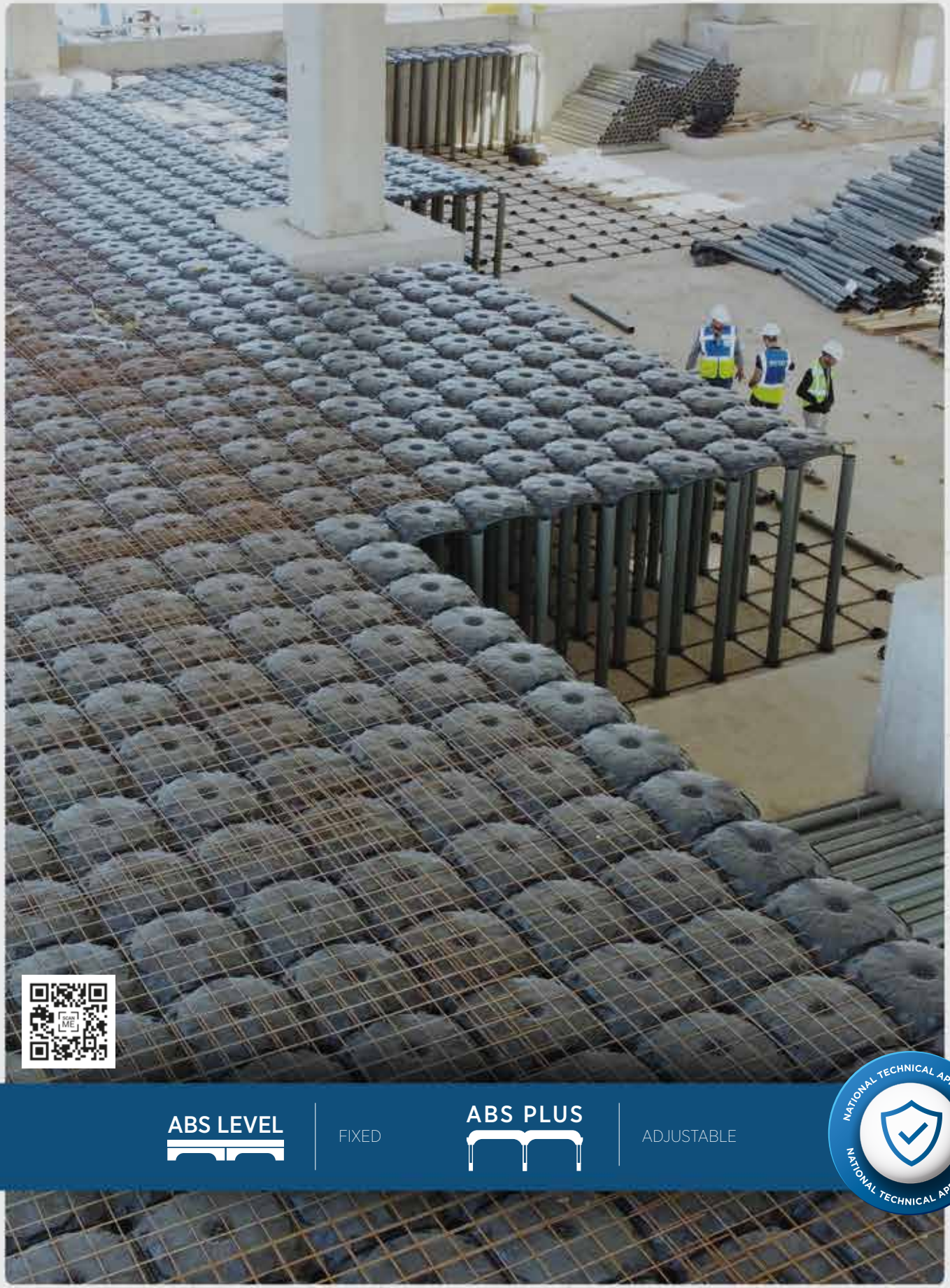
# abs Void Formworks



VOID FORMWORKS FOR LIGHTWEIGHT FILLS

**ABS LEVEL** | FIXED

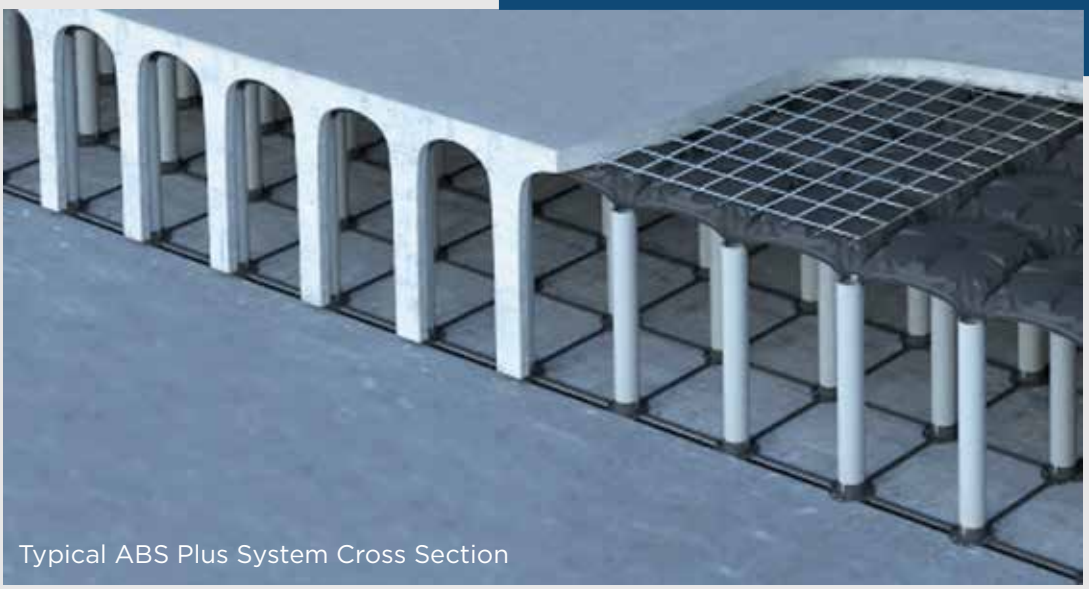
**ABS PLUS** | ADJUSTABLE

NATIONAL TECHNICAL APPROVAL

absvoidformwork.com

# LIGHTWEIGHT, SIMPLE, FAST

# WHAT ARE ABS VOID FORMWORKS?



Typical ABS Plus System Cross Section

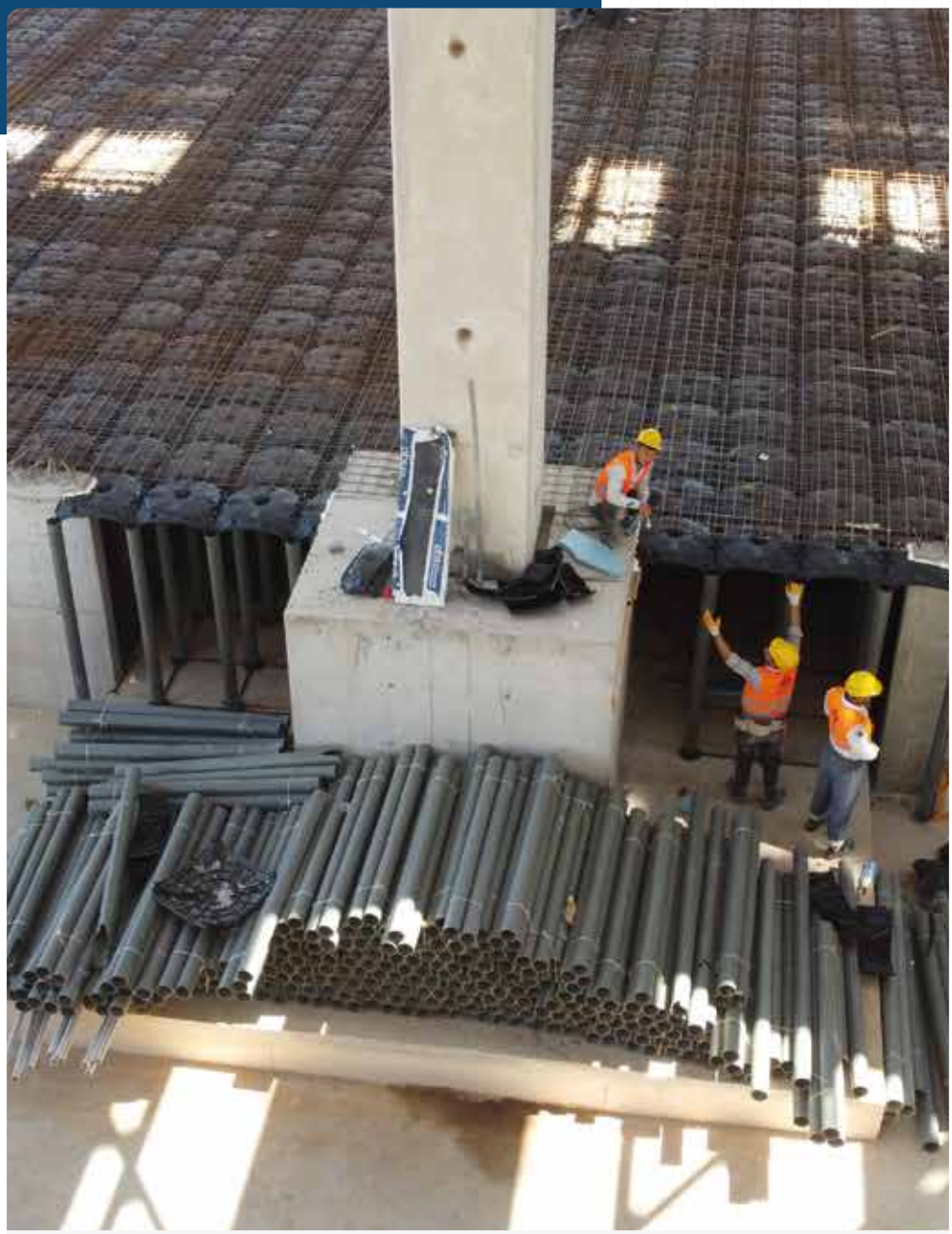
## ABS Void Formworks help to construct reinforced concrete raised floors

