

# Pharmaceutical Cleanrooms



## SM60 panel

Metal facing and rock wool core



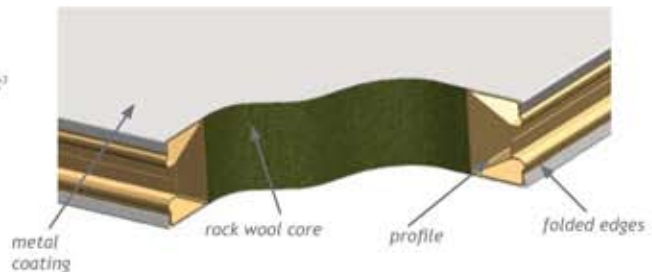
Non combustible modular panel thickness 60 mm 2.36", it is perfectly airtight and insulating, with ultra smooth surfaces for easy maintenance. Made from non-particle emission time-stable materials, it is designed for high-tech clean rooms that must be kept completely free of micro-biological contamination.



### Composition

#### Core

Non hydrophile rock wool  
Density : 80 kg/m<sup>3</sup> 4.99 lb/ft<sup>3</sup> (wall) or 100 kg/m<sup>3</sup> 6.24 lb/ft<sup>3</sup> (ceiling)  
Fire reaction (EN 13504-1): A1  
Glue : Polyurethane bi-component



#### Facings

Support	Coatings according to NF EN 10169	Thickness (in mm)		Class according to XP P 34-301
<u>Coated or pre-lacquered sheet</u> hot galvanised Z225, S250 GD+Z, according to NF EN 10326 standard	polyester 25 µm lacquer	0,6 0.02"	0,8 0.03"	IIIa
	PVDF 35 µm lacquer	0,6 0.02"		IVb
	PVC 120 µm film laminated	0,6 0.02"		IVb
	complex PET 55 µm film + PE lacquer	0,6 0.02"		IVb
<u>Stainless steel sheet</u> shades 470 LI, 304 L or 316 L	grain -400-, poli S4	0,6 0.02"	0,8 0.03"	Non significant
	PVC + PET 130 µm film	0,6 0.02"		

NB: on request, facings can be different on inside and outside faces (aspect, colour and/or thickness).

#### Profiles

Aluminium alloy 6060 T5 (EN 573 standard)  
Rustproof treatment (with bichromate or electro-zinc)

## Technical characteristics

## SM60 panel

## Panel

Thickness	60 mm 2.36"				
Dimensions	Width	Vertical		Horizontal	
		0,40 m 1.31' ; 0,60 m 1.97' ; 0,80 m 2.62' ; 1,00 m 3.28'	1,20 m 3.94'	0,40 m 1.31' ; 0,80 m 2.62'	1,20 m 3.94'
	Maxi. length	3,80 m 12.07'	5,90 m 19.35'	3,80 m 12.07'	5,90 m 19.35'
Thermal conductivity Coeff.	$\lambda = 0,041 \text{ W/m} \cdot ^\circ\text{C}$ 0.023 Btu.ft/h.ft <sup>2</sup> .°F				
Thermal transmission Coeff.	$U_c = 0,621 \text{ W/m}^2 \cdot ^\circ\text{C}$ 0.109 Btu/h.ft <sup>2</sup> .°F				
Acceptable resisting to buckling	$\geq 210 \text{ kPa}$ 30.46 PSI (2,1 daN/cm <sup>2</sup> ) 30.45 lbf/sp.in.				
Weight	17 kg/m <sup>2</sup> 3.48 lbs/sq.ft (2 sides 0,63 mm 0.02")				
Tightness in whole partition with silicon joint	$Q_s \leq 0,0027 \text{ m}^3/\text{h} \cdot \text{m}^2$ 0.0088 ft <sup>3</sup> /h.ft <sup>2</sup> under $\Delta P = 50 \text{ Pa}$ 0.007 PSI				

## Maximum acceptable loads in partition

Bending resistance, panels on 2 supports

Partition height (m)	2,50 8.20'	3,00 9.84'	3,50 11.48'	4,00 13.12'	$\geq 4,50$ 14.76'
q (daN/m <sup>2</sup> )	75 15.67 lbf/ft <sup>2</sup>	55 11.49 lbf/ft <sup>2</sup>	42 8.78 lbf/ft <sup>2</sup>	30 6.27 lbf/ft <sup>2</sup>	20 4.18 lbf/ft <sup>2</sup>

## Acceptable span in ceiling

		Walkable(*)	Non walkable
Without opening	-	2,40 m 7.87'	3,20 m 10.50'
With opening	If panel with opening, between 2 panels without opening	2,40 m 7.87'	3,20 m 10.50'
	If majority of panels with one to two opening by panel	2,00 m 6.56'	2,80 m 9.19'
	If opening -nonstandard- or important frequency of opening	1,60 m 5.25'	2,40 m 7.87'

Span = distance between two secured pieces, longways of panel.

 Loads take into account for the measures = 60 daN/m<sup>2</sup> 12.53 lbf/ft<sup>2</sup> (panel weight included, panel on 2 supports) + 150 daN 337.21 lbf (if accessible ceiling, ponctual load at any point of the ceiling).

Small sections can be cut out (largeur &lt; 600 mm 1.96') without compromising the safety of the ceiling.

 With -nonstandard- openings (width > 0,665 m 2.18' and/or area > 0,45 m<sup>2</sup> 4.84 ft<sup>2</sup>) it is necessary to provide additional fastening joist.

(\*): The SM60 ceiling must not be considered as a technical platform. For maintenance, it supports the passage of one person.

