quick and easy installation

A and B = inside frame measurement

- Sophisticated solution
- Flush installation in shaft walls
- Also suitable for tiling
- Installation possible in shaft walls of different producers

Customized solutions

Customized sizes can be produced in every dimension upon enquiry.

Locks

The access panel can be equipped with the following types of locks:

FS Four-square lock with white collar

Round-cylinder lock with key

Profile cylinder lock with metal collar









da due lati







Description

The access panel consists of aluminium profiles with plasterboard inlay GKF 30 mm (EI60).

Both outer and inner frame of the access panel consist of four single frames, which are firmly connected due to a special welding process. The access panel is equipped with two catchwires. In order to avoid accidents, this safety-system has to be secured after each opening.

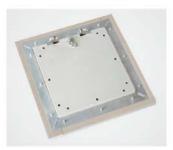
A joint gap of 2.5 mm is visible between outer frame and door leaf, which is equipped with a circumferential fire-resistant seal (foaming). The concealed snap locks open the access panel when pressure is applied to the flap on the spring loaded latch side.











Capabilities

In non-bearing shaft walls/insulation panels of the fire resistance class EI60 with single-side cladding 30 mm.

Tested in accordance with the "European Norms EN 1634-1 and EN 1634-3".

Dimensions

The access panel fire resistance is available in the following standard sizes:

- 200 x 200 mm
- = 500 x 500 mm
- 300 x 300 mm
- = 600 x 600 mm
- 400 x 400 mm
- tested up to 800 x 800 mm

Customized solutions

Customized sizes can be produced in every dimension upon enquiry.

Locks

The access panel can be equipped with the following types of locks:

- Four-square lock with white collar
- z
- Round-cylinder lock with key
- Profile cylinder lock with metal collar

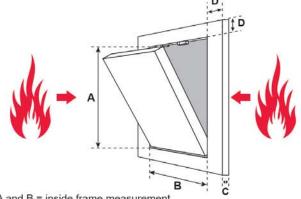
Übersetzung? Lastre da due lati











A and B = inside frame measurement

- C = 30 mm
- D = 55 mm

- Economical solution
- Delivery at short notice on request
- Quick and easy installation
- Sophisticated solution
- Flush installation in shaft walls/insulation panel
- Also suitable for tiling
- Installation possible in shaft walls of different producers



System F5 - 90/120 - For shaft walls



Description

The access panel consists of aluminium profiles with plasterboard inlay GKF 40 mm, 45 mm or 50 mm.

Both, an outer and an inner frame of the access panel consist of four single frames, which are firmly connected due to a special welding process. The fireresistant double-layer cladding on the reverse side meets the required fire resistance standard. The access panel is equipped with two catchwires. In order to avoid accidents, this safety-system has to be secured after each opening.

A joint gap of 1.5 mm is visible between outer frame and door leaf, which is equipped with a circumferential fire-resistant seal (foaming). The concealed snap locks open the access panel when pressure is applied to the flap on the spring loaded latch side.









Capabilities

In non-bearing shaft walls of the fire resistance class E190:

- with single-side cladding 40 mm
- with single-side cladding 43 mm
- with single-side cladding 45 mm
- with single-side cladding 50 mm

Tested in accordance with the "European Norms EN 1634-1 and EN 1634-3".

Dimensions

The access panel fire resistance is available in the following standard sizes. Dimensions A and B as follows:

200 x 200 mm

300 x 300 mm

400 x 400 mm

The clearance is smaller by 50 mm each.

Customized solutions

Customized sizes can be produced in every dimension upon enquiry.

Locks

The access panel can be equipped with the following types of locks:

FS Four-square lock with white collar

Z

Round-cylinder lock with key

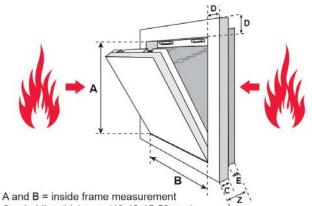
Profile cylinder lock with metal collar



Übersetzung?







C =cladding thickness (40-43-45-50 mm)

D = 55 mm

E = variable dimensions:

with 40 mm GKF = 40 mm with 43 mm GKF = 37 mm

with 45 mm GKF = 35 mm

with 50 mm GKF = 30 mm

Z = C+E = total thickness 80 mm

Dimension D remains constant. Dimension E varies according to GKF-thickness. Dimension C corresponds to the respective cladding thicknesses.

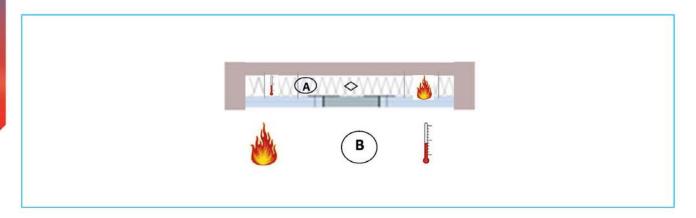
Dimension Z is 80 mm overall.