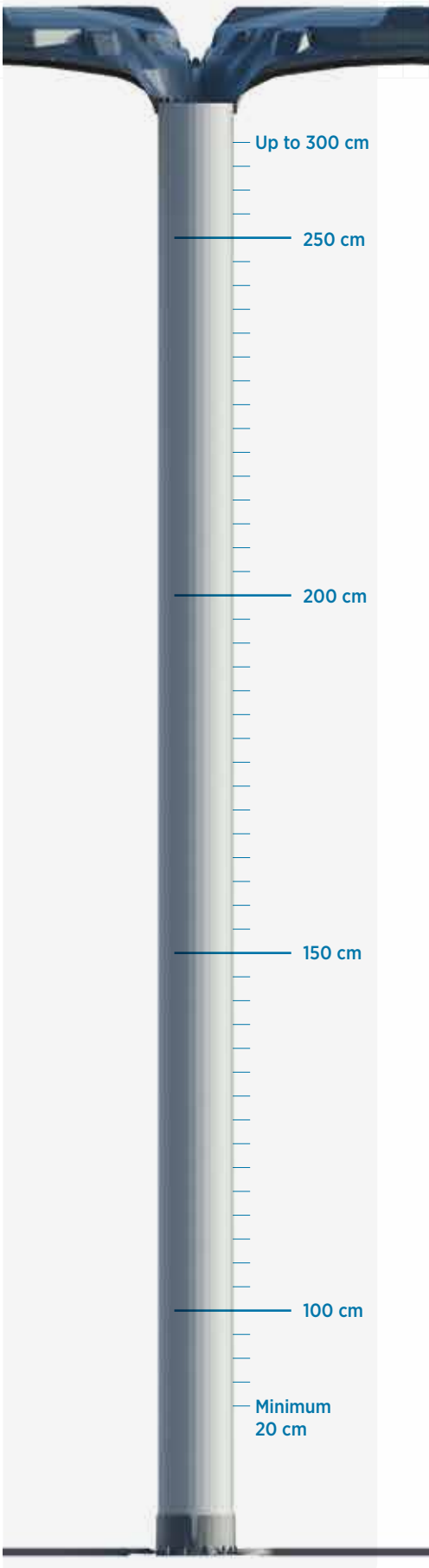
ABS Plus void formwork is an adjustable-height concrete formwork system made from recycled plastic. The system is also referred to as disposable formwork, void former, permanent formwork, or single-use formwork. It enables the creation of reinforced concrete raised floors up to 300 cm, offering a lightweight, fast, easy, and economical fill for any structure. To accommodate project-specific heights, the legs are cut to specification at the factory before delivery. Alternatively, standard-length legs can be cut on-site by the customer to fit the exact heights.

ABS Plus
Adjustable Height

ABS Level
Fixed Height

# ABS PLUS | ADJUSTABLE HEIGHT





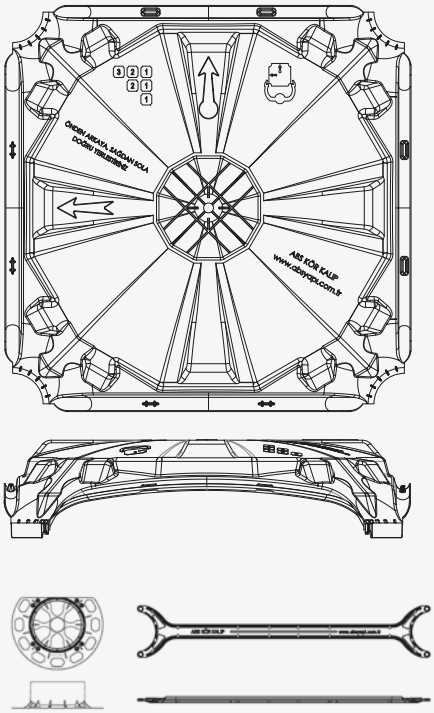

**ABS PLUS | ADJUSTABLE HEIGHT VOID FORMWORKS FOR LIGHTWEIGHT FILLS (20 - 300 cm)**

ABS Plus void formwork is an adjustable-height concrete formwork system made from recycled plastic. The system is also referred to as disposable formwork, void former, permanent formwork, or single-use formwork. It enables the creation of reinforced concrete raised floors up to 300 cm, offering a lightweight, fast, easy, and economical fill for any structure. To accommodate project-specific heights, the legs are cut to specification at the factory before delivery. Alternatively, standard-length legs can be cut on-site by the customer to fit the exact heights.

Unlike similar systems, the ABS Plus system consists of 2 legs per m2, which, in addition to the advantages listed below, provides additional ease of application and significant cost savings on concrete and steel. ABS Plus system can be used for various lightweight fill applications. Common uses include sunken slab fills, landscape fills to create hardscape surfaces, amenity floor construction, inverted beam fills, fills between foundation footings, car park ramps, swimming pool decks, elevator/staircase hallway fills, crawlspace construction, low-voltage distribution rooms and rainwater harvesting.

For more information

# ABS Plus (20 cm - 300 cm)



1. **ABS Plus - Spacer** (min. 2 max. 4 pcs per m², depending on the project)
2. **ABS Plus - Base** (2 pcs = 1 m², Ø125 mm, H 2,5 cm)
3. **ABS Plus - Leg** (2 pcs = 1 m², cut to the heights required by the project, Ø125 mm)
4. **ABS Plus - H15 Dome** (2 pcs = 1 m²)


## Dimensions

| | |
|---|---|
| **Dome size** | 710 x 710 mm, 2 domes per m² |
| **Dome height** | 150 mm, net height w/o leg connections |
| **Net arch clearance** | width 590 mm, height 59 mm |
| **Base height** | 25 mm, 2 bases per m² |
| **Leg diameter** | Ø 125 mm, 2 legs per m² |
| **Leg height** | variable heights, depending on requirement |
| **Number of spacers needed** | max 4/m² lower than 50 cm heights may not require use of spacers, however all spacers are need for heights for more than 120 cm |

## Pallet dimensions

| | |
|---|---|
| **Pallet dimensions (dome)** | 75 x 150 x 255 |
| **Pieces per pallet (dome)** | 170 pcs |
| **Area covered per pallet (dome)** | 85 m² |
| **Pallet weight (dome)** | 350 kg |

Material: dome, base and spacer recycled PP, leg recycled PVC
Application speed: 20 m²/man-hour on a rectangular area

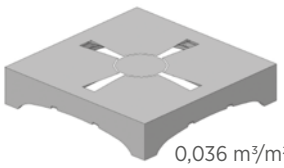
## Formulas

d = height in m of the topping concrete calculated separately depending on the service loads needed
h = total height of the ABS Plus system in m before concrete casting

Total concrete consumption in m³/m² = d + 0,03554 + [0,02454 x (h - 0,15)]