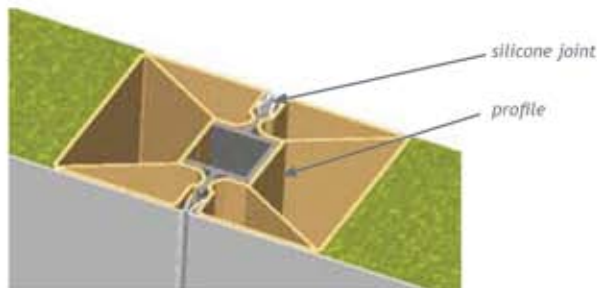
## Installation

## SM60 panel

### Assembly

Profiles integrated in the thickness of SM panels, enable the assembly of panels and the passage of cables. The system make use of aluminium key that is inserted into the longitudinal grooves in vertical panels and in the 4 sides for ceiling panels.

A mounting «non-progressive» of the partition is possible, without link key, for a dismantling panel by panel.

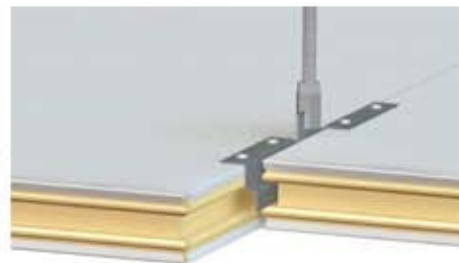


*Assembly between panels*



### Suspension

A metallic piece is integrated in the groove profiles in order to fixe the ceiling panels to the building structure.



*Fixing system of ceiling*

### Tightness

- Silicon mastic (quality-label SNJF ; complies FDA 21 CFR 175.105)
- Mastic MS polymer
- Flexible sealant in reticulate polyethylene, density 50 kg/m<sup>3</sup> 3.12 lb.ft<sup>3</sup>, in the form of adhesive strip (over the ceiling)

## Reports and approvals

### Fire reaction :

French class = M0

Euroclass = A2-s1,d0

Flame spread index (ASTM E84-01) = Class 1

Class 0 (BS 476 part 6&7)

Flame spread (BS 476 part 7) = Class 1

Fire spread index (BS 476 part 6) = 0,7

### FM Global approval:

FM Approvals (standard 4880) = Class 1

*Consult the data n°0112 «Reports and approvals».*

## SL60 panel

High pressure laminated facings and rock wool core



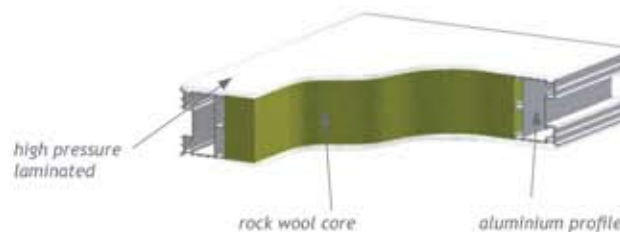
Modular panel of thickness 60 mm 2.36", it consists in insulated mineral wool core bonded between 2 high pressure laminated facings. It allows an easy maintenance thank to ultra smooth surfaces and it is furthermore very resistant against shocks and chemical aggressions.



### Composition

#### Core

Rock wool  
Density : 88 kg/m<sup>3</sup> 5.49 lb/ft<sup>3</sup>  
Fire reaction (EN 13504-1): A1  
Glue : Polyurethane bicomponent



#### Facings

High pressure laminated facing (HPL), standard compact CGS (according to NF EN 438)

Fire reaction M1  
Thickness 4 mm 0.16"  
Weight 5,68 kg/m<sup>2</sup> 1.16 lb/ft<sup>2</sup>

#### Profiles

Aluminium alloy 6060 T5 (EN 573 standard)  
Rustproof treatment (with bichromate or electro-zinc)

### Technical characteristics

#### Panel

Thickness	60 mm 2.36"		
Dimensions	Width	mini = 0,10 m 0.33'	maxi = 1,20 m 3.94'
	Maxi. length	3,00 m 9.84'	
Weight	17,3 kg/m <sup>2</sup> 3.54 lbs/sq.ft		

#### Maximum acceptable loads in partition

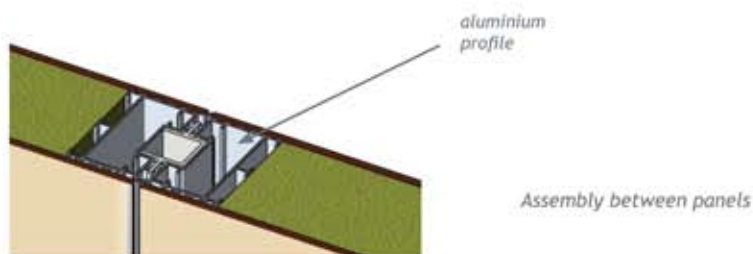
Bending resistance, panels on 2 supports : span ≤ 3,00 m 9.84' => q = 60 daN/m<sup>2</sup> 12.45 lb/ft<sup>2</sup>

## Installation

## SL60 panel

### Assembly

SL panels integrate in their thickness, aluminium profiles enable the assembly of panel and the passage of cables. The assembly is made with an aluminium key which fits into the groove of the longitudinal shores for the vertical panels.



### Tightness

The tightness is made by silicon mastic (fungicidal - quality-label SNJF ; complies FDA 21 CFR 175.105) avec ancrage mécanique sur les profilés aluminium.

## Reports and approvals

### Fire reaction :

French class = M1

Euroclass = B-s1,d0

Consult the data n°0112 -Reports and approvals-

NB : Do not use in non controlled environment (temperatures and hygrometry). Products to be stored under controlled ambient temperature from 10°C to 30°C (50°F to 86°F), and RH 40% to 60%.

## High Pressure Laminated



The high pressure laminated facings are highly resistant to shocks, abrasion, scratching and chemical aggression. They provide long time duration life to walls, both for wear and appeal. Their non-porous surface offers very good chemical inertia.



Used as partition, lining and door leaves facings, the HPL facing addresses all needs in hospital environments, chemical facilities and laboratories.

### Characteristics

Thicknesses : 4 mm (0.157 inch) or 6 mm (0.236 inch)

Finishing : High pressure laminated facing (HPL), standard compact CGS (according to NF EN 438).

