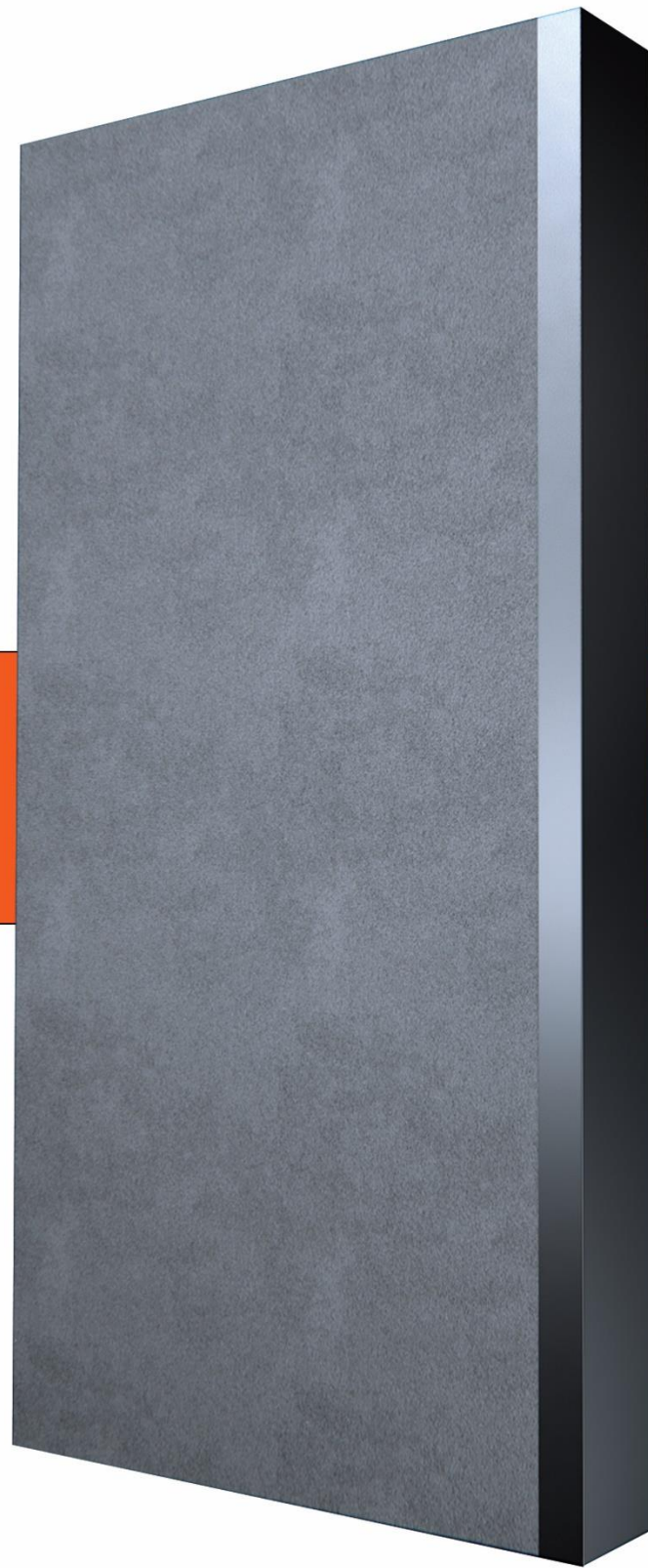


# FARAPANEL

Prefabricated Wall

2023 - 2024



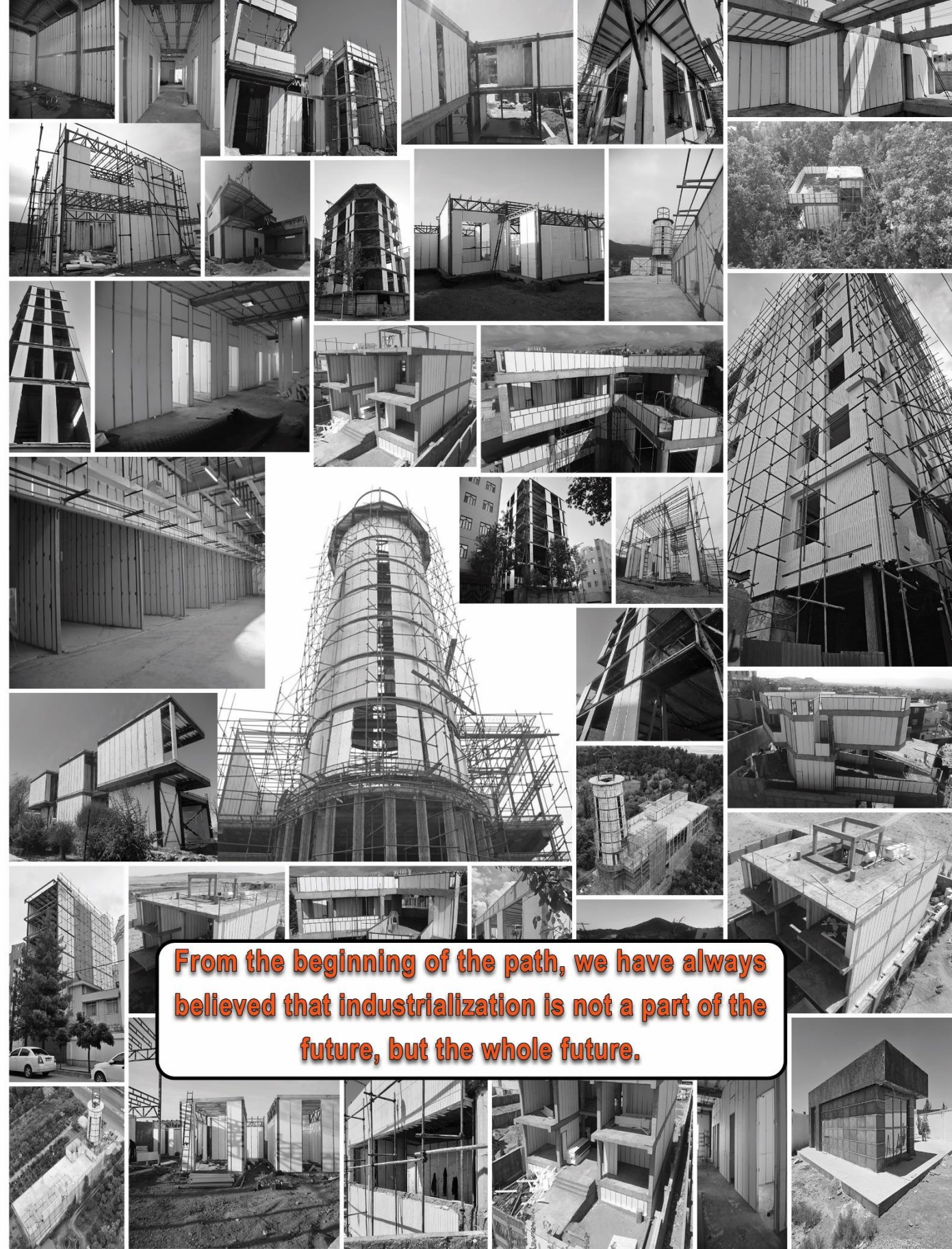
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Golshan. Haft Tir Street. Vakilabad Boulevard. Mashhad. Phone  
051 38666207- 05138661600

## About us

With more than a century of successful experiences in various fields of the construction industry, Farapanel group entered the field of production in 1390 considering the need for industrial materials in the construction of the country and using the capabilities of domestic experts, dry walls which is widely used today in many advanced countries of the world, including America, Canada, Switzerland, Italy and Turkey, according to the climatic conditions of the Middle East, both culturally and climatically, and optimized and Mass production.

# 01



**From the beginning of the path, we have always believed that industrialization is not a part of the future, but the whole future.**

## What is Fara Panel?

Fara panel is a semi- prefabricated ultralight wall from the family of dry partitions, which is optimized according to the climate conditions of the Middle East region and is used in all types of walls of building, such as external walls and internal separators.