Leg height in m = h - 0,15 m

## Dome Concrete Consumption



0,036 m³/m²

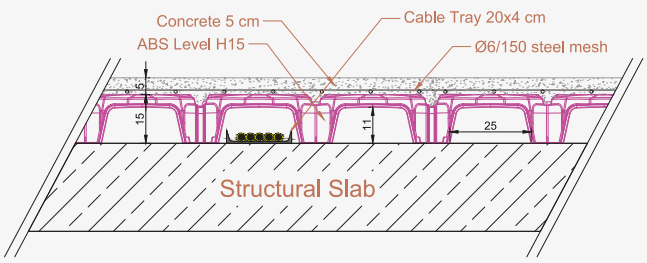
# ABS LEVEL | FIXED HEIGHT

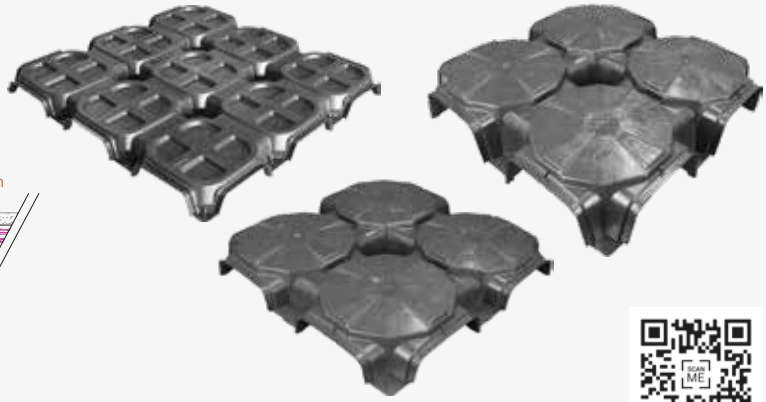
## ABS LEVEL | FIXED-HEIGHT VOID FORMWORKS FOR LIGHTWEIGHT FILLS (5, 10, 15 cm)

"The 'Level' series of ABS Void Formworks offers fixed heights of 5, 10, and 15 cm, allowing for the quick, easy, and highly economical creation of reinforced concrete raised floors in commercial or industrial structures. Made from recycled plastic, the formworks are specifically designed to accommodate cable trays and/or plumbing pipes.

The products can be used as an alternative to modular raised floor applications with metal pedestals. Additionally, commercial areas that are traditionally filled with 8–10 cm of dry screed to achieve a smooth concrete finish can now be constructed as reinforced concrete raised floors using ABS Level void formworks and junction boxes, allowing electrical and mechanical installations to pass through them. The space that would typically be lost can now be added to the usable area of the building.

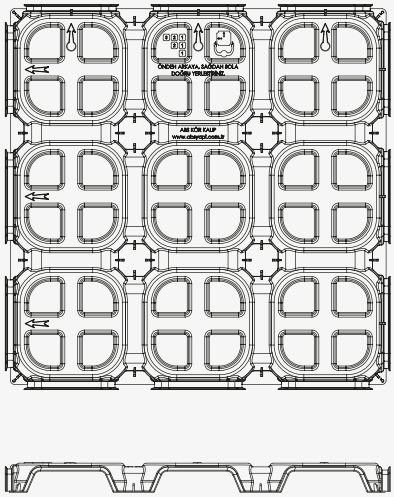
1) ABS Level - H5 (2 pcs = 1 m²)
2) ABS Level - H10 (2 pcs = 1 m²)
3) ABS Level - H15 (2 pcs = 1 m²)

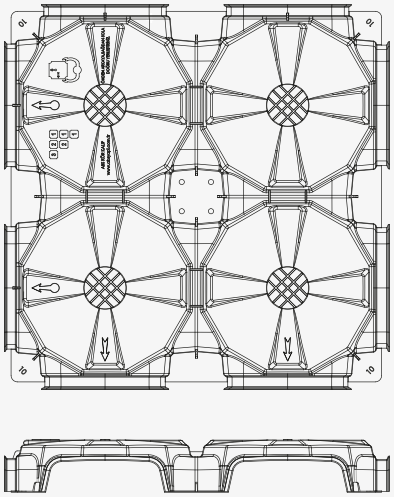


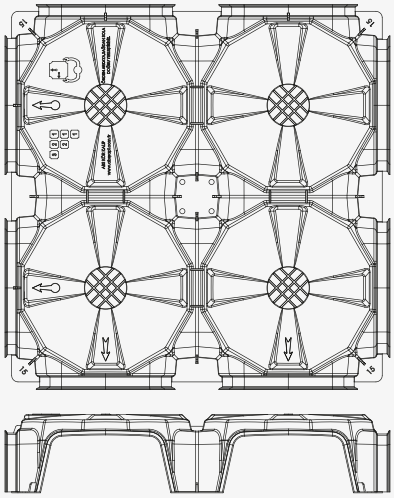



For more information

# ABS Level - H5 | ABS Level - H10 | ABS Level - H15







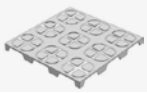
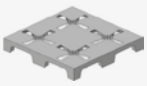
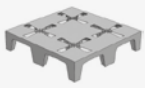
## Dimensions

| ABS Level - H5 | ABS Level - H10 | ABS Level - H15 |
|---|---|---|
| 710 x 710 x 50 mm | 710 x 710 x 100 mm | 710 x 710 x 150 mm |
| 2 formworks per m² | 2 formworks per m² | 2 formworks per m² |
| 1,78 kg/pcs | 1,96 kg/pcs | 2,16 kg/pcs |

## Net arch clearance

| ABS Level - H5 | ABS Level - H10 | ABS Level - H15 |
|---|---|---|
| 160 mm width | 230 mm width | 250 mm width |
| 40 mm height | 60 mm height | 110 mm height |

## Concrete consumption w/o topping concrete

| ABS Level - H5 | | ABS Level - H10 | | ABS Level - H15 | |
|---|---|---|---|---|---|
| 0,010 m³/m² |  | 0,022 m³/m² |  | 0,025 m³/m² |  |

## Pallet dimensions

| ABS Level - H5 | ABS Level - H10 | ABS Level - H15 |
|---|---|---|
| 75 x 150 x 260 cm | 75 x 150 x 260 cm | 75 x 150 x 260 cm |

## Pieces per pallet and area covered

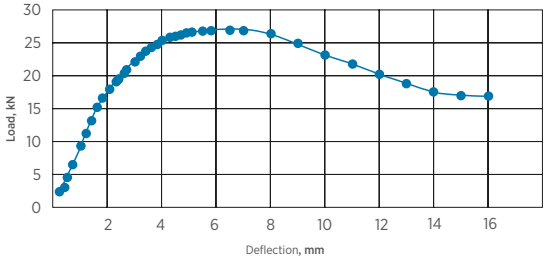
| ABS Level - H5 | ABS Level - H10 | ABS Level - H15 |
|---|---|---|
| 300 pcs and 150 m² | 250 pcs and 125 m² | 250 pcs and 125 m² |

## Pallet weight

| ABS Level - H5 | ABS Level - H10 | ABS Level - H15 |
|---|---|---|
| 545 kg | 500 kg | 550 kg |

## Material: recycled PP
## Application speed: 100 m²/man-hour on a rectangular area

### FORMWORK LOAD BEARING REPORT




| Sample No | Sample Type | Sample Size (mm) | Plate Size (mm) | Maximum Load | |
|---|---|---|---|---|---|
| | | | | kN | kN/m² |
| 1 | ABS Level H5 | 710x710x50 | 450x450 | 26.950 | 133.1 |

- Please contact us for more detailed information.

# SPECIAL VERSION

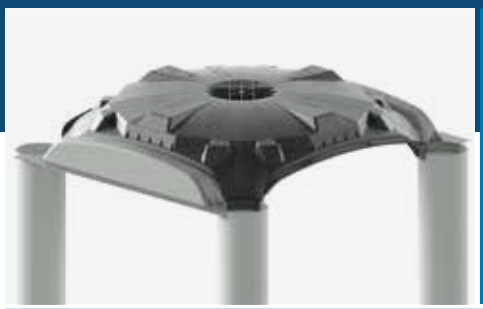
## ABS PLUS S | VARIABLE-HEIGHT VOID FORMWORK SYSTEM FOR MAXIMUM CLEARANCE

ABS Plus S (S for special, smart, and slim) offers maximum possible net arch clearance among all the existing void formwork designs. Thanks to its unique umbrella cage shape it has an almost flat ceiling allowing MEP (mechanical, electrical, and plumbing) installations to pass through uninterruptedly, at a maximum available leg opening of 350 mm. Moreover, the formwork system can be installed at a minimum height of 75 mm leaving a net clearance of 50 mm under the arch. This registered umbrella cage design also works as a concrete spacer on its top, allowing less topping concrete for a stronger structure.