Fire behaviour : B-s2,d0 according to the Euroclasses.  
CE marking

### Resistance



### Resistance to chemical products used during the cleaning process stage

- High resistance to :
- solvents
  - diluting agents
  - detergents
  - cleaning products
  - disinfectants
  - coloring agents
  - bleaches
  - cosmetics.....

Some highly coloured or oxidizing substances can however leave stains when they are in contact with the surface for long periods. The surface must be systematically and frequently cleaned.


HPL panels refer to european regulation EN438.

NB : Do not use in non controlled environment (temperatures and hygrometry). Products to be stored under controlled ambient temperature from 10°C to 30°C (50°F to 86°F), and RH 40% to 60%.


## HPL colours chart for doors leaves and panels

Note : for doors


Colours available for leaves dimensions until 1200 mm. 

Colours available for leaves dimensions until 1400 mm. 




754- bianco 2 



1041- beige 



1413-silver bleu 



1021-rosa siria 



1068-giallo vivo 




1023-grigio scuro 



1175-sole 



1007-rosso 



1183-rosso rubino 



1010-verde thai 



1383-verde 



1060-verde versailles 



1075-azzurrinno 



1204-bleu faenza 



1079-bleu oceano 

Non contractual colour chart.



## Connections

### SI-SM-ST-SL 60 panel

The connections of SI, SM, ST, SL panels between themselves, with the floor or with the ceiling are adapted to the environment cleaning and decontamination restrictions the more strict.

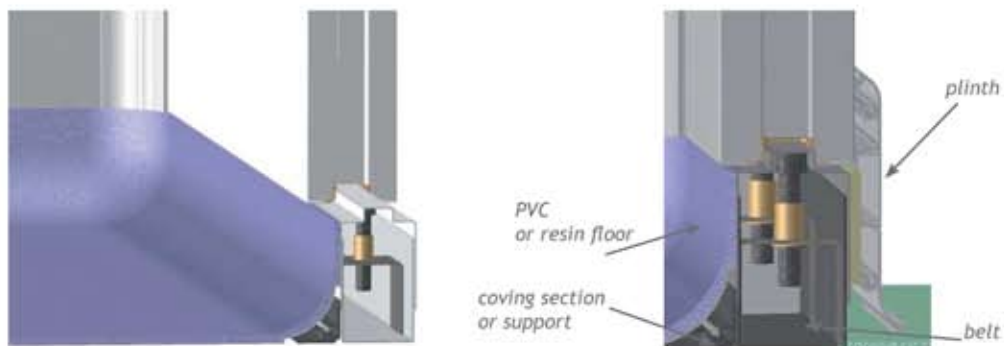
#### Link with floor

##### By means of an adjustable metallic belt

The adjustable metallic belt enables the level to be adjusted while providing for a 5 mm 0.2" undercut here and there to enable the floor to be flush with the partition.

A coving profile fillet is available as an option to provide support for floor upsweeps (PVC or resin). On the outside face, a plinth can be installed.

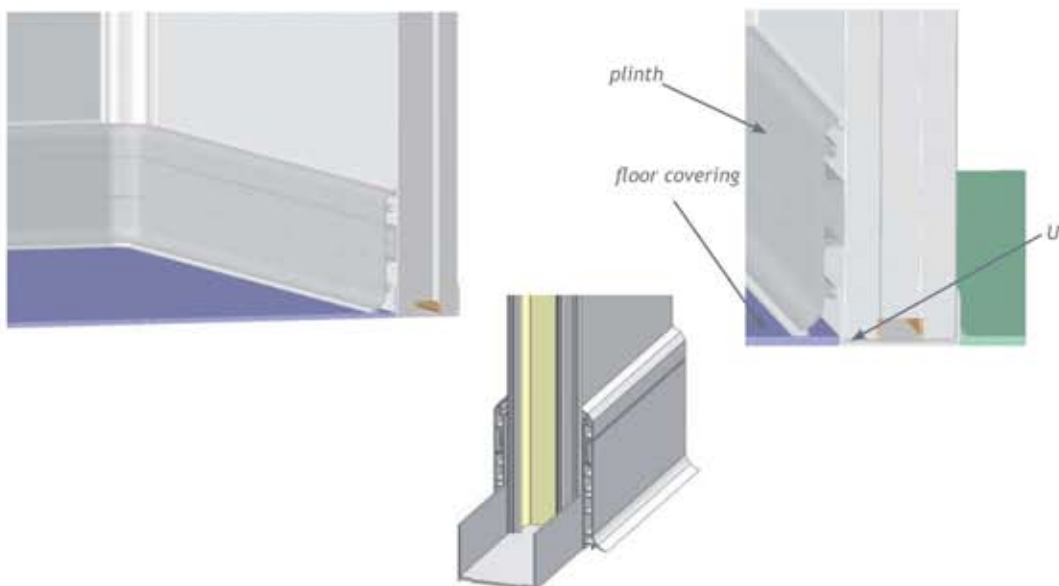
Dimensions : 80 (-10 +30) x 50 mm 3.15" (-0.39"+1.18") x 1.97"



##### By U-shaped piece

Partition can be linked to the floor with a lacquered aluminium or PVC U-profile, 60 mm 2.36". A plinth on one side or on each side of the partition ensures the finish.

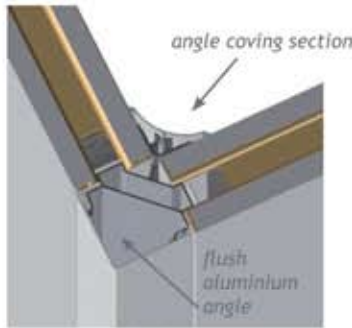
Principle: Installation of U-profile on finished floor.