# 02



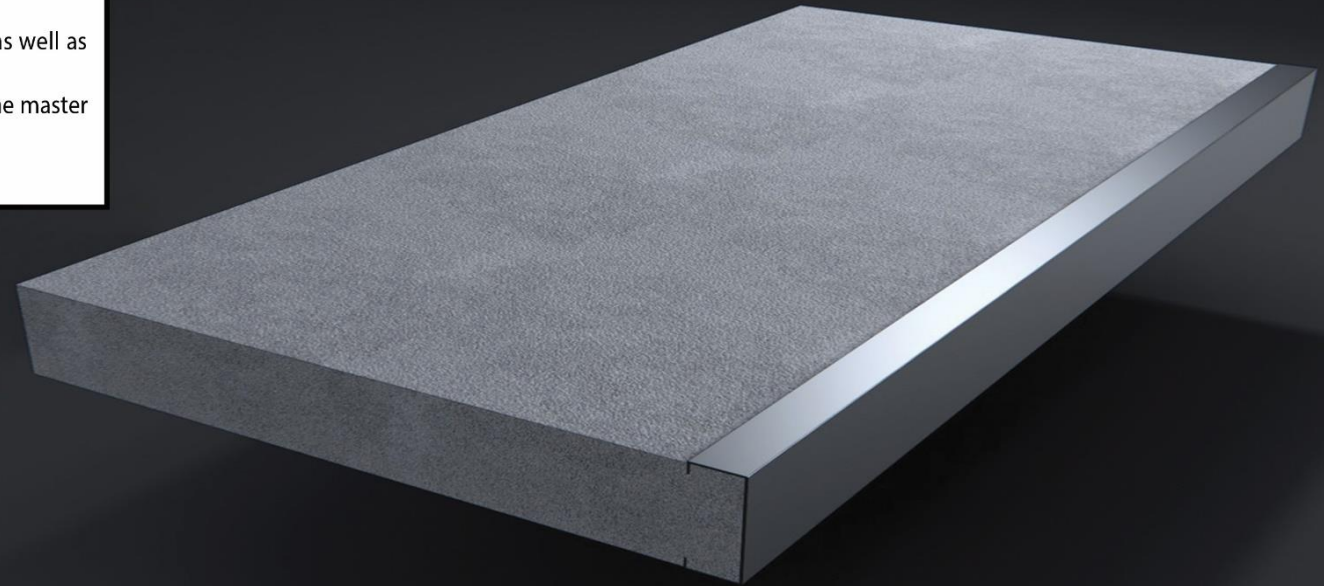
## Fara panel wall structure

Fara panel consist of a layer of frame retard are poly styrene that acts as insulations and wall filter.

Which has different colonists from 10 kg to 2 kgm<sup>3</sup> depending on the use cases, and the stability of this product is provided by galvanized steel sections with A minimum thickness of 0.08 mm is provided depending on the location of the wall (internal or external) as well as the height of the panels and the thickness of the sheet. The geometrical shape of the master and the arrangement of the master inside the panel are variable.

# 03

Frapanel structure



## Dimension of specifications of farapanel walls

### Width:

By default the width of the panels is 90cm that in each panel, there is a stud and a 60cm layer of Poly Styrene that restrain in each other.

### Height:

The height of the Panels is completely variable depending on the height of the floor and is produced exactly at the same size and has no restrictions.

### Thickness:

The producible thicknesses are: 6, 8, 10&14 cm.