## ABS PLUS | WIDE BASE SYSTEM

Standard void formwork systems used in reinforced concrete raised floor construction generally consist of multiple legs, each 125 mm in diameter, and bases of the same diameter. When these systems are installed on a structural reinforced concrete floor or reinforced concrete screed/concrete, the 125 mm legs transfer the load to the ground without any problems. However, when installed on natural ground, even if it is well compacted, the small contact area of the 125 mm legs (covering only 1.3% of the area) poses a significant risk. Under load, these feet may puncture the ground, causing it to sink. This situation can lead to deflection in the reinforced concrete raised floor above, resulting in cracks, fractures, and severe material damage that is difficult to repair.

# ACCESSORIES

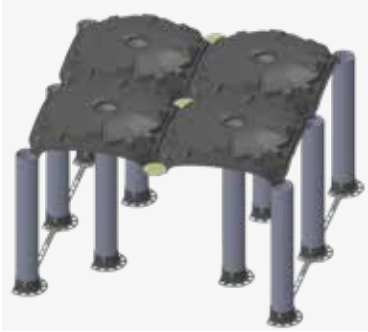


## ABS PLUS | DOME SIDE SHUTTER

This unique design helps to cover the opening between uncut ABS Plus domes and perimeter wall completely even if the wall surface is uneven. The design covers the arch of the dome with minimum concrete consumption while keeping the leg entry completely open for concrete casting.

## ABS PLUS | MIDDLE LEG

The “middle foot” of the utility model design, which belongs to ABS Yapı, allows a foot to be passed through the center of the ABS Plus Dome when necessary. This makes it possible to create space for diagonal installations without using the corner feet of the dome. In addition, if the “middle foot” is to function as a dome console at the edge ends, it also provides reinforcement.



# ADVANTAGES

## THE LIGHTEST SOLUTION

Regardless of the height, only the weight of the topping concrete is added to the structure.

## EASE OF LOGISTICS

Unmatched logistical advantage; products are designed to be stackable, nesting in each other. At a sample height of 100 cm, 1 truck of void formwork equivalents 50 trucks of alternative fill material!

## HIGH LOAD BEARING

Through the creation of hundreds of columns, arches and domes, the reinforced concrete raised floor has a very high load bearing capacity.

## REDUCED CONSTRUCTION TIME

Construction activities on upper floors can proceed without having to wait for the fill application on lower floors, as the fill application can be done anytime, saving very valuable construction time.

## VOID SPACE CREATION

The void space that gets created can be used for installations (electrical, mechanical, etc.) to pass through; columns have a net opening of 59 cm.

## FAST AND EASY

The installation does not require any skilled labor; it can be done very fast and easy.

## RAMP CONSTRUCTION

The legs can be cut at any size needed to create a ramp.

## CONTINUOUS CONRETE SURFACE

Any sort of covering application can be applied on the concrete surface very easily.

## HEAT AND SOUND INSULATION

The void space that gets created provides heat and sound insulation.

## RADON AND DAMP BARRIER

If used above foundations and properly ventilated, it is the most economical and safest way to removing radon gas, humidity and dampness from living quarters.

## SEPARATOR WALL CONSTRUCTION

Separator walls can be installed directly on the newly created concrete surface.

## ENVIRONMENTAL VALUE

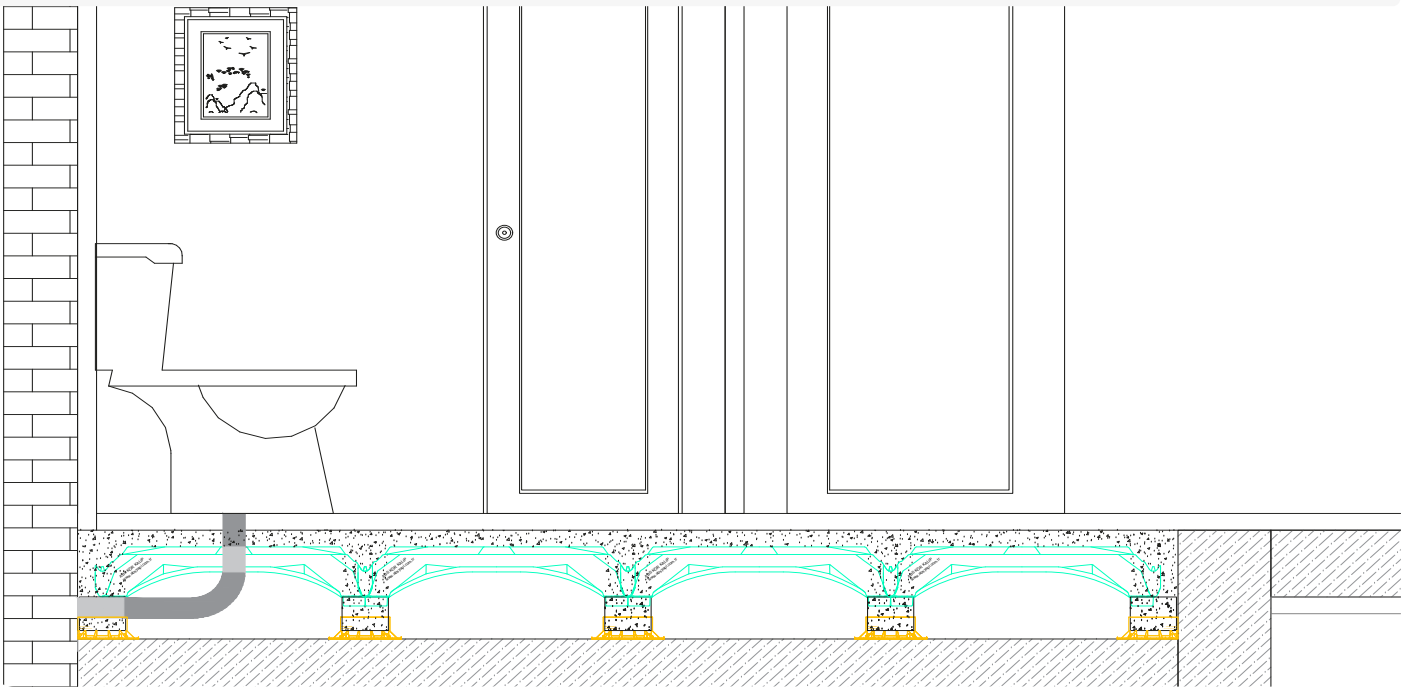
Because the void formworks are made of recycled PP, they help to gain considerable LEED certificate points.

ABS Void Formwork System for lightweigth fill is the first and only domestic product group in its field with National Technical Approval and G marking.

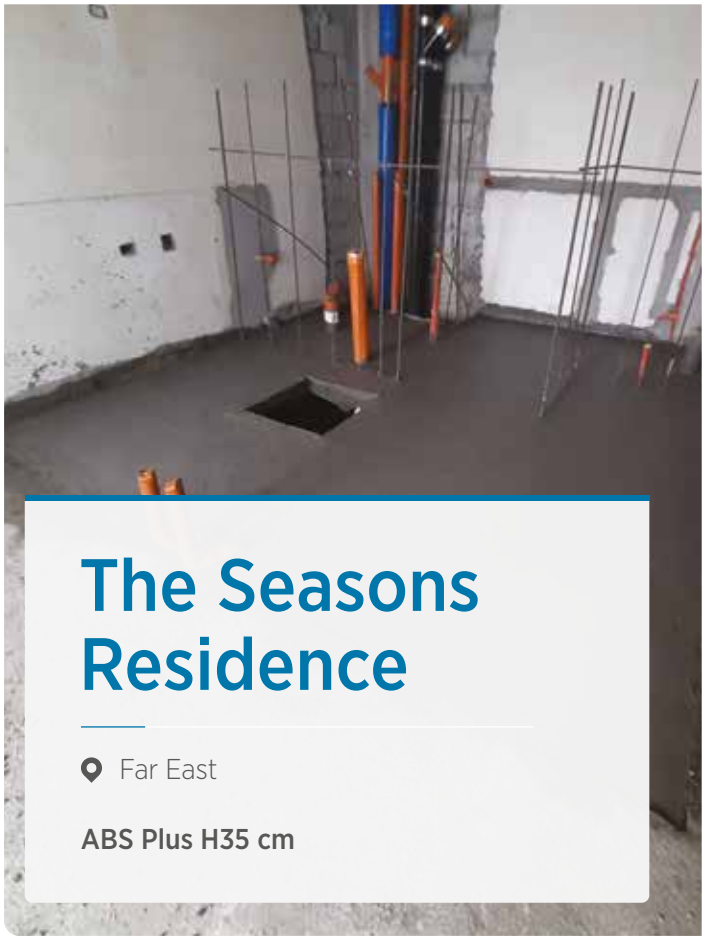
UTO-TTO/19-1915

# SUNKEN SLAB FILLS

In commercial buildings in particular, sunken slabs may be required on ground floors or podium areas. By using ABS Void Formworks, these areas can be raised to the height specifications of the architectural plans. Constructing reinforced concrete raised floors by using ABS Void Formworks is one of the lightest and most practical solutions for leveling height differences.