- Economical solution
- Delivery at short notice on request
- Quick and easy installation
- Sophisticated solution
- Flush installation in shaft walls
- Also suitable for tiling
- Installation possible in shaft walls of different producers

FF Systems - Introduction to the use of the F6 system

MEMBRANE CEILING

This type of false ceiling is built to protect everything immediately above it and is completely independent, for fire prevention purposes, from the ceiling to which it is anchored. It differs from collaborative ceilings, which are a simple covering designed to improve the fire resistance of an existing ceiling, but without giving protection to the systems present in the cavity.



The F6 FF Systems system for false ceilings has been designed to be inserted in membrane ceilings and thanks to the passing of strict fire tests, it allows the inspection of everything that may be between the false ceiling and the attic with the relative fire resistance achieved.

Anything inserted immediately behind the hatch is protected and vice versa.

Tests carried out according to standard 1364-2 / removable access panel.



Access panel fire resistance

System F6 - 60 - For ceilings



Description

The access panel consists of aluminium profiles with plasterboard inlay Fireboard 30 mm (2 x 15 mm).

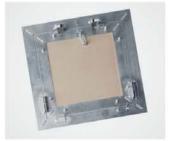
Both outer and inner frame of the access panel consist of four single frames, which are firmly connected due to a special welding process.

The access panel is equipped with a catchwire. In order to avoid accidents, this safety-system has to be secured after each opening.

A joint gap of 2.5 mm is visible between outer frame and door leaf, which is equipped with a circumferential fire-resistant seal (foaming). The concealed snap locks open the access panel when pressure is applied to the flap on the spring loaded latch side.









Capabilities

In non-bearing plasterboard ceilings of the fire resistance class FI60

Tested in accordance with the "European Norms EN 1364-2 and EN 1634-3".



The access panel fire resistance is available in the following standard sizes. Dimensions A and B as follows:

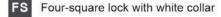
- 200 x 200 mm
- 300 x 300 mm
- 400 x 400 mm
- 500 x 500 mm
- 600 x 600 mm
- tested up to 800 x 800 mm

Customized solutions

Customized sizes can be produced in every dimension upon enquiry.

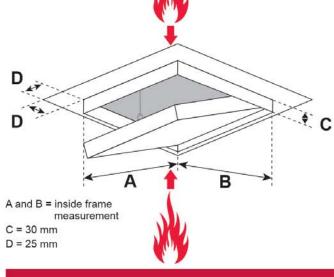
Locks

The access panel can be equipped with the following types of locks:



z Round-cylinder lock with key

Profile cylinder lock with metal collar



- Economical solution
- Delivery at short notice on request
- Quick and easy installation
- Sophisticated solution
- Flush installation in plasterboard ceilings
- Fire-resistant layer on the reverse side is no longer necessary



Description

System F6 - 90 - For ceilings

The access panel consists of aluminium profiles with plasterboard inlay GKF 40 mm, 43 mm, 45 mm or 50 mm.

Access panel fire resistance

Both, an outer and an inner frame of the access panel consist of four single frames, which are firmly connected due to a special welding process.

The fire-resistant double-layer cladding on the reverse side meets the required fire resistance standard. The access panel is equipped with two catchwires. In order to avoid accidents, this safety-system has to be secured after each opening. A joint gap of 1.5 mm is visible between outer frame and door leaf, which is equipped with a circumferential fire-resistant seal (foaming). The concealed snap locks open the access panel when pressure is applied to the flap on the spring loaded latch side.

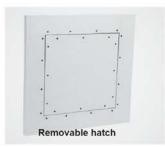












Capabilities

In non-load bearing ceilings of the fire resistance class:

- EI90 with cladding of 40 mm
- El90 with cladding of 43 mm
- El90 with cladding of 45 mm
- EI90 with cladding of 50 mm

Tested in accordance with the "European Norms EN 1364-2 and EN 1634-3".

Dimensions

The access panel fire resistance is available in the following standard sizes. Dimensions A and B as follows:

- 200 x 200 mm
- 500 x 500 mm
- 300 x 300 mm
- = 600 x 600 mm
- 400 x 400 mm
- Tested up to 800 x 800 mm

Dimension D remains constant. Dimension E varies according to GKF-thickness. Dimension C corresponds to the respective cladding thicknesses.

Customized solutions

Customized sizes can be produced in every dimension upon enquiry.