# 04

Dimensional specifications of Farapanel walls





## Types of multi Panel walls:

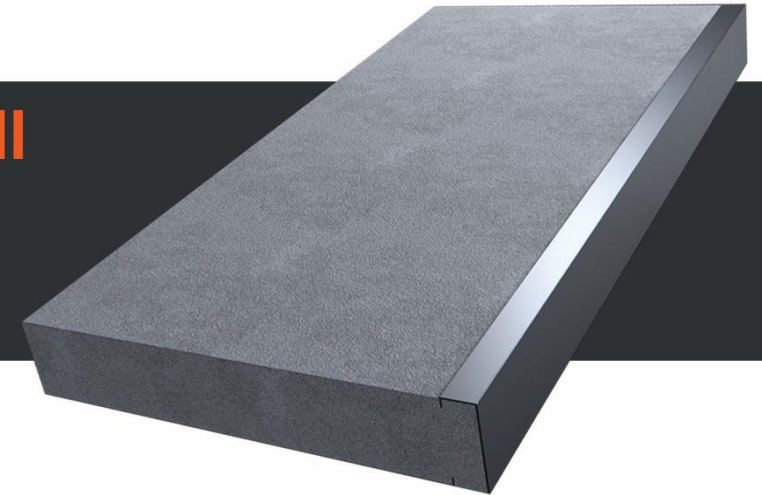
Farapanel wall are produced in two types, normal and special, in order to use in hot or cold area are producible, to prevent heat leakage and Condense phenomenon as well.

The main usage of the Farapanel for internal and external wall is its normal type which stud is seen from both sides of the panel.

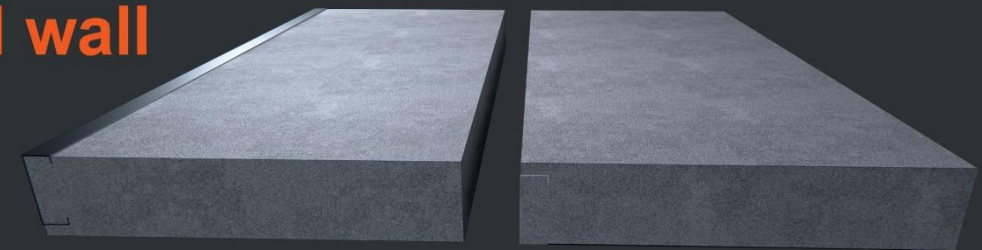
But in cases the use of this special product is essential, in which the poly styrene is covered on one side of the Bal stud and the heat bridge is removed completely.

# 05

### Normal wall



### Special wall



## Advantages of Farapanel

- 1 Increasing the speed of construction and consequently a quick return of investment.
- 2 Significant reduction of the dead load of the building due to the low weight of the Farapanel wall.
- 3 Reducing wall thickness and increasing useful architectural space.
- 4 No need for door and window frames for openings with different dimensions.
- 5 Complete removal of post wall due to regular repetition of galvanized steel structures inside wall.
- 6 The possibility of performing any kind of traditional and industrial dry and wet carpentry.
- 7 Training for installation in the shortest possible time due to prefabrication in factory.



- 8 A very suitable heat insulation and in accordance with the principles of the publication.
- 9 Sound insulation and conforms to the principles of the publication.
- 10 Easy and cheap transportation due to the light weight and panel structure of the Farapanel walls.
- 11 Failure to create construction waste during the time of carrying, and furling.
- 12 Ease in the implementation of electrical and mechanical installations.
- 13 The possibility of moving and changing the map after installation and even after operation.
- 14 Flexibility in architecture and the possibility of implementing the wall in the shape of an arch.
- 15 Complete removal of the post wall due to regular repetition of galvanized.
- 16 Possibility of performing in every climate conditions considering the dry structure of walls.
- 17 Very suitable performance in order to utilize in hot, cold and humid areas because of the type of its ingredients.



# 06

Advantages of  
Farapanel walls



# Technical specifications

## Fire resistance

The insulating layer or the filter of the farapanel partition is made of low-burning polystyrene (grade E) which means that it burns without creating toxic gas as long as it is exposed to a direct flame and it stops as soon as the flame agent is removed according to the layers journey institution such as plaster, cement, stone files and gypsum, board panels, etc, the fire time or in other words the time it takes for the flame to reach the polystyrene, can be increased up to the three hours with the explanation that after the destruction of the insulating layer and joinery, the structures are still left and there is a possibility that a layer of insulation will be placed again in the distance between the estad and joinery will be done on it, if in the case of traditional walls after a fire the wall will be completely destroyed and debris will be created does.

07

## Impact resistance

Farapanel partitions, contrary to what it shows at first glance, after the implementation of traditional or industrial carpentry layers, are very resistant to impact.