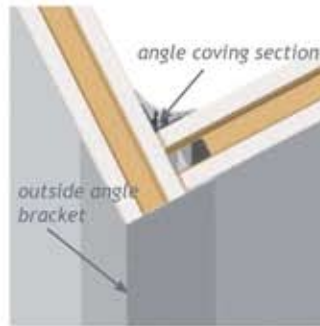
## Junctions between vertical panels

## Connections

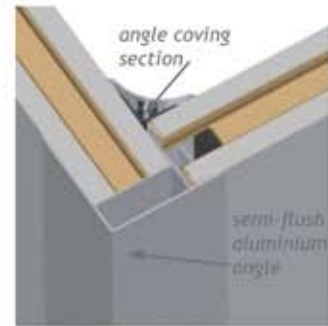
### Junction at coving profile



With a flush angle post

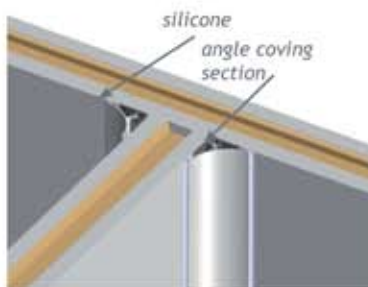


With a complement profile

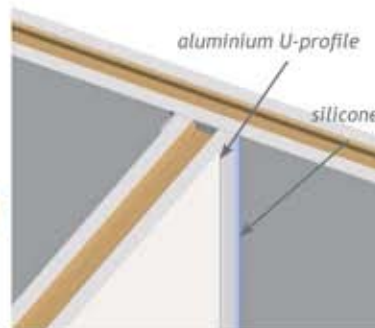


With semi-flush angle post

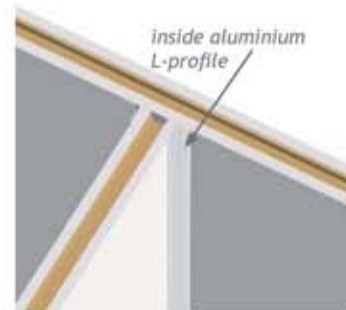
### Junction in partition



With PVC, aluminium, or stainless steel angle coving section

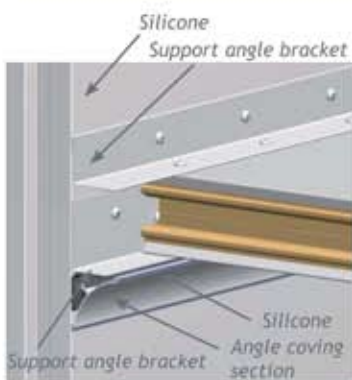


With aluminium U-profile

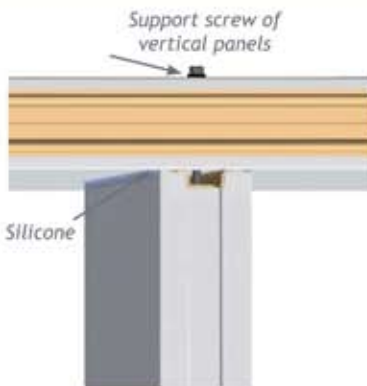


With aluminium L-profile

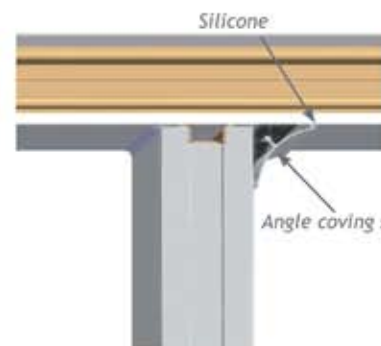
## Junctions between ceilings and partitions



Junction ceiling to partition with load-bearing support on partition



Partition under ceiling junction by direct screwing



Partition under ceiling junction with fixing by angle coving section

## Airtight double flush glazing



Glazings are monobloc elements of thickness 60 mm 2.36" consists in two laminated glasses mounted flush on a black aluminium profile with tightness on the periphery. They can be incorporated into panels on site (SI, SM, ST, SL).



### Application

This glazing can be used in premises where the relative humidity not exceeded 75% and with a temperature included between +10 °C 50 °F and + 40 °C 104 °F.

The use of 100 mm 3.94" wide mullions increases the glazed surface (SI, SM range).



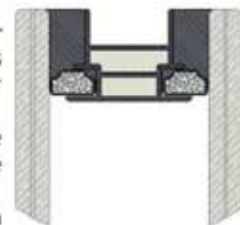
Glazing between 2 panels  
(SI/SM/ST/SL)

### Characteristics

VE60 glazings are bi-glasses consisted with a black (RAL 9005) aluminium profile on which is bonded 2 laminated glasses 44.2 with 2 peripheral inserts (containing molecular riddle or dryer).

A silicon joint is extruded between the glasses and the aluminium profile in order to ensure the tightness, leaving the black (RAL 9005) peripheral aluminium profile visible. This profile enables the assembly between panels or glazings.

A decompression valve can be set on glazings send by plane or mounted at more than an altitude of 1100 m 3609'.



### Standard dimensions

Height x Width (mm)

800 x 800 2.62'x2.62'

800 x 1000 2.62'x3.28'

800 x 1200 2.62'x3.94'

1000 x 1000 3.28'x3.28'

1000 x 1200 3.28'x3.94'

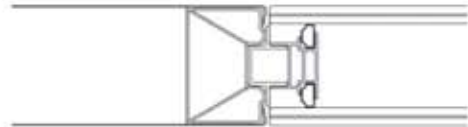
1200 x 1200 3.94'x3.94'

Other dimensions on request.

## Installation

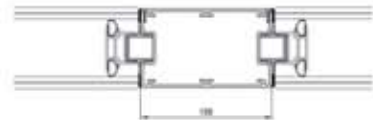
## Airtight double flush glazing

Glazings are incorporated on site into SI, SM or SL panels or between panels, window breasts and string courses. A silicon joint assures the tightness between juxtaposed flush elements.



## Mullion between glazing

Using mullions enables to increase the glazing surface.



This lacquered aluminium profiles are put between glazings in order to keep the partition rigidity. They can be used for cable passage.

## Variant with interated blind only for glazings with thickness 60 mm

Only for VE60 glazings, It is possible to integrate white Venetian blinds, manuals or automatics, and adjustables.

In manual control with rod or thin cord.