Locks

The access panel can be equipped with the following types of locks:

FS Four-square lock with white collar

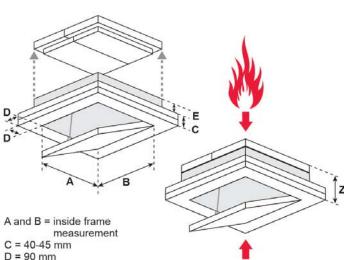
Round-cylinder lock with key

D7

Profile cylinder lock with metal collar







Particular advantages of our system

■ Economical solution

E = variable dimension

Z = total height = 110 mm

- Delivery at short notice on request
- Quick and easy installation
- Sophisticated solution
- Flush installation in ceilings

esistance



Access panel fire resistance

System F6 - 120 - For ceilings



Description

The access panel consists of aluminium profiles with plasterboard inlay Fireboard 50 mm.

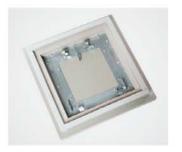
Both outer and inner frame of the access panel consist of four single frames, which are firmly connected due to a special welding process. The fire-resistant double-layer on the reverse side meets the required fire resistance class. The access panel is equipped with two catchwires.

In order to avoid accidents, this safety-system has to be secured after each opening.

A joint gap of 2.5 mm is visible between outer frame and door leaf, which is equipped with a circumferential fire-resistant seal (foaming). The concealed snap locks open the access panel when pressure is applied to the flap on the spring loaded latch side.











In non-bearing plasterboard ceilings of the fire resistance

Tested in accordance with the "European Norms EN 1364-2 and EN 1634-3".



The access panel fire resistance is available in the following standard sizes. Dimensions A and B as follows:

- 200 x 200 mm
- 300 x 300 mm
- 400 x 400 mm

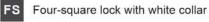
Dimensions D and E remain constant. Dimension C corresponds to the respective cladding thicknesses.

Customized solutions

Customized sizes can be produced in every dimension upon enquiry.

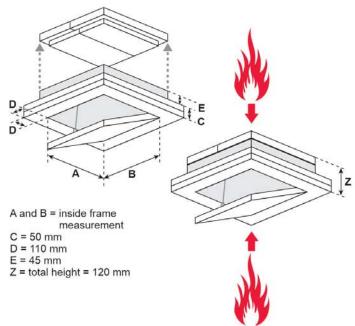
Locks

The access panel can be equipped with the following types of locks:



z Round-cylinder lock with key

Profile cylinder lock with metal collar



- Economical solution
- Delivery at short notice on request
- Quick and easy installation
- Sophisticated solution
- Flush installation in plasterboard ceilings



FF Systems - Introduction to the use of the BMW system for masonry Masonry walls/cavity walls or blocks

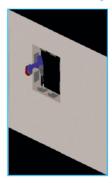
MASONRY CAVITY OR WALL

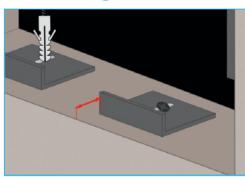
A masonry cavity is a vertical septum that alone protects, for fire protection purposes, the installations that may be behind it.

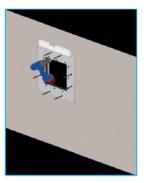
The F5 FF Systems system has passed stringent fire tests that allow it to be used in masonry, block construction.

In this case, any type of rigid construction is permitted as long as it has its own fire rating equal to or greater than the F5 system used, it is at least 10 cm thick and it has a density of the material used of at least 650 kg/mc.

Example of mounting an F5 hatch on a block wall:







Everything immediately behind the hatch is protected and vice versa.

Tested in accordance with EN 1364-1.



Access panel fire resistance

System BMW - For solid walls



Description

The access panel consists of aluminium profiles with plasterboard inlay GKF 40 mm (EI90).

Both, an outer and an inner frame of the access panel consist of four single frames, which are firmly connected due to a special welding process. The fireresistant double-layer cladding on the reverse side meets the required fire resistance standard. The access panel is equipped with two catchwires. In order to avoid accidents, this safety-system has to be secured after each opening.

A joint gap of 1.5 mm is visible between outer frame and door leaf, which is equipped with a circumferential fire-resistant seal (foaming). The concealed snap locks open the access panel when pressure is applied to the flap on the spring loaded latch side.

Using the enclosed masonry straps, the access panel can be fixed easily into solid walls.









In solid walls with the fire resistance class EI90/EI120:

for all suitable solid wall constructions

Tested in accordance with the "European Norms EN 1634-1 and EN 1634-3".