In this sense, all the tests related to the impact of a soft object and the laboratory of the housing research center and Urban development has been done on it and it was able to pass this test without the slightest damage. Partition can withstand a load of  $204 \text{ kg/m}^2$  which none of the traditional materials have such a resistance and they create debris after destruction.

# 08



## Resistance to compressive forces (wind)

One of the most obvious advantages of Fara panel Partition compared to other materials is the very high resistance of this product against compressive forces or wind force, which is due to the regular repetition of steel structures inside the wall and its connection from top and bottom to the building Skeleton. According to the tests carried out on the sample of Fra panel walls in the laboratory of the housing and urban Development research Center, the Fra panel Partition can withstand a load of  $204 \text{ kg/m}^2$  which none of the traditional materials have such a resistance and they create debris after destruction.

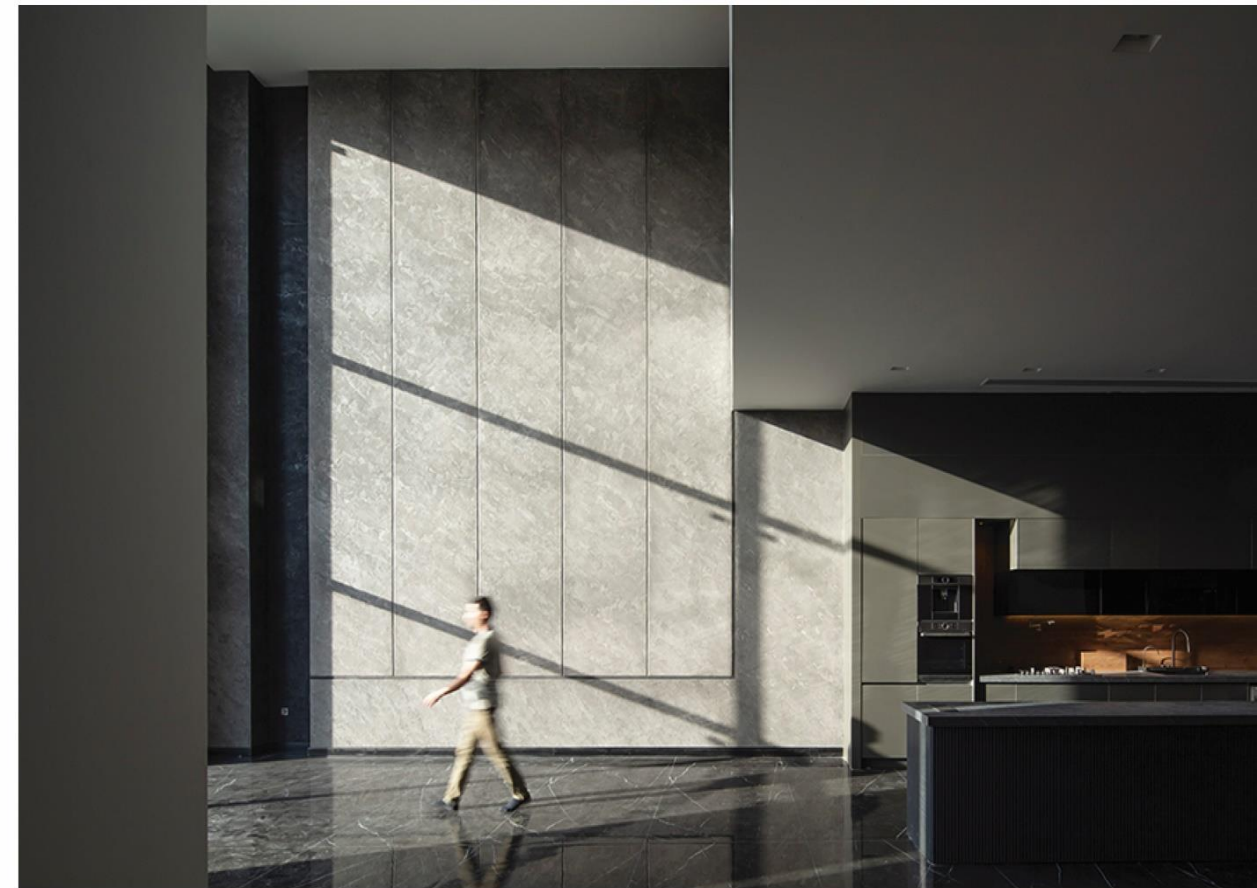


## FARAPANEL

is a construction vision more than being a construction material. A vision with a background of more than a century and **futuristic.**