In automatic, control with remote control or button.



## Mullion between glazings



Positioned between two glazings, the mullion allows to stiffen the partition. It can be installed in a partition of thickness 60 mm 2.36" made of Ultra-Clean line panels.

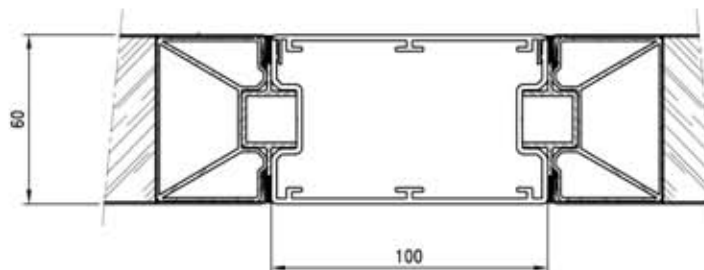


### Characteristics

Cover and support in lacquered aluminum, width 100 mm 3.93", thickness 60 mm 2.36".

Basic length of 4 m 13.12' with specific adaptation piece at bottom for assembly on adjustable belt.

It also allows the passage of cables or other fluid.



## Electrical race way



The electrical race way enables the passage of cables and accessories to be grouped between two 60 mm 2.36" thick panels of Ultra-Clean line.



### Descriptif

Support and cover are in lacquered aluminium, with a width 100 mm 3.93", a thickness 60 mm 2.36", a basis length of 4 m 13.12' with a T-bracket for the mounting on adjustable belt.

As the cover is fixed last, the cables could be set up after the partition mounting.

All is totally sunken in the partition thickness and is flush on the two sides without visible fixings.

### Technical characteristics

The removable cover enables to integrate different electrical accessories on semi-flush or flush way.

- power socket
- switch
- push button
- signal lamps (with colourless, red, orange or green bowl)

The electrical race way could be divided strong current-weak current.

Openings, only on one part of the cover, are possible in factory or on site.

Installation is the same as mullion mounting.



NB : electrical accessories are not supplied.

## Double flush door

Flush doorframe for panels 60 mm 2.36" thick, 60 mm 2.36" leaf, aluminium honeycomb or mineral wool core



Service door with flush doorframe on the 2 sides of the partition, the leaf consists in aluminium honeycomb or mineral wool core bonded between 2 metallic facings.

### Technical characteristics

#### Leaf

- 1 or 2 leaves thickness 60 mm 2.36"
  - sandwich structure
  - aluminium honeycomb or mineral wool core and aluminium profile of structure
  - welded-mechanic smooth galvanised steel sheet 8/10<sup>th</sup> 0.031" and heat-cured epoxy-polyester powder coating, iceberg white colour (near RAL 9010)
- Options
- colours according to the chart (see card N°0907)

#### Doorframe

- one-piece double flush doorframe for panels of thickness 60 mm
  - lacquered aluminium frame, heat-cured epoxy-polyester powder coating
- Options
- stainless steel doorframe
  - Detachable overpanel 630 mm 2.07', 730 mm 2.39' ou 830 mm 2.72' for doors of dimensions 2040 x 1660 mm 6.69'x5.44' and 2040 x 2060 mm 6.69'x6.76'

Left or right opening.

#### Tightness

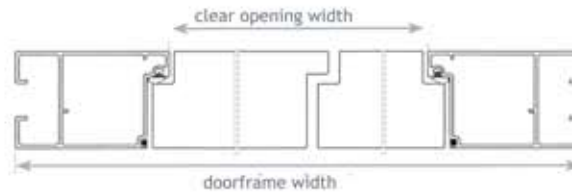
closed profile sealant, 10 mm 0.39" trimming at the bottom of the door.



standard equipment	options	see card N°
<b>1 or 2 leaves door</b>		
adjustable white lacquered aluminium hinges	adjustable black or white composite hinges adjustable stainless steel finishing aluminium hinges stainless steel hinges (non adjustable)	GSP-0603-E/A
white PVC handle with cylinder-type safety lock (single keyway)	coloured PVC handle with european profile lock (single keyway) stainless steel handle with european profile lock (single keyway) white PVC pull handle (without lock) with push plate stainless steel pull handle (without lock) with push plate ergonomic handle	GSP-0602-E/A
stamped stainless steel strike		
	panic push bar	GSP-0604-E/A
	floor gasket	GSP-0607-E/A
	brush seal	
	door butt	GSP-0606-E/A
	wall mounting door closer	GSP-0605-E/A
	double flush glass panel 640x350 mm 2.10'x1.15', 800x500 mm 2.62'x1.64', 1000x500 mm 3.28'x1.64'	GSP-0218-E/A
	stainless steel sheet or grey PVC kick plate, height 850 mm 2.79' on 1 or 2 sides	GSP-0612-E/A
	airlock management kits	GSP-0802-E/A
<b>2 leaves door</b>		
lever bolt top and bottom on half fixed leaf		
	closing selector	GSP-0605-E/A