Dimensions

The access panel fire resistance is available in the following standard sizes. Dimensions A and B as follows:

The access panel can be equipped with the following types

- 200 x 200 mm
- 300 x 300 mm
- 400 x 400 mm
- 500 x 500 mm
- 600 x 600 mm
- tested up to H: 1500 x B: 1000 mm

The clearance is smaller by 50 mm each.

of locks: EI90:

FS Four-square lock with white collar

Round-cylinder lock with key

PΖ Profile cylinder lock with metal collar

EI120:

Four-square lock with white collar





with 40 mm GKF = 40 mm with 43 mm GKF = 37 mm with 45 mm GKF = 35 mm

A and B = inside frame measurement

C = cladding thickness (40-43-45-50 mm)

E = variable dimensions:

D = 57 mm

with 50 mm GKF = 30 mm

Z = C+E = total thickness 80 mm

- Economical solution
- Delivery at short notice on request
- Quick and easy installation
- Sophisticated solution
- Flush installation in solid walls
- Also suitable for tiling or plastering

Access panel Jumbo System fire resistance System for plasterboard walls, shaft walls and solid brickness wall

Description

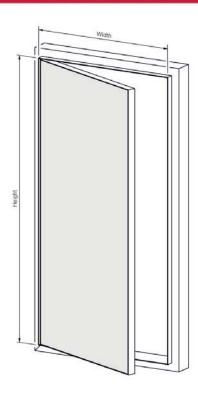
Fire resistance EI30

This access panel offer installation with invisible frame and hinges.

The inner frame consist of a solid aluminium welded frame, and the outer one is produced with a special welding system on every profile. A joint gap of 3 mm is visible between outer frame and door leaf, which is equipped with a circumferential fire-resistant seal (foaming). The snap locks, invisibles, can be open only with a light pressing. It's possible to apply others kind of locks in order to avoid unauthorized access. Special solid hinges allow to lateral open, to right or to left (on requested).



Tested in accordance with EN 13501-2 and EN 1634-3 (+EN 1634-3 Smoke resistant test)







Application possibilities

- Plasterboard walls (non-load-bearing) fire resistant El30
- Solid brickness wall, fire resistant El30

Dimensions

Custom on request limited as follow:

- Width: min. 500 mm / max. 800 mm
- Height: min. 800 mm / max 1800 mm

(Tested up to L. 800 mm x H. 1800 mm)

Locks

The access panel can be equipped with the following types of locks:

- Four-square lock with white collar FS
- Z Round-cylinder lock with key
- Profile cylinder lock with metal collar

- Fast delivery
- Quick installation
- Invisible outer frame and hinges
- Sturdy aluminum frame
- Lateral opening
- Fire resistance El30 testing



FF Systems - Passive fire protection

use of FF SYSTEMS access panel

	KIND OF ACCESS PANEL	TEST RESULT	SYSTEMS	TESTED SIDE	max. SIZE [mm] base x height	MINIMUM SUBSTRATE THICKNESS [mm]	TEST	OPENING	ACCESS PANEL
WALL	F4	El 60	PARTITION/ COUNTER WALL	BOTH SIDES*	1000x1000	125	EN	VASISTAS	EXTRACTABLE
	F4	El 90	PARTITION/ COUNTER WALL	BOTH SIDES*	1000x1000	125	EN	VASISTAS	EXTRACTABLE
	F4	EI 120	PARTITION/ COUNTER WALL	BOTH SIDES*	1000x1000	125	EN	VASISTAS	EXTRACTABLE
CAVITY AND COUNTER WALL	F5	El 30	SELF- SUPPORTING CAVITY/ROOF	INDOOR OUTDOOR	800x800	25	EN	VASISTAS	EXTRACTABLE
	F5	El 60	SELF- SUPPORTING CAVITY/ROOF	INDOOR OUTDOOR	800x800	30	EN	VASISTAS	EXTRACTABLE
	F5	El 90	SELF- SUPPORTING CAVITY/ROOF	INDOOR OUTDOOR	1000x1500	40	EN	VASISTAS	EXTRACTABLE
	F5	EI 120	SELF- SUPPORTING CAVITY/ROOF	INDOOR OUTDOOR	1000x1500	40	EN	VASISTAS	EXTRACTABLE
MASONRY CAVITY	BMW	EI 90	MASONRY CAVITY/ WALL	INDOOR OUTDOOR	1000x1500	100	EN	VASISTAS	EXTRACTABLE
	BMW	EI 120	MASONRY CAVITY/ WALL	INDOOR OUTDOOR	1000x1500	100	EN	VASISTAS	EXTRACTABLE
FALSE CEILING	F6	EI 60	FALSE CEILING MEMBRANE	FROM TOP TO BOTTOM	800x800	30	EN		EXTRACTABLE
	F6	El 90	FALSE CEILING MEMBRANE	FROM TOP TO BOTTOM	800x800	40	EN		EXTRACTABLE
	F6	EI 120	FALSE CEILING MEMBRANE	FROM TOP TO BOTTOM	800x800	50	EN		EXTRACTABLE



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