





ESSENTIALS OF THE SYSTEM

The Vero Building System is SCIP (Structural Concrete Insulated Panel) construction based on a combination of foam polystyrene sheet and galvanized steel wire meshes. The EPS shape has been customized to each individual project design and structural requirements. Our modular panels allow a faster assembly compared to traditional systems. They fulfill all the required structural and load-bearing functions, offering high thermal and sound resistance and come in a wide range of shapes and finishes, providing versatility in the design process.

COMPOSITION OF THE PANELS

A.

Foam polystyrene core

is non-toxic, non-hazardous, self-extinguishing, non-combustible, and chemically inert with customizable density and thickness, depending on the panel type needed.

B.

Electrowelded steel wire mesh

made of galvanized steel are placed on both sides of the polystyrene panel and are then connected by means of joints of the same material.

PLASTERING

After the panel assembly, traditional plaster or shotcrete should be sprayed and/or poured on the panel - depending on the panel type.



**Unparalleled
Safety**



**Thermal
Insulation**



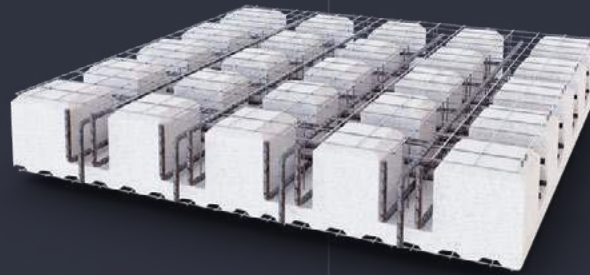
**Energy
Efficient**

ADVANTAGES OF THE VERO SCIP BUILDING SYSTEM

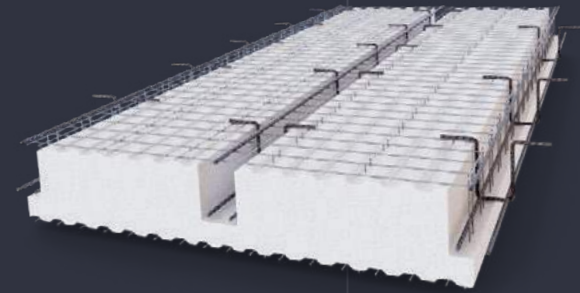
- High thermal insulation ratings, our smallest panel starts at R19 rating
- The diversity of the panels can accommodate different architectural and design features
- Rapid assembly with little to no need for lifting equipment
- Structural capacity and resistance to earthquakes and hurricanes
- No skilled labor required
- Lower costs and less construction time
- Easy and quick installation of the plumbing, heating, electric, telephone systems, etc.
- Highly fire-proof material
- Lower foundation costs compared to conventional systems
- Complete construction system
- Excellent integration with traditional systems
- Panels of customizable length and thickness
- Solid panel connection
- Vero panel meshes also include connection flanges
- The polystyrene core avoids any thermal bridges
- Made of environmentally friendly components

CLASSIFICATION OF THE VERO SCIP PRODUCTS

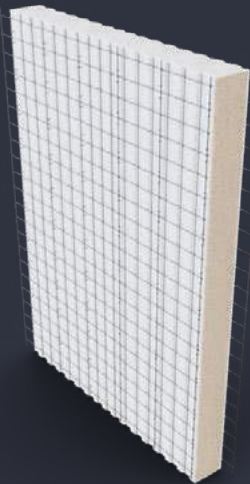
The Vero panels, application, standard sizes, and complementary products are described below. Panel thickness and length may be customized according to the different project requirements and individual customer demands. Initially the panel's thickness is determined by the required thermal insulation level and by the required structural resistance.