## Dimensions

## Double flush door



	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)
1 leaf	2040 x 630 80"x25"	2039 x 609 80"x24"	2135 x 801 84"x31"	2240 x 630 88"x25"	2239 x 609 88"x24"	2335 x 801 92"x31"			
	2040 x 830 80"x33"	2039 x 809 80"x32"	2135 x 1001 84"x39"	2240 x 830 88"x33"	2239 x 809 88"x32"	2335 x 1001 92"x39"			
	2040 x 930 80"x37"	2039 x 909 80"x36"	2135 x 1101 84"x43"	2240 x 930 88"x37"	2239 x 909 88"x36"	2335 x 1101 92"x43"	2440 x 930 96"x37"	2439 x 909 96"x36"	2535 x 1101 99"x43"
	2040 x 1030 80"x41"	2039 x 1009 80"x40"	2135 x 1201 84"x47"	2240 x 1030 88"x41"	2239 x 1009 88"x40"	2335 x 1201 92"x47"	2440 x 1030 96"x41"	2439 x 1009 96"x40"	2535 x 1201 99"x47"
	2040 x 1130 80"x45"	2039 x 1109 80"x44"	2135 x 1301 84"x51"						
2 leaves	2040 x 1260 80"x50"	2039 x 1244 80"x49"	2135 x 1436 84"x56"	2240 x 1260 88"x50"	2239 x 1244 88"x49"	2335 x 1436 92"x56"			
	2040 x 1460 80"x58"	2039 x 1444 80"x57"	2135 x 1636 84"x64"						
	2040 x 1660 80"x65"	2039 x 1644 80"x65"	2135 x 1836 84"x72"	2240 x 1660 88"x65"	2239 x 1644 88"x65"	2335 x 1836 92"x72"	2440 x 1660 96"x65"	2439 x 1644 96"x65"	2535 x 1836 99"x72"
	2040 x 1860 80"x73"	2039 x 1844 80"x73"	2135 x 2036 84"x80"						
	2040 x 2060 80"x81"	2039 x 2044 80"x80"	2135 x 2236 84"x88"	2240 x 2060 88"x81"	2239 x 2044 88"x80"	2335 x 2236 92"x88"	2440 x 2060 96"x81"	2439 x 2044 96"x80"	2535 x 2236 99"x88"

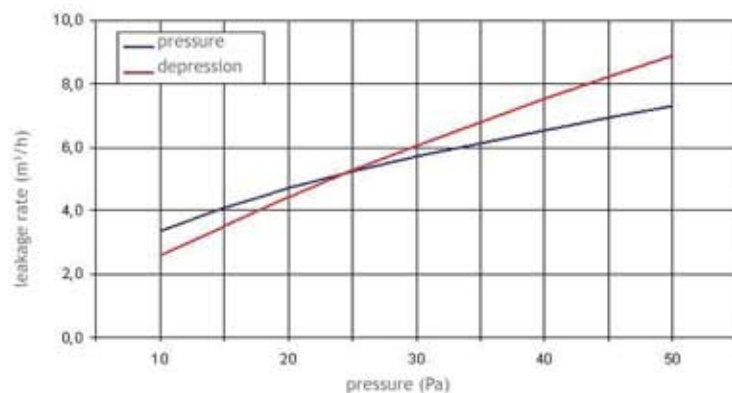
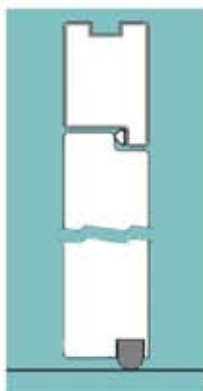
## Permeability

Nota :

- a door is under pressure when the action of the air tends to stick the leaf on the doorframe
- a door is in vacuum when the action of the air tends to spread the leaf of the doorframe

### Air leakage rate for single leaf hinged door with floor gasket

The permeability of the double flush doors with floor gasket is note in report n° 2612115 made by CETIAT.





## Double flush door with HPL leaf

Flush doorframe for panels 60 mm 2.36" thick, 60 mm 2.36" leaf, mineral wool core



Service door with flush doorframe on the 2 sides of the partition, the leaf consists in mineral wool core bonded between 2 high pressure laminated facings.

### Technical characteristics

#### Leaf

- 1 or 2 leaves thickness 60 mm 2.36"
- sandwich structure
- mineral wool core and aluminium profile of structure
- decorative high pressure laminated facing, thickness 4 mm (colour according to the card GSP-0908)
- mono component polyurethane glue
- white aluminium edges (close to RAL 9010)

#### Doorframe

- one-piece double flush doorframe for panels of thickness 60 mm
- lacquered aluminium frame, heat-cured epoxy-polyester powder coating

#### Options

- stainless steel doorframe

Left or right opening.

#### Tightness

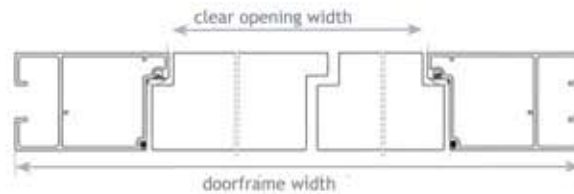
closed profile sealant, 10 mm 0.39" trimming at the bottom of the door.



standard equipment	options	see card N°
<b>1 or 2 leaves door</b>		
adjustable white lacquered aluminium hinges	adjustable black or white composite hinges adjustable stainless steel finishing aluminium hinges stainless steel hinges (non adjustable)	GSP-0603-E/A
white PVC handle with cylinder-type safety lock (single keyway)	coloured PVC handle with european profile lock (single keyway) stainless steel handle with european profile lock (single keyway) white PVC pull handle (without lock) with push plate stainless steel pull handle (without lock) with push plate ergonomic handle	GSP-0602-E/A
stamped stainless steel strike		
	panic push bar	GSP-0604-E/A
	wall mounting floor gasket	GSP-0607-E/A
	brush seal	
	door butt	GSP-0606-E/A
	wall mounting door closer	GSP-0605-E/A
	vision panel 800x500 mm 2.62'x1.64'	GSP-0218-E/A
	stainless steel sheet or grey PVC kick plate, height 850 mm 2.79' on 1 or 2 sides	GSP-0612-E/A
	airlock management kits (electromagnetic lock with wall mounting counter plate)	GSP-0802-E/A
<b>2 leaves door</b>		
lever bolt top and bottom on half fixed leaf		
	closing selector	GSP-0605-E/A