## SUNKEN SLAB FILLS REFERENCE APPLICATION



# The Seasons Residence

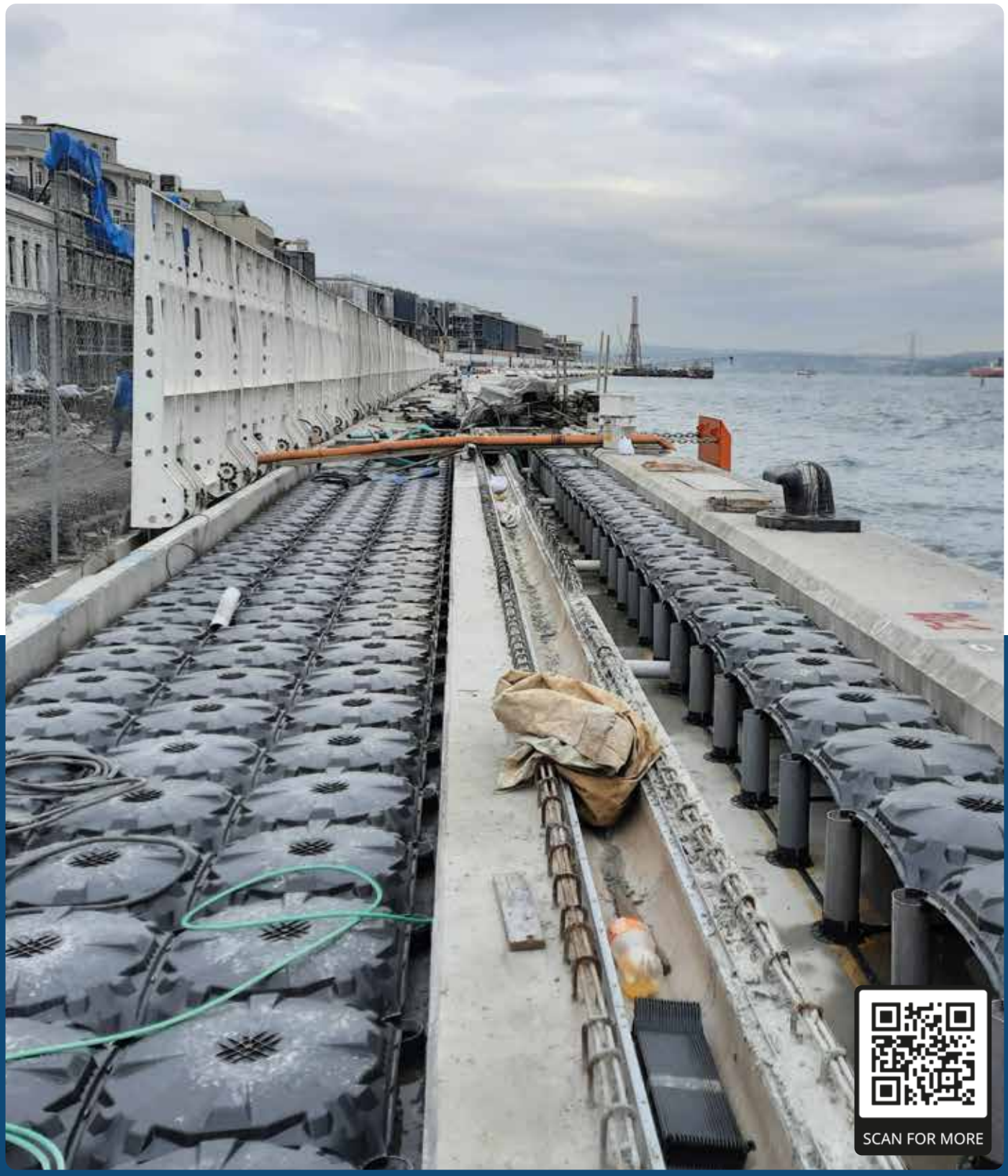
Far East

**ABS Plus H35 cm**

# Gebze Bilsem School

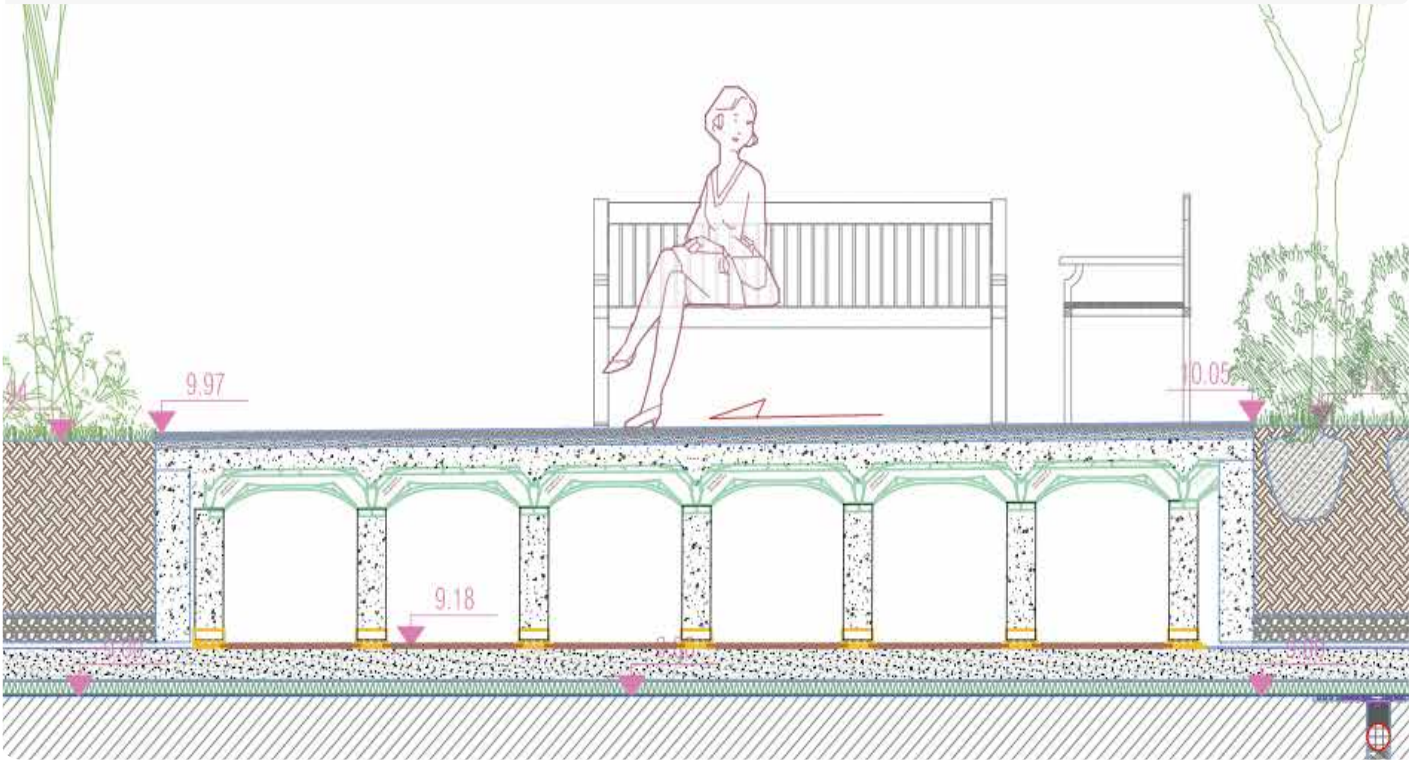
Gebze, İzmit

**ABS Plus H40 cm**

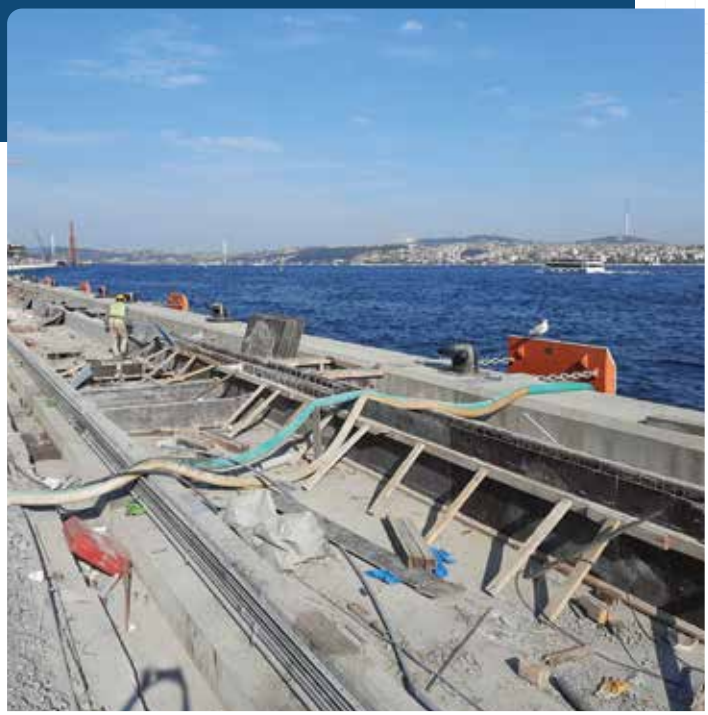


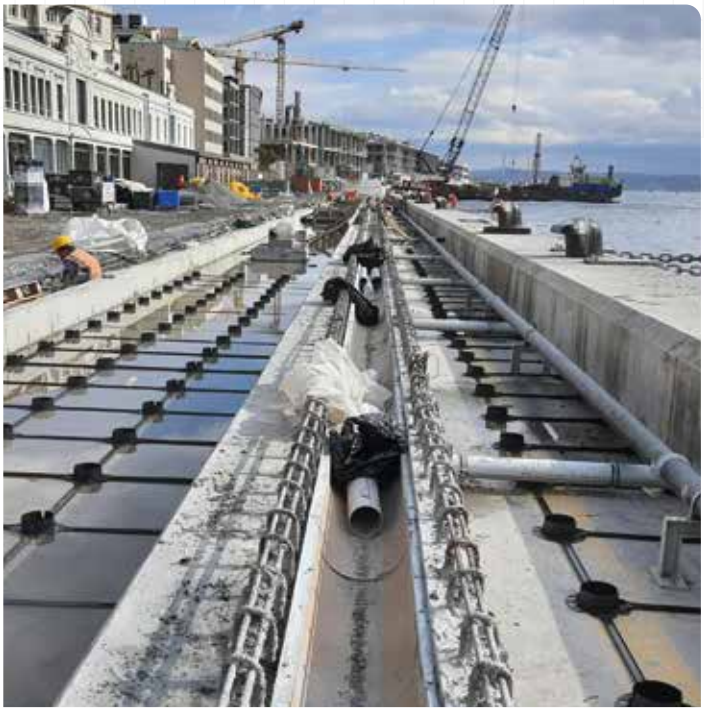

# LANDSCAPE FILLS

ABS Void Formworks are preferred not only because they are the lightest fill application but also because they do not interrupt the drainage slope. This makes them the ideal choice for constructing hardscape surfaces in landscape projects, while completely eliminating the risk of long-term cracks.