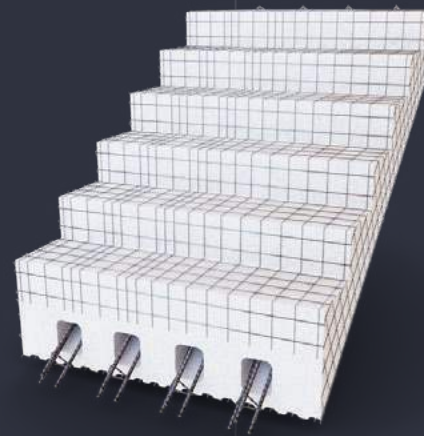
**Landing Panel
PNR**



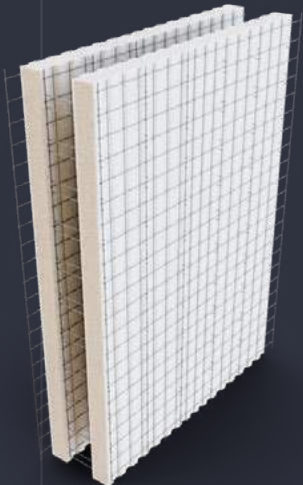
**Floor Panel
PS2 / PS3**



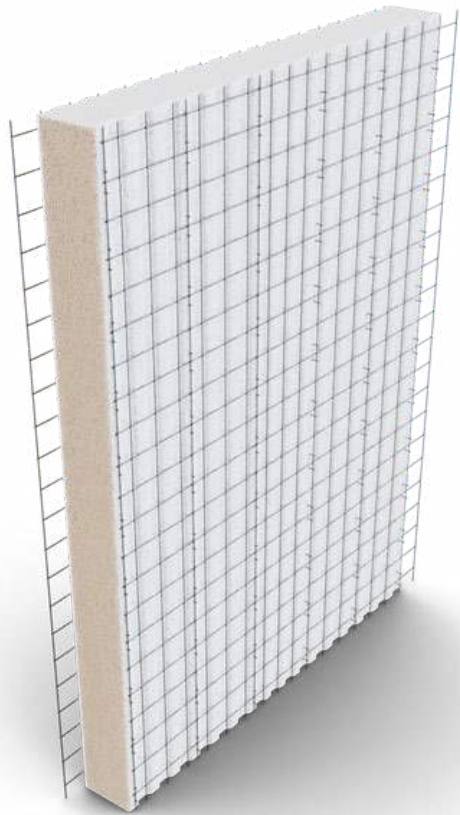
**Single Panel
PSM/PST/PSS**



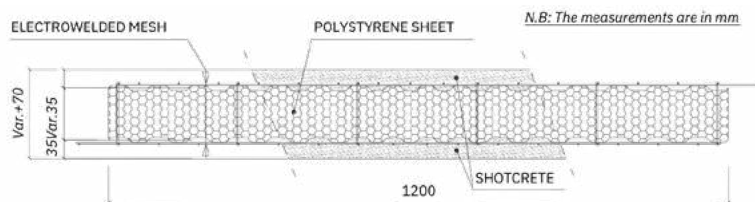
**Staircase Panel
PSCA**



**Double Panel
PDM**



Single Panel PSM / PST / PSS



Single Panel PSM

Galvanized steel wire mesh:

Longitudinal wires

ø 0.098" every 3.05"

Transversal wires

ø 0.098" every 2.95"

Cross steel wire

nr. 2ø 0.118" every 5.91"

Steel wire yield

$f_{yk} > 87082$ PSI

Steel wire failure

$f_{tk} > 98692$ PSI

Polystyrene

Density

0.94 lb/ft³ or 1.56 lb/ft³

Thickness

2.36" - 6.30"

Finished wall thickness

5.12" - 9.06"

This panel is used for structural walls and is finished by shotcrete.

A compressive strength of at least 3626 PSI should be applied.

Panel Specifications (rev. 13 US 08/21)

Type of Panel	Finished Wall Thickness (in)	Density 0.94 lb.ft ³			Density 1.56 lb.ft ³		
		Thermal Resistance R (F ft ² h/BTU)*	Panel Weight (lb/ft ²)	Wall weight with shotcrete** (F ft ² h/BTU)*	Thermal Resistance R (F ft ² h/BTU)*	Panel Weight (lb/ft ²)	Wall weight with shotcrete** (F ft ² h/BTU)*
PSM60	5.12	9.0	0.72	32.26	10.90	0.83	32.38
PSM80	5.91	12.81	0.78	32.32	14.14	0.95	32.48
PSM100	6.69	15.72	0.86	32.40	17.39	1.07	32.61
PSM120	7.48	18.64	0.94	32.48	20.63	1.18	32.73
PSM140	8.27	21.55	1.02	32.57	23.88	1.30	32.85
PSM160	9.06	24.60	1.09	32.63	27.12	1.42	32.95

Soundproofing Index: 45 dB ***

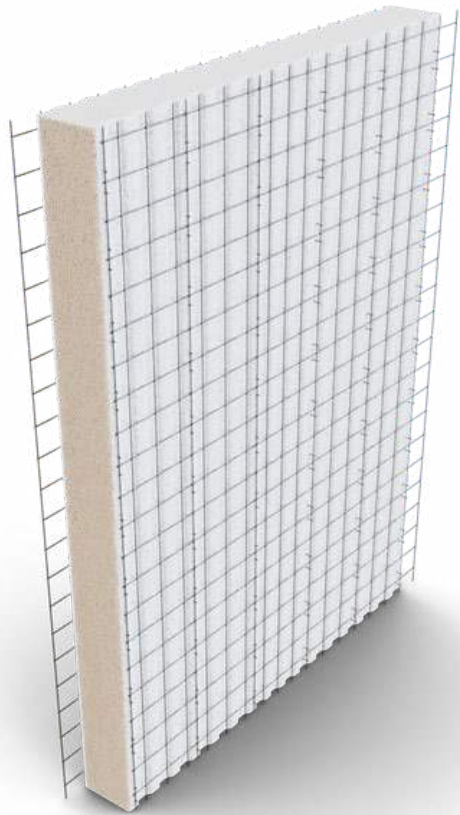
Fire Resistance: REI 90****

* value obtained by analytical calculation, considering only the thickness of the layers that make up the element