# Comparative table

Characteristic	A light concrete block	Other walls tear	Farapanel
The weight of the finished wall with joinery(kg/m)	100	35	29
Operating area (square meters per day)	20m2	60m2	100m2
Need a skilled team	has	Has	Doesn't have
The need for door and window frames	has	has	Doesn't have
Dynamic resistance	***	**	****
Ability to bear load on the entire surface of the wall	has	Doesn't has	Has
Quick and easy installation	**	*	***
Need for thermal	has	Doesn't have	Doesn't have
Insulation post wall(w/mk)	1/58	1/90	2
Water proofing	*	***	****
Seismic behavior	*	***	****
Sound reduction index(dB)	40	50	47
Fire resistance(minutes)	180	120	120
Materials transportation costs	Doesn't have	has	has
Diversity in joinery materials	max	min	Min
increasing the useful life of the structure	has	Doesn't have	has
Monitoring the implementation	max	min	min
Architectural flexibility	***	**	****
The quality of the final joinery	max	min	min
Ease of access and maintenance of facilities	***	**	****
Ease of repairing and maintaining the wall	max	mid	min
The amount of the waste materials	max	min	min
The distribution of the installation inside the wall	**	****	**
Decorative mounting voltage	has	Doesn't have	has



# 09

Comparative tables

## Farapanel cover

Due to its panel structure and the presence of polystyrene as its filter, the Fra panel partition is the only prefabricated wall that can perform any kind of joinery on it. It is possible.

Industrial plaster sheets and cement panels of all covering materials.

Industrial or so called dry materials can be installed due to the presence of master of the panel with screws on this product.



# 10



Traditional covers ( types of linings ) due to the surface polystyren integrated with stud wing, the ability to perform traditional coating ( plaster and cement ) is available on this product. The parts that are coated with cement be made of steel mesh with special clips, and the parts that are coated with plaster are made of Rabbita are used with plastic nets be made.

Secondary covers such as stone or tiles for installing files and stones.

First method: Adhesive tape on plaster or cement panels for joinery less than  $40 \text{ kg/m}^2$ .

The second method: is traditional implementation directly on the wall of Farapanel as a group after installing steel mwsh with clips.

## The method of installing Para panel walls

Due to the panel structure of the walls and the height. The panels are produced exactly according to the height of the filters.

Installing methods are performed easily in three stages.

# 11



Installation of a runners on the floor and on concrete. **1**



Installing the runner under the ceiling exactly parallel to the floor runner **2**



Placing the walls as drawers **3**

## Scope of application

The range of use of the Fra panel wall due to the materials used. Polystyrene and galvanized steel, which are resistant to both heat and they resistant to moisture. Suitable for use in any type of weather, especially in areas with high heat and cold, especially in humid areas, as well as direction.

Use in all building as fallows including internal walls. And external with the best performance is applicable.



# 12

Residential building ✓

Villa building ✓

Office commercial buildings ✓

Industrial building ✓

Medical building ✓

Workshop equipment building ✓

Rapid construction building ✓





**Commercial building**

**Atlas Grand Bazar Mashhad**



**Complex therapy**

**Imam Ali Hospital (Zahedan)**



**Entertainment complex**

**Ramsar Sea light house**



**The residential complex**

**Rose Building (Mashhad)**



**The residential complex Tuba**  
**Nuzhan Villa (Koohsar)**



**The residential Villa**  
**Roodhen (Tehran)**



**Residential villa**

**Zaferanieh (Karaj)**



**Residential Villa**

**Shandiz ( Mashhad)**