## LANDSCAPE FILLS REFERENCE APPLICATION





# Galataport İstanbul

İstanbul, Turkey

**ABS Plus H30 & 60 cm**

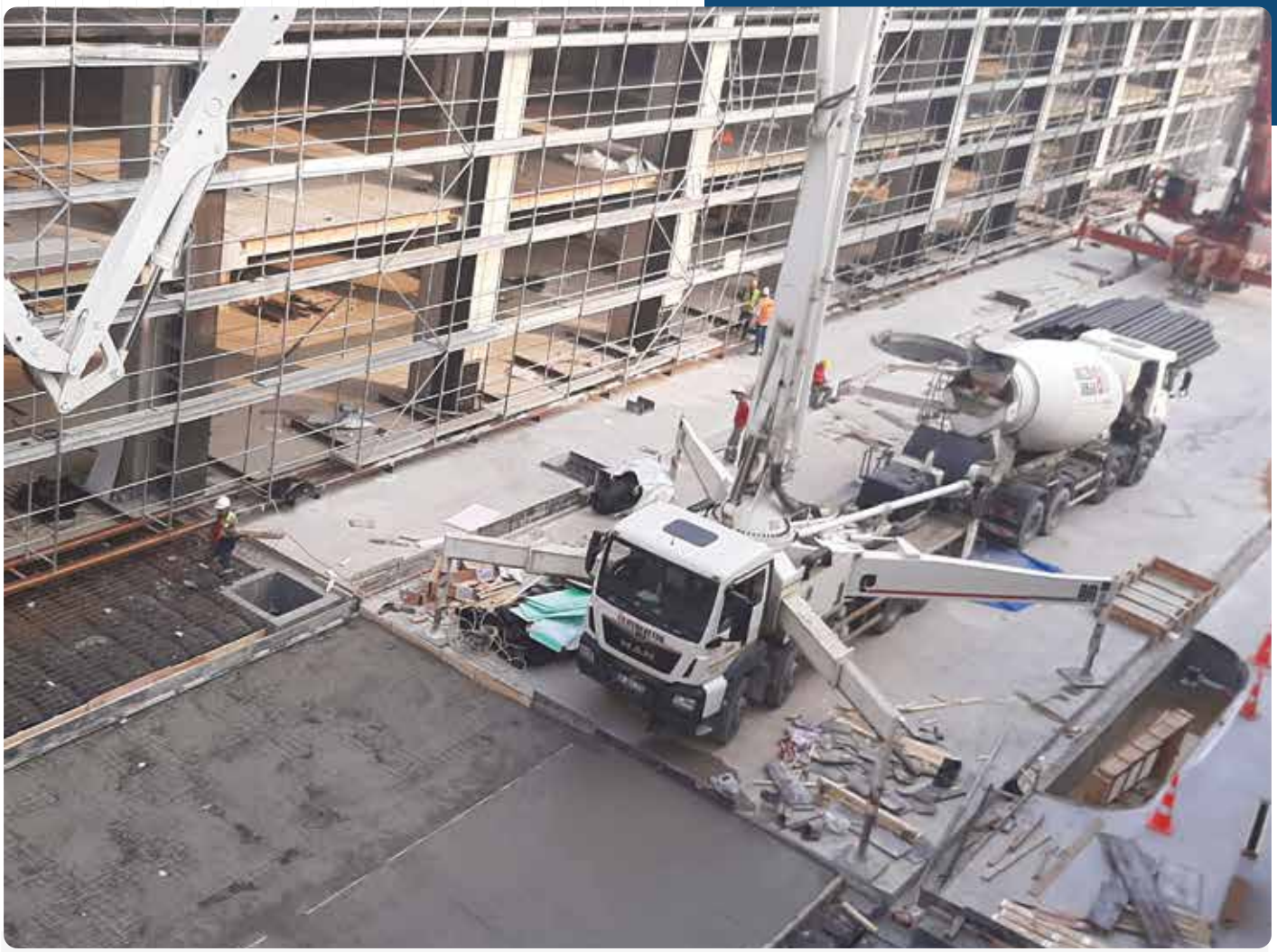
# LANDSCAPE FILLS REFERENCE APPLICATION

## Gaziantep Iconova

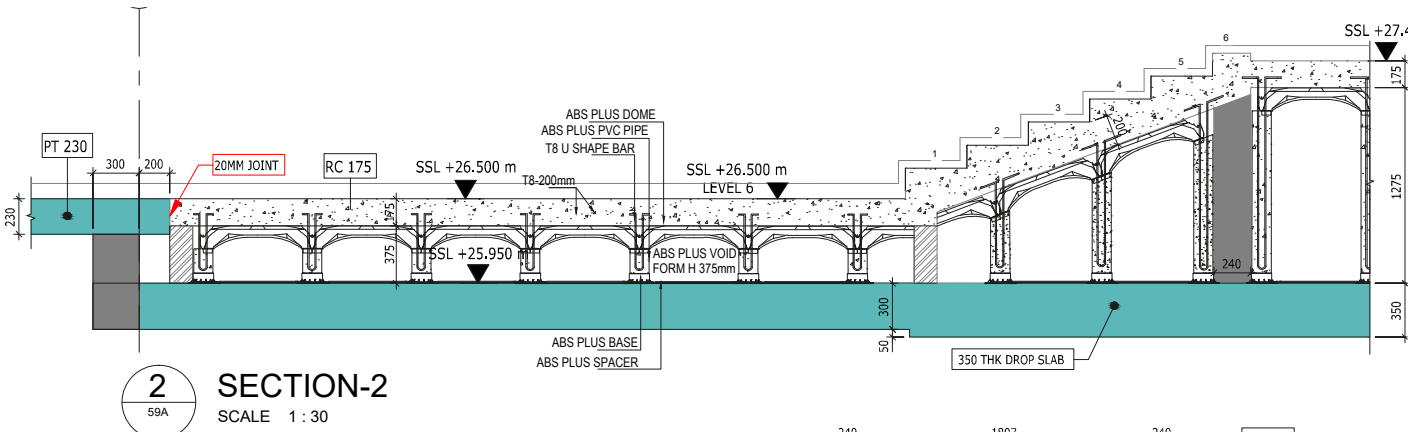
Gaziantep, Turkey

**ABS Plus H50 cm**

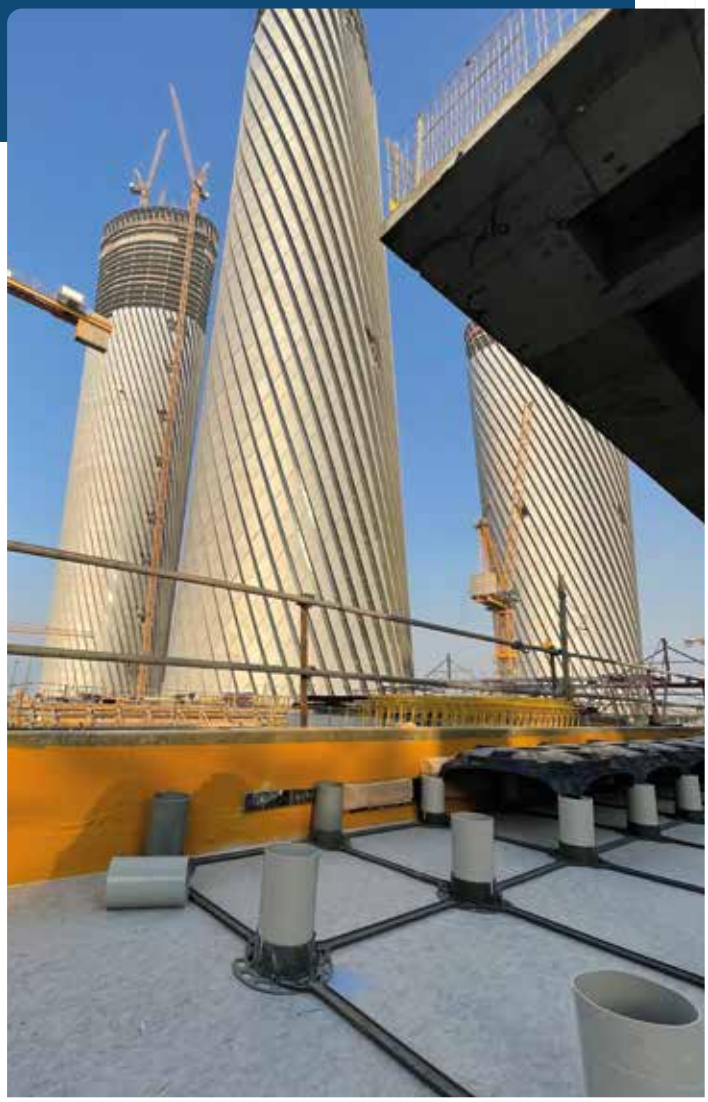
# AMENITY FLOOR CONSTRUCTION

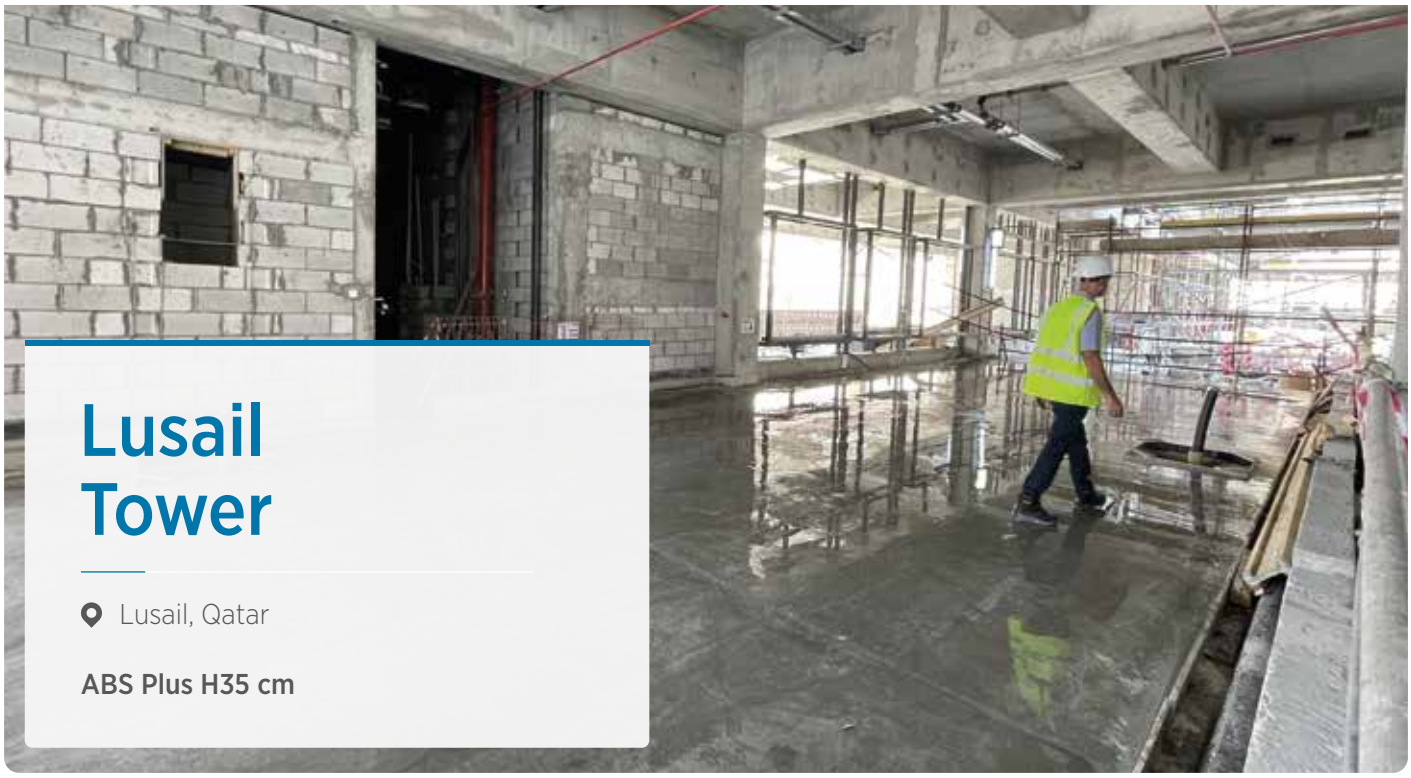


ABS Plus is the most suitable solution for constructing reinforced concrete raised flooring in indoor and outdoor hard landscaping applications. ABS Plus void formworks create a permanent reinforced concrete structure with high load-bearing capacity in such areas. With a 95% void ratio, it is the lightest solution available. Made from recycled plastic, the formwork is environmentally friendly and significantly reduces material usage throughout the application. Additionally, the empty space beneath the ground can be utilized for the passage of mechanical, electrical, and plumbing systems. Whether the building is low-rise or high-rise, ABS Plus is the most effective solution for hard landscaping applications in social areas on the podium level of the structure.