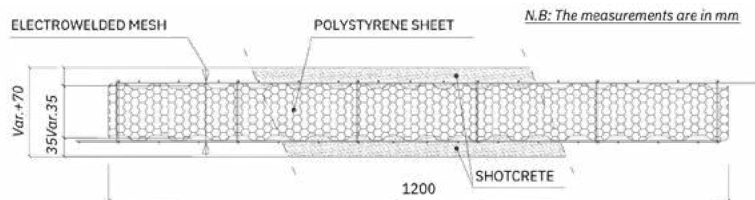
** considered density for the shotcrete: 137 lb/ft³

*** test carried out on PSM90 at the University of Santiago de Chile

**** test carried out at C.S.I., Milan, Italy



Single Panel PSM / PSME / PST / PSS



Single Panel PSME

Galvanized steel wire mesh:

Longitudinal wires	∅ 0.098" every 2.77"/3.05"
Transversal wires	∅ 0.098" every 2.76"/2.95"
Cross steel wire	nr. 2 ∅ 0.118" every 5.51"/5.91"
Steel wire yield	fyk > 87082 PSI
Steel wire failure	ftk > 98692 PSI

Polystyrene

Density	0.94 lb/ft ³ or 1.56 lb/ft ³
Thickness	3.15" - 6.30"

Finished wall thickness

6.30" - 9.45"

The single panel PSME is used for load bearing walls and is finished by shotcrete. A compressive strength of at least 3626 PSI should be applied.

Panel Specifications (rev. 13 US 08/21)

Type of Panel	Finished Wall Thickness (in)	Density 0.94 lb.ft ³			Density 1.56 lb.ft ³		
		Thermal Resistance R (F ft ² h/BTU)*	Panel Weight (lb/ft ²)	Wall weight with shotcrete** (F ft ² h/BTU)*	Thermal Resistance R (F ft ² h/BTU)*	Panel Weight (lb/ft ²)	Wall weight with shotcrete** (F ft ² h/BTU)*
PSM80	6.30	12.48	0.80	36.72	14.17	0.97	37.01
PSM100	7.09	15.75	0.88	36.93	17.42	1.08	37.13
PSM120	7.87	18.66	0.96	37.01	20.66	1.20	37.26
PSM140	8.66	21.58	1.03	37.07	23.91	23.91	37.26
PSM160	9.45	24.49	1.11	37.15	27.15	27.15	37.48

Soundproofing Index: 45 dB ***

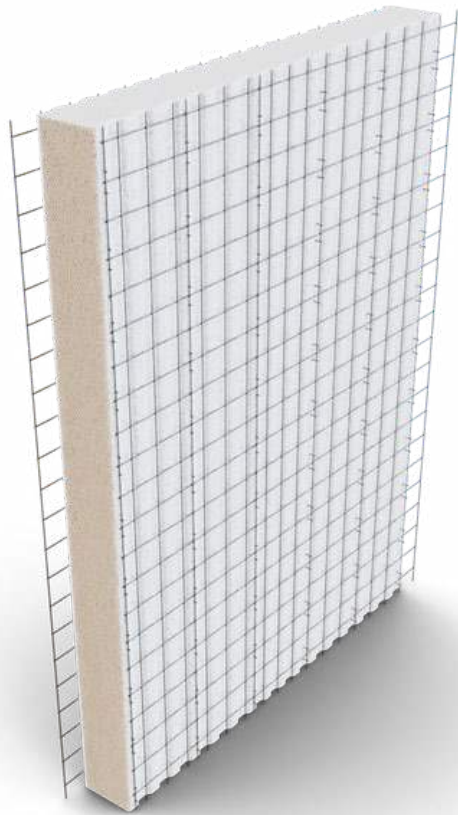
Fire Resistance: REI 90****

* value obtained by analytical calculation, considering only the thickness of the layers that make up the element

** considered density for the shotcrete: 137 lb/ft³

*** test carried out on PSM90 at the University of Santiago de Chile

**** test carried out at C.S.I., Milan, Italy



Single Panel PSM / PST / PSS

Single Panel PSS

Galvanized steel wire mesh:

Longitudinal wires

ø 0.098" every 3.05"

Transversal wires

ø 0.098" every 2.95"

Cross steel wire

nr. 2ø 0.118" every 5.91"

Steel wire yield

$f_{yk} > 87082$ PSI

Steel wire failure

$f_{tk} > 98692$ PSI

Polystyrene

Density

0.94 lb/ft³ or 1.56 lb/ft³

Thickness

3.15" - 6.30"