## Dimensions

## Double flush door



	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)
1 leaf	2040 x 630 80"x25"	2039 x 609 80"x24"	2135 x 801 84"x31"	2240 x 630 88"x24"	2239 x 609 88"x24"	2335 x 801 92"x31"			
	2040 x 830 80"x33"	2039 x 809 80"x32"	2135 x 1001 84"x39"	2240 x 830 88"x32"	2239 x 809 88"x32"	2335 x 1001 92"x39"			
	2040 x 930 80"x37"	2039 x 909 80"x36"	2135 x 1101 84"x43"	2240 x 930 88"x36"	2239 x 909 88"x36"	2335 x 1101 92"x43"	2440 x 930 96"x36"	2439 x 909 96"x36"	2535 x 1101 99"x43"
	2040 x 1030 80"x41"	2039 x 1009 80"x40"	2135 x 1201 84"x47"	2240 x 1030 88"x40"	2239 x 1009 88"x40"	2335 x 1201 92"x47"	2440 x 1030 96"x40"	2439 x 1009 96"x40"	2535 x 1201 99"x47"
2 leaves	2040 x 1260 80"x50"	2039 x 1244 80"x49"	2135 x 1436 84"x56"	2240 x 1260 88"x49"	2239 x 1244 88"x49"	2335 x 1436 92"x56"			
	2040 x 1660 80"x65"	2039 x 1644 80"x65"	2135 x 1836 84"x72"	2240 x 1660 88"x65"	2239 x 1644 88"x65"	2335 x 1836 92"x72"	2440 x 1660 96"x65"	2439 x 1644 96"x65"	2535 x 1836 99"x72"
	2040 x 2060 80"x81"	2039 x 2044 80"x80"	2135 x 2236 84"x88"	2240 x 2060 88"x81"	2239 x 2044 88"x80"	2335 x 2236 92"x88"	2440 x 2060 96"x81"	2439 x 2044 96"x80"	2535 x 2236 99"x88"



## Almost flush door

Almost flush steel doorframe, thickness 60 mm 2.36", sheet leaf 40 mm 1.57"



Service door with almost flush doorframe on the 2 sides of the partition, the leaf consists in mineral wool core bonded between 2 metallic facings.

### Technical characteristics

#### Leaf

- 1 or 2 leaves of thickness 40 mm 1.57"
- sandwich structure
- mineral wool ou aluminium honey comb core and aluminium structure profile
- facings :
  - smooth galvanised steel sheet 6/10<sup>th</sup> 0.02" and heat-cured epoxy-polyester powder coating (colour according to the chart)
  - or stainless steel sheet 304 poli S4
- mono component polyurethane glue

#### Doorframe

- one-piece almost flush doorframe for panels of thickness 60 mm 2.36"
- aluminium alloy 6060T5 frame (NF EN 573 standard)

#### Tightness

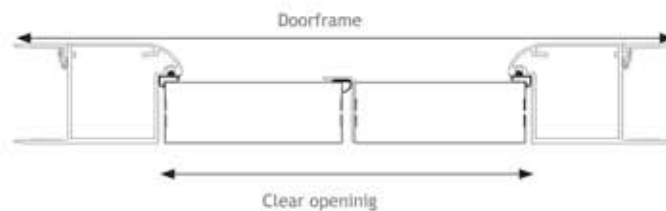
- sealant on 3 sides



standard	options	see card N°
<b>1 or 2 leaves door</b>		
adjustable white lacquered aluminium hinges	adjustable stainless steel finishing aluminium hinges stainless steel hinges (non adjustable)	GSP-0603-E/A
white PVC handles with cylinder-type safety lock (single keyway)	coloured PVC handle with european profile lock (single keyway) and stamped stainless steel lock box stainless steel handles with european profile lock (single keyway) and stamped stainless steel lock box white PVC pull handles (without lock) with push plate stainless steel pull handle (without lock) with push plate ergonomic handle	GSP-0602-E/A
stamped stainless steel lock box	panic push bar floor gasket brush seal push plate wall mounting door closer stainless steel sheet or grey PVC kick plate, height 850 mm 2.79' on 1 or 2 sides double flush glass panel 640 x 350 mm 2.10'x1.15', 800 x 500 mm 2.62'x1.64', 1000 x 500 mm 3.28'x1.64' contact switch airlock management	GSP-0604-E/A GSP-0607-E/A GSP-0605-E/A GSP-0612-E/A GSP-0218-E/A GSP-0802-E/A
<b>2 leaves door</b>		
lever bolt top and bottom on half fixed leaf	closing selector	GSP-0605-E/A

## Dimensions

## Almost flush door



	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)
1 leaf	2040 x 630 80"x25"	2039 x 609 80"x24"	2139,5 x 810 84"x31"	2240 x 630 88"x24"	2239 x 609 88"x24"	2339,5 x 810 92"x31"			
	2040 x 830 80"x33"	2039 x 809 80"x32"	2139,5 x 1010 84"x40"	2240 x 830 88"x33"	2239 x 809 88"x32"	2339,5 x 1010 92"x40"			
	2040 x 930 80"x37"	2039 x 909 80"x36"	2139,5 x 1110 84"x44"	2240 x 930 88"x36"	2239 x 909 88"x36"	2339,5 x 1110 92"x44"	2440 x 930 96"x36"	2439 x 909 96"x36"	2539,5 x 1110 100"x44"
	2040 x 1030 80"x41"	2039 x 1009 80"x40"	2139,5 x 1210 84"x48"	2240 x 1030 88"x40"	2239 x 1009 88"x40"	2339,5 x 1210 92"x48"	2440 x 1030 96"x40"	2439 x 1009 96"x40"	2539,5 x 1210 100"x48"
	2040 x 1130 80"x45"	2039 x 1109 80"x44"	2139,5 x 1310 84"x51"						
2 leaves	2040 x 1260 80"x50"	2039 x 1244 80"x49"	2139,5 x 1445 84"x57"	2240 x 1260 88"x49"	2239 x 1244 88"x49"	2339,5 x 1445 92"x57"			
	2040 x 1460 80"x58"	2039 x 1444 80"x57"	2139,5 x 1645 84"x65"						
	2040 x 1660 80"x65"	2039 x 1644 80"x65"	2139,5 x 1845 84"x73"	2240 x 1660 88"x65"	2239 x 1644 88"x65"	2339,5 x 1845 92"x73"	2440 x 1660 96"x65"	2439 x 1644 96"x65"	2539,5 x 1845 100"x73"
	2040 x 1860 80"x73"	2039 x 1844 80"x73"	2139,5 x 2045 84"x80"						
	2040 x 2060 80"x81"	2039 x 2044 80"x80"	2139,5 x 2245 84"x88"	2240 x 2060 88"x81"	2239 x 2044 88"x80"	2339,5 x 2245 92"x88"	2440 x 2060 96"x81"	2439 x 2044 96"x80"	2539,5 x 2245 100"x88"

## Almost flush door HPL leaf

Almost flush steel doorframe, thickness 60 mm 2.36", HPL leaf 40 mm 1.57"



Service door with almost flush doorframe on the 2 sides of the partition, the leaf consists in mineral wool core bonded between 2 metallic facings.