# AMENITY FLOOR CONSTRUCTION REFERENCE APPLICATION





## Lusail Tower

Lusail, Qatar

**ABS Plus H35 cm**

# AMENITY FLOOR CONSTRUCTION REFERENCE APPLICATION

## İstanbul Finance Center

İstanbul, Turkey

**ABS Plus H30 cm**

# AMENITY FLOOR CONSTRUCTION REFERENCE APPLICATION

## İstinyePark İzmir

İzmir, Türkiye

**ABS Plus H90 cm**

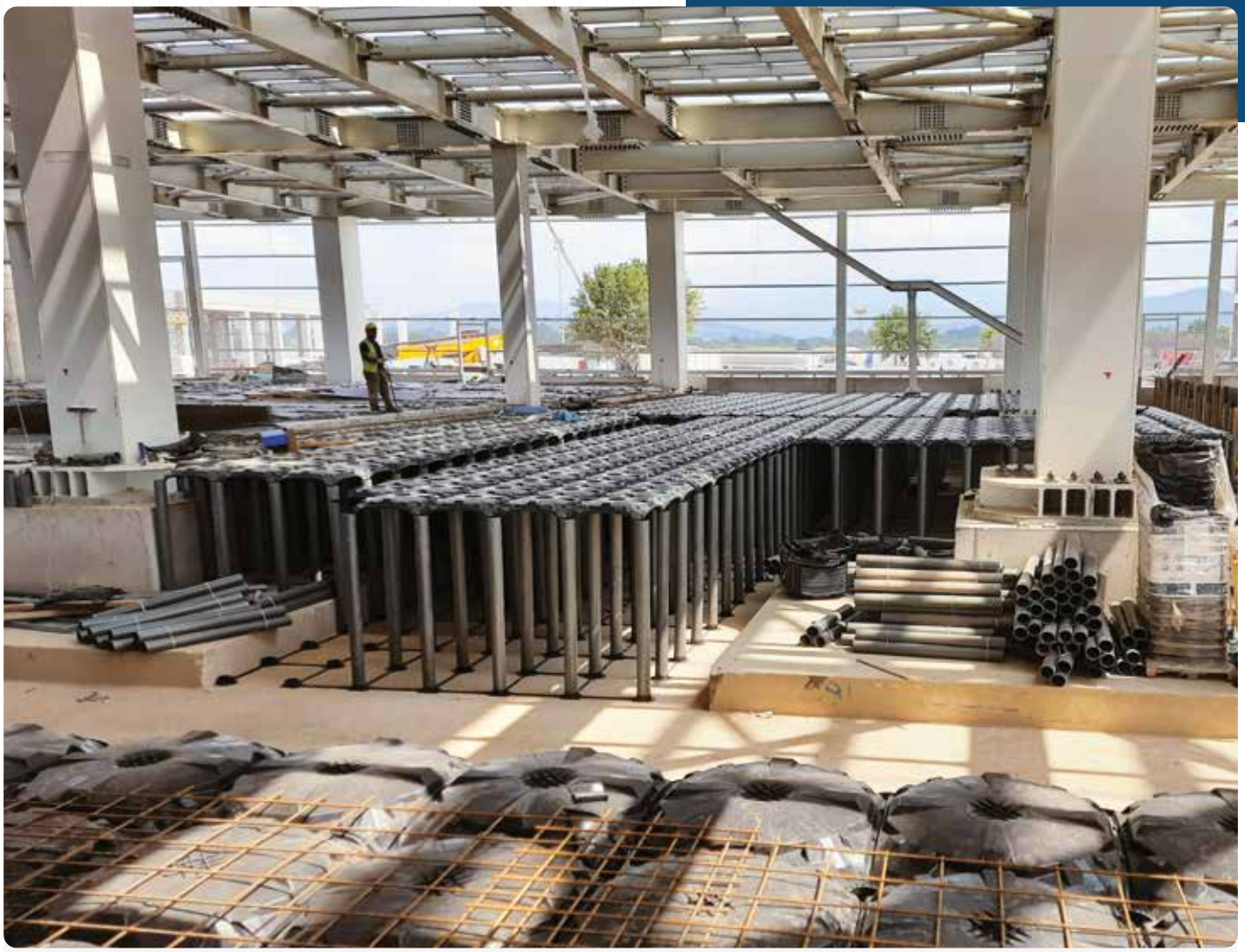
# AMENITY FLOOR CONSTRUCTION REFERENCE APPLICATION


## The Crest Sobha

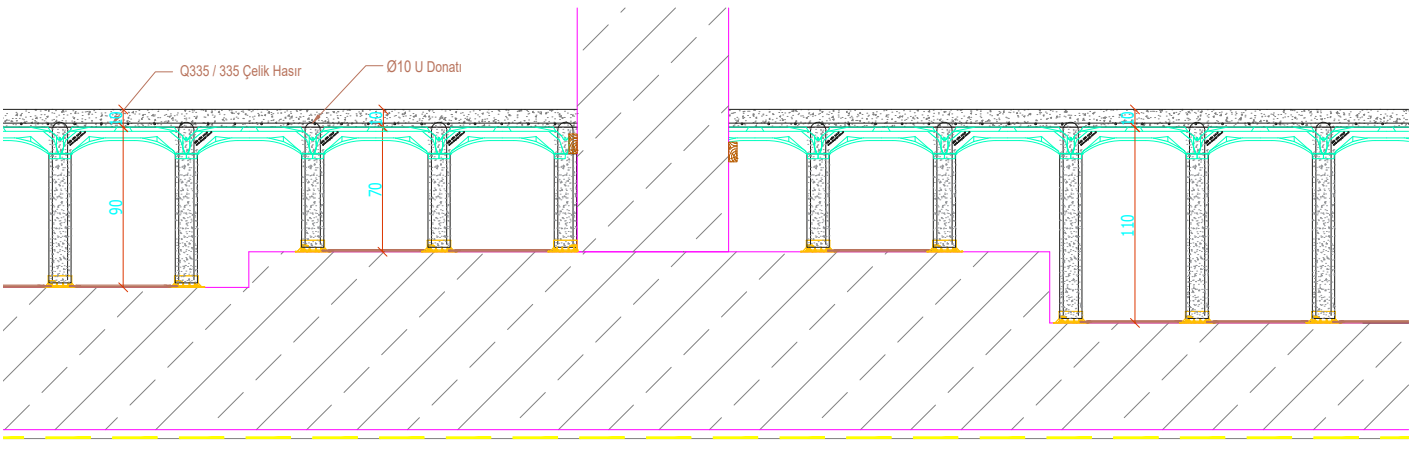
Dubai, UEA

**ABS Plus, variable heights**

# FILLS BETWEEN FOUNDATION FOOTINGS



ABS Void Formworks can be used effectively to fill the space between column/wall footings on top of a raft foundation. Since the space is 95% hollow, it can accommodate MEP (mechanical, electrical, and plumbing) installation passages. This same void space can also help prevent flooding.



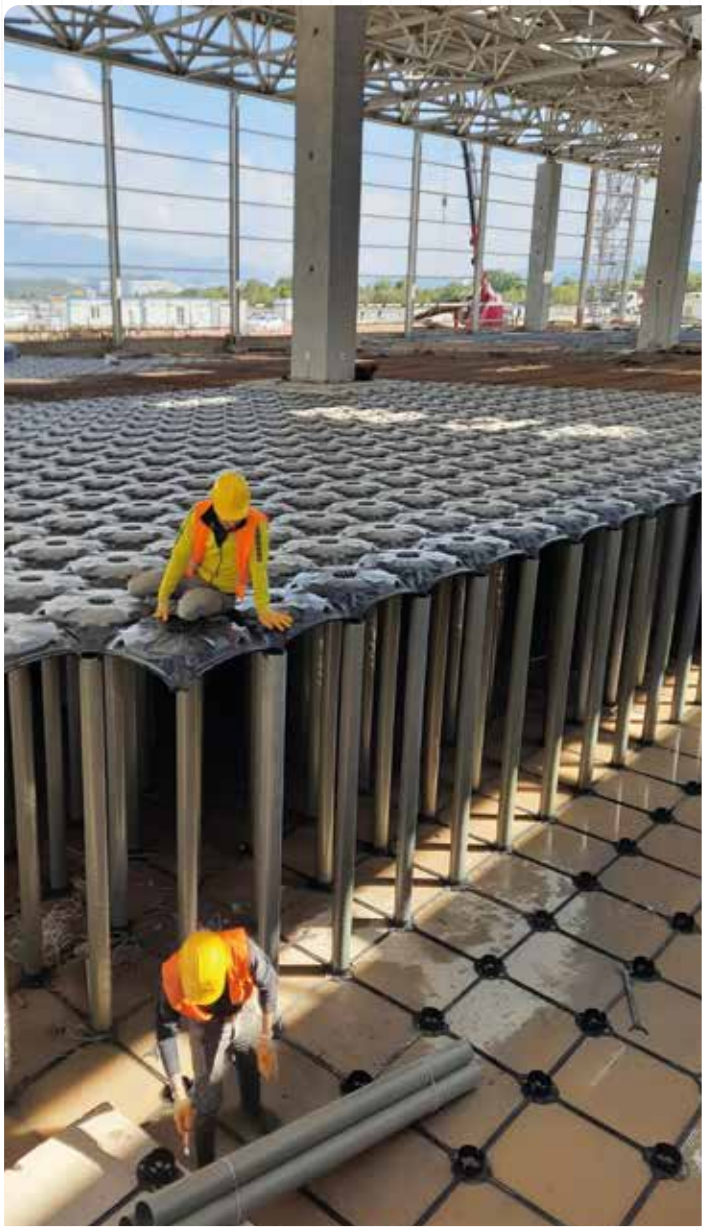
## FILLS BETWEEN FOUNDATION FOOTINGS REFERENCE APPLICATION