Finished wall thickness

6.69" - 9.84"

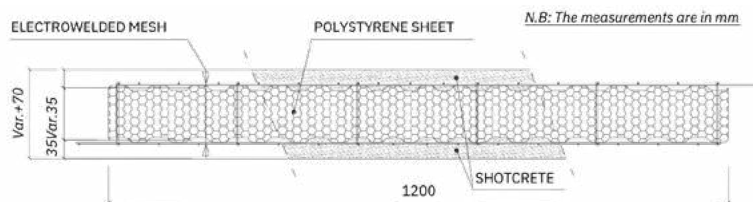
This type of panel is used for slab and roof systems. The panel must be completed on site with the casting of conventional concrete and spraying of shotcrete.

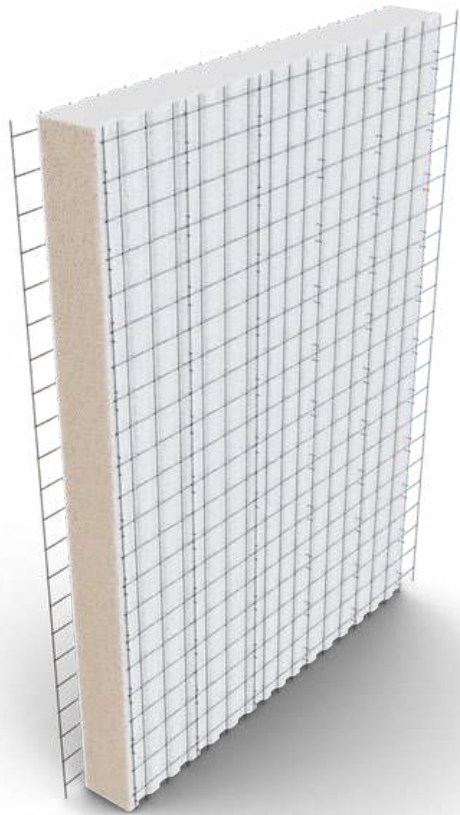
Panel Specifications (rev. 13 US 08/21)

Type of Panel	Finished Wall Thickness (in)	Density 0.94 lb.ft ³			Density 1.56 lb.ft ³		
		Thermal Resistance R (F ft ² h/BTU)*	Panel Weight (lb/ft ²)	Slab weight with concrete and shotcrete** (F ft ² h/BTU)*	Thermal Resistance R (F ft ² h/BTU)*	Panel Weight (lb/ft ²)	Slab weight with concrete and shotcrete** (F ft ² h/BTU)*
PSM80	6.69	12.81	0.78	43.58	14.14	0.94	43.75
PSM100	7.48	15.72	0.86	43.67	17.39	1.07	43.87
PSM120	8.27	18.64	0.94	43.75	20.63	1.19	43.99
PSM140	9.06	21.55	1.02	43.83	23.88	1.31	44.12
PSM160	9.84	24.60	1.09	43.89	27.12	1.41	44.22

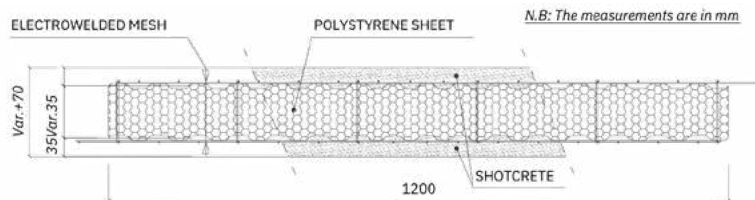
* value obtained by analytical calculation, considering only the thickness of the layers that make up the element

** considered density for the shotcrete: 137 lb/ft³, considered density for concrete 150 lb/ft³





Single Panel PSM / PST / PSS



Single Panel PST

Galvanized steel wire mesh:

Longitudinal wires
 Transversal wires
 Cross steel wire
 Steel wire yield
 Steel wire failure

∅ 0.098" every 3.05"
 ∅ 0.098" every 4.43"
 nr. 2∅ 0.118" every 8.86"
 $f_{yk} > 87082$ PSI
 $f_{tk} > 98692$ PSI

Polystyrene

Density
 Thickness

0.94 lb/ft³ or 1.56 lb/ft³
 1.97" - 7.87"

Finished wall thickness

3.94" - 9.84"

The single panel PST can be used as an internal partition, external curtain wall, and/or insulating wall, etc. It is similar to the PS panel except for its polystyrene core outline that is thinner and requires less plaster for finishing.