### Technical characteristics

#### Leaf

- 1 or 2 leaves of thickness 40 mm 1.57"
- sandwich structure
- mineral wool core and aluminium structure profile
- facings in high pressure laminated of thickness 4 mm. (colour according to the colour card GSP-0908)
- mono component polyurethane glue
- white lacquered aluminium edges (close to RAL 9010)

#### Doorframe

- one-piece almost flush doorframe for panels of thickness 60 mm 2.36"
- aluminium frame, paint according to the colour card GSP-0907.

#### Tightness

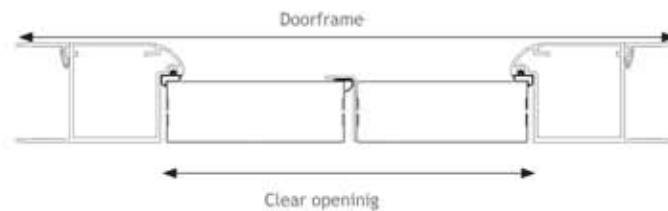
- sealant on 3 sides



standard	options	see card N°
<b>1 or 2 leaves door</b>		
adjustable white lacquered aluminium hinges	adjustable stainless steel finishing aluminium hinges stainless steel hinges (non adjustable)	GSP-0603-E/A
white PVC handles with cylinder-type safety lock (single keyway)	coloured PVC handle with european profile lock (single keyway) and stamped stainless steel lock box	GSP-0602-E/A
	stainless steel handles with european profile lock (single keyway) and stamped stainless steel lock box	
	white PVC pull handles (without lock) with push plate	
	stainless steel pull handle (without lock) with push plate	
stamped stainless steel lock box	ergonomic handle	
	panic push bar	GSP-0604-E/A
	floor gasket	GSP-0607-E/A
	brush seal	
	push plate	
	wall mounting door closer	GSP-0605-E/A
	stainless steel sheet or grey PVC kick plate, height 850 mm 2.79' on 1 or 2 sides	GSP-0612-E/A
	double flush glass panel 800 x 500 mm 2.62'x1.64'	GSP-0218-E/A
	contact switch	
	airlock management	GSP-0802-E/A
<b>2 leaves door</b>		
lever bolt top and bottom on half fixed leaf		
	closing selector	GSP-0605-E/A

## Dimensions

## Almost flush door



	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)	designation Ht x Width (mm)	clear opening Ht x Width (mm)	doorframe Ht x Width (mm)
1 leaf	2040 x 630 80"x25"	2039 x 609 80"x24"	2139,5 x 810 84"x31"	2240 x 630 88"x24"	2239 x 609 88"x24"	2339,5 x 810 92"x31"			
	2040 x 830 80"x33"	2039 x 809 80"x32"	2139,5 x 1010 84"x40"	2240 x 830 88"x33"	2239 x 809 88"x32"	2339,5 x 1010 92"x40"			
	2040 x 930 80"x37"	2039 x 909 80"x36"	2139,5 x 1110 84"x44"	2240 x 930 88"x36"	2239 x 909 88"x36"	2339,5 x 1110 92"x44"	2440 x 930 96"x36"	2439 x 909 96"x36"	2539,5 x 1110 100"x44"
	2040 x 1030 80"x41"	2039 x 1009 80"x40"	2139,5 x 1210 84"x48"	2240 x 1030 88"x40"	2239 x 1009 88"x40"	2339,5 x 1210 92"x48"	2440 x 1030 96"x40"	2439 x 1009 96"x40"	2539,5 x 1210 100"x48"
2 leaves	2040 x 1260 80"x50"	2039 x 1244 80"x49"	2139,5 x 1445 84"x57"	2240 x 1260 88"x49"	2239 x 1244 88"x49"	2339,5 x 1445 92"x57"			
	2040 x 1660 80"x65"	2039 x 1644 80"x65"	2139,5 x 1845 84"x73"	2240 x 1660 88"x65"	2239 x 1644 88"x65"	2339,5 x 1845 92"x73"	2440 x 1660 96"x65"	2439 x 1644 96"x65"	2539,5 x 1845 100"x73"
	2040 x 2060 80"x81"	2039 x 2044 80"x80"	2139,5 x 2245 84"x88"	2240 x 2060 88"x81"	2239 x 2044 88"x80"	2339,5 x 2245 92"x88"	2440 x 2060 96"x81"	2439 x 2044 96"x80"	2539,5 x 2245 100"x88"

## Locking and slaving devices for hinged doors



### Electromagnetic lock

- integrated in the door frame
- counterplate integrated in the door leaf for double flush doors
- surface-mounted for single flush doors
- Power voltage 24 V. Released if power cut (except for special requests). Generally speaking, only the moving panel is locked.



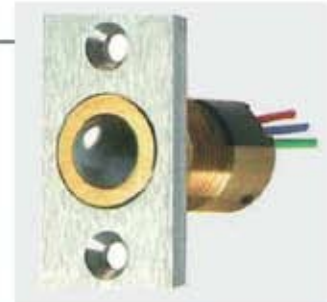
electromagnetic lock with counterplate sunk in the panel



electromagnetic lock with counterplate surface-mounted

### Contact switch

- on each leaf
- detection status of door (open or closed)



### Specific solution : Electric lock

Electric lock on specific request  
type ASSA ABLOY with integrated contact