Panel Specifications (rev. 13 US 08/21)

Type of Panel	Finished Wall Thickness (in)	Density 0.94 lb.ft ³			Density 1.56 lb.ft ³		
		Thermal Resistance R (F ft ² h/BTU)*	Panel Weight (lb/ft ²)	Wall weight with shotcrete** (F ft ² h/BTU)*	Thermal Resistance R (F ft ² h/BTU)*	Panel Weight (lb/ft ²)	Wall weight with shotcrete** (F ft ² h/BTU)*
PSM50	3.94	8.48	0.57	21.06	9.31	0.68	21.16
PSM60	4.33	9.94	0.61	21.10	10.94	0.74	21.22
PSM80	5.12	12.85	0.70	21.18	14.18	0.86	21.34
PSM100	5.91	15.76	0.76	21.24	17.43	0.96	21.44
PSM120	6.69	18.67	0.84	21.32	20.67	1.09	21.57
PSM140	7.48	21.59	0.90	21.38	23.92	1.19	21.67
PSM160	8.27	24.50	0.96	21.44	27.16	1.29	21.77
PSM180	9.06	27.41	1.04	21.53	30.40	1.41	21.89
PSM200	9.84	30.32	1.11	21.59	33.65	1.52	22.00

Soundproofing Index: 41 dB ***

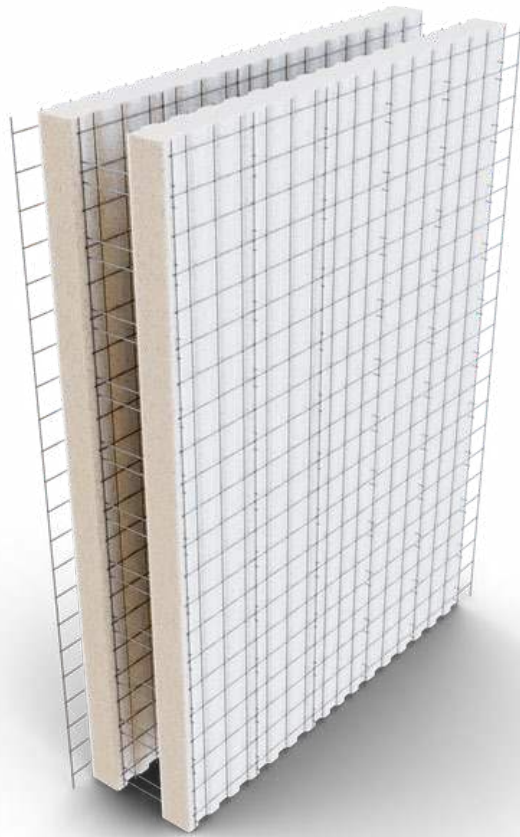
Fire Resistance: REI 120***

* value obtained by analytical calculation, considering only the thickness of the layers that make up the element

** considered density for the shotcrete: 125 lb/ft³

*** test carried out on PST40 at the University of Santiago de Chile

**** test carried out at C.S.I., Milan, Italy



Double Panel PDM

Double Panel PDM

Galvanized steel wire external mesh:

Longitudinal wires

∅ 0.098" every 3.05"

Transversal wires

∅ 0.098" every 2.95"

Cross steel wire

nr. 2∅ 0.118" every 5.91"

Steel wire yield

$f_{yk} > 87082$ PSI

Steel wire failure

$f_{tk} > 98692$ PSI

Polystyrene

Density

approx 1.6 lb/ft³

Thickness

1.97" - 3.15"

Inter-plate distance

5.91" - 7.87"

The double panel PDM consists of two panels facing each other and joined by connectors at a distance established for the structure requirements. The panel must be completed on site with the casting of conventional concrete internally, and spraying with conventional cement-based plaster externally.

Panel Specifications (rev. 13 US 08/21)

Type of Panel	EPS core thickness	Finished Wall Thickness (in)	Thermal Resistance R (F ft ² h/BTU)*	Panel weight (lb/ft ²)	Wall weight with concrete and shotcrete** (lb/ft ²)*
PDM150	1.97+1.97	11.81	17.75	1.70	96.33
	2.76+2.76	13.39	24.24	1.95	96.57
	3.15+3.15	14.17	27.49	2.07	96.69
PDM180	1.97+1.97	12.99	17.82	1.72	111.09
	2.76+2.76	14.57	24.31	1.97	111.34
	3.15+3.15	15.35	27.56	2.09	111.46
PDM200	1.97+1.97	13.78	17.87	1.74	120.94
	2.76+2.76	15.35	24.36	1.99	121.19
	3.15+3.15	16.14	27.60	2.11	121.31

Soundproofing Index: $D_{2m, n, T, w} = 40$ dB***

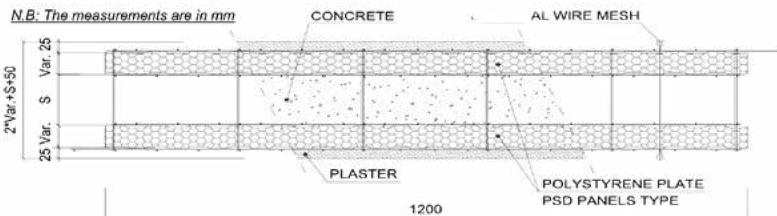
Fire Resistance: REI 150****

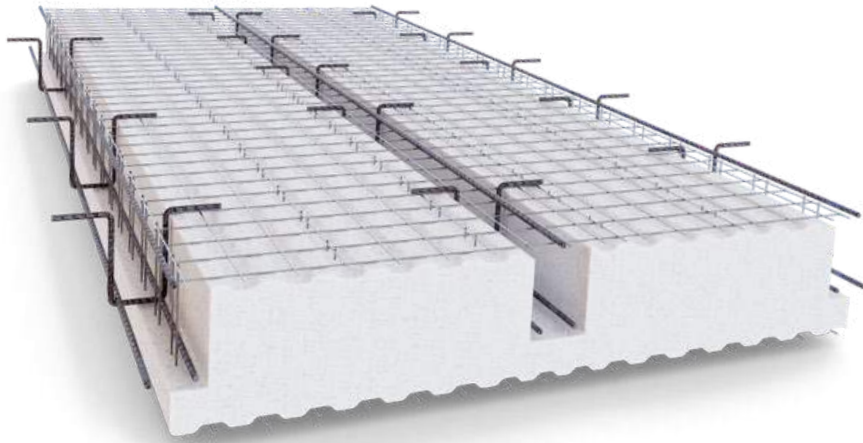
* value obtained by analytical calculation, considering only the thickness of the layers that make up the element

** considered density for shotcrete: 125 lb/ft, considered density for concrete: 150 lb/ft

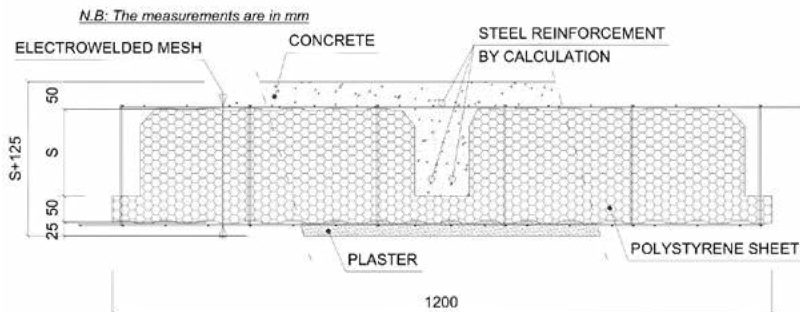
*** test carried out on PDM80 at Giordano Institute in Rimini

**** test carried out on PDM150 (5+5) at Giordano Institute in Rimini





Floor Panel PS2/PS3



Floor Panel PS2/PS3

Galvanized steel wire external mesh:

Longitudinal wires

ø 0.098" every 3.05"

Transversal wires

ø 0.098" every 4.43"

Cross steel wire

nr. 2ø 0.118" every 8.86"

Steel wire yield

$f_{yk} > 87082$ PSI

Steel wire failure

$f_{tk} > 98692$ PSI

Polystyrene

Density

approx 1.00 lb/ft³

Thickness

1.97" - 3.15"

Center distance between joists

PS2

23.62"

PS3

15.74"

This type of panel is used for floor and roof systems. The panel must be completed on site with additional steel reinforcement and casting of conventional concrete, according to the structural needs of the project.

Panel Specifications (rev. 13 US 08/21)

Type of Panel	Plaster Thickness in 0.98 Polystyrene plate in 1.97 Concrete slab in 1.97	Thermal Resistance R (F ft ² h/BTU)*	Panel Weight (lb/ft ²)	Slab weight with concrete and shotcrete** (lb/ft ²)*
	Sheet Height (S) *** (in)			
PS2100	3.94	20.47	0.88	44.10
PS2120	4.72	22.90	0.94	45.80
PS2140	5.51	25.33	1.00	47.50
PS2160	6.30	27.77	1.07	49.20
PS2180	7.09	30.20	1.13	50.90
PS2200	7.87	32.64	1.19	52.60
PS2220	8.66	35.07	1.25	54.30
PS2240	9.45	37.51	1.31	56.00

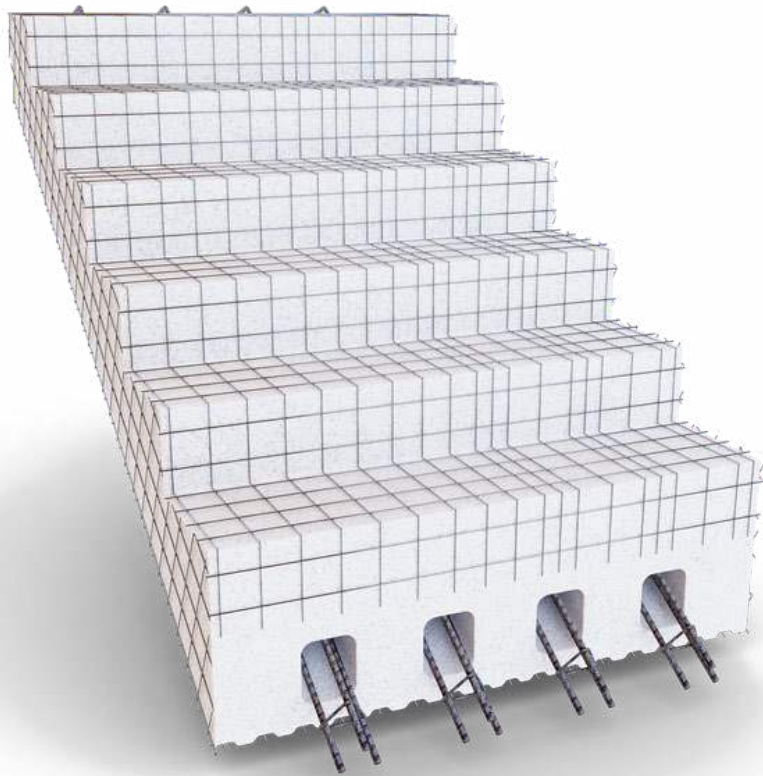
The soundproofing insulation level requested can be obtained, as for the conventional floor system, by applying a layer of insulated material between the structure and the overstructure.

* value obtained by analytical calculation, considering only the thickness of the layers that make up the element

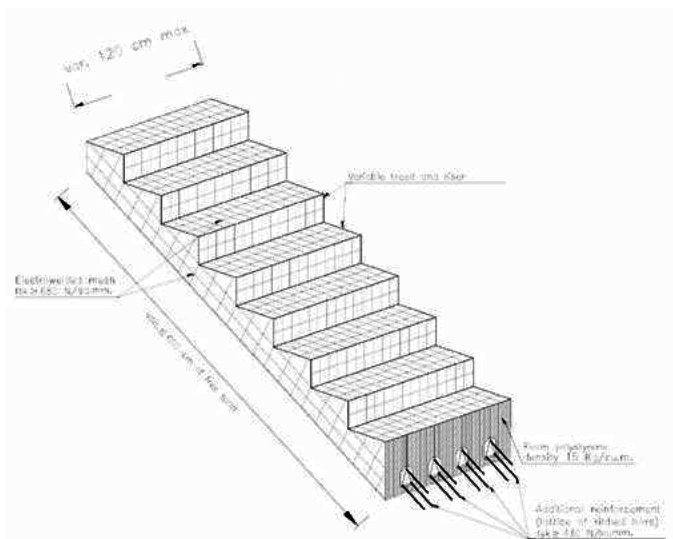
** considered density for the shotcrete: 125 lb/ft³; considered density for concrete: 150 lb/ft³

*** maximum rib height (S) is 11.8 in

**** PS2 means a panel with 2 ribs per panel. PS3 means 3 ribs per panel.



Staircase Panel PSCA



Staircase Panel PSCA

Galvanized steel wire external mesh:

Longitudinal wires	0.098"
Transversal wires	0.098"
Cross steel wire	0.118"
Steel wire yield	$f_y > 87082$ PSI
Steel wire failure	$f_k > 98692$ PSI

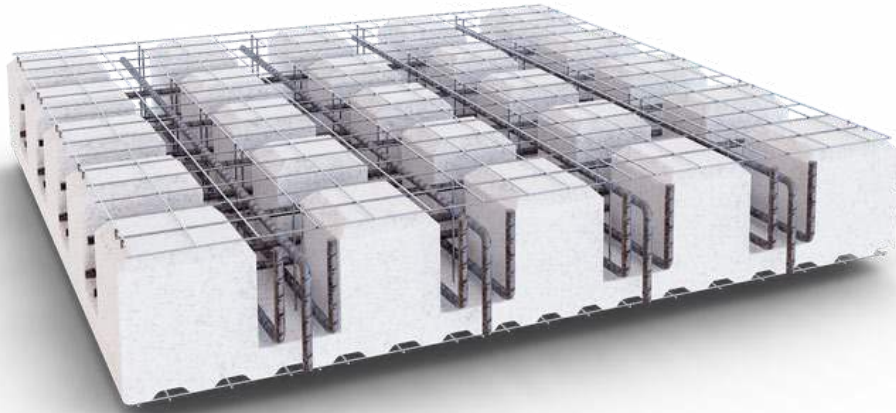
Polystyrene

Density	approx 1.00 lb/ft ³
---------	--------------------------------

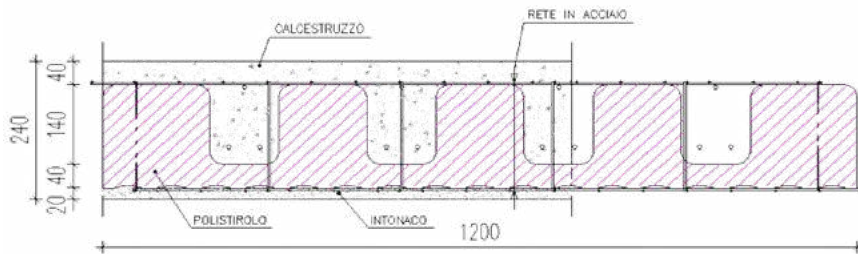
Fire resistance

120 min

This panel is made of a foam polystyrene block shaped according to design requirements and then coated with two layers of steel wire mesh assembled with electrodoled steel wires. The stair must be reinforced on site with steel bars and then filled with concrete.



Landing Panel PNR



N.B: The measurements are in mm

Landing Panel PNR

Galvanized steel wire external mesh:

Longitudinal wires	0.098"
Transversal wires	0.098"
Cross steel wire	0.118"
Steel wire yield	$f_{yk} > 87082$ PSI
Steel wire failure	$f_{tk} > 98692$ PSI

Polystyrene

Density	approx 1.00 lb/ft ³
---------	--------------------------------

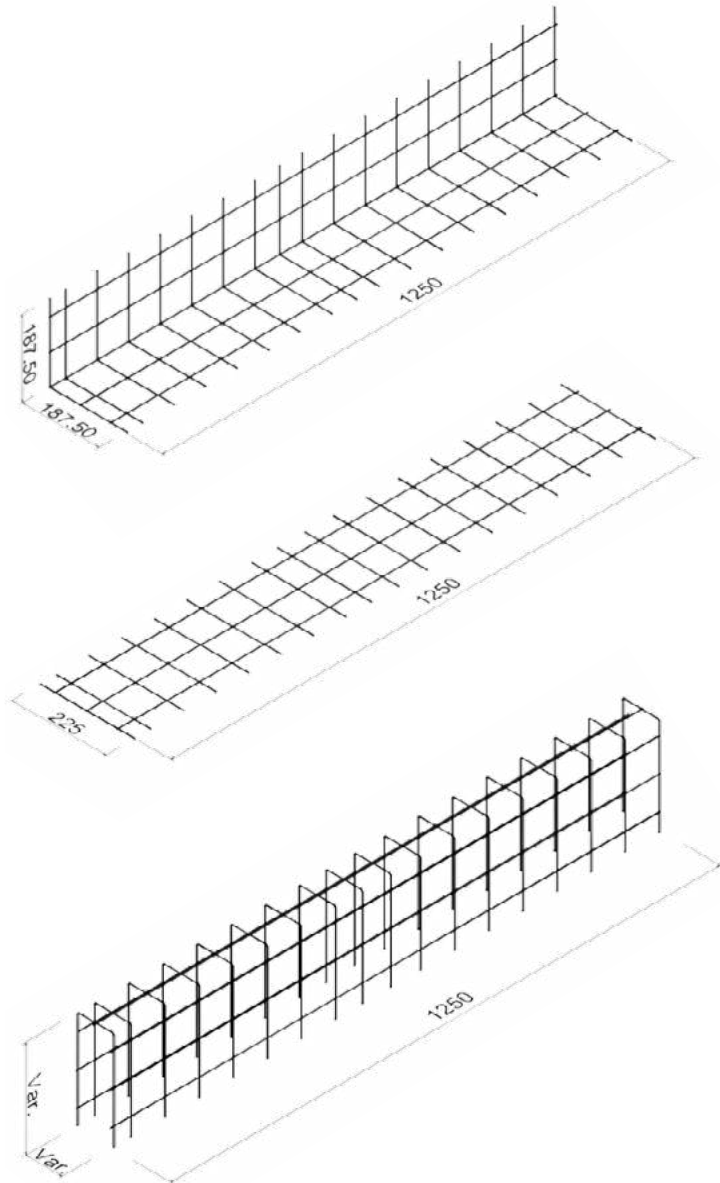
Fire resistance

120 min

This panel is made of a foam polystyrene block shaped according to design requirements and then coated with two layers of steel wire mesh assembled with electrodoveled steel wires.

The landing panel must be reinforced on site with steel rebar and then filled with concrete.

Galvanized Steel Wire Reinforcement Mesh



Corner Mesh RG1

- Used for every wall intersection
- Used for every wall and ceiling intersection

Flat Mesh RG2

- Used for every opening corner-window, door frame, etc.
- Used anywhere there is discontinuity of mesh-MEP cut outs, etc.

U-Shaped Mesh RU

- Used around any opening - windows, doors, etc.
- Used to complete the top side of certain wall panes such as garden walls, fences, etc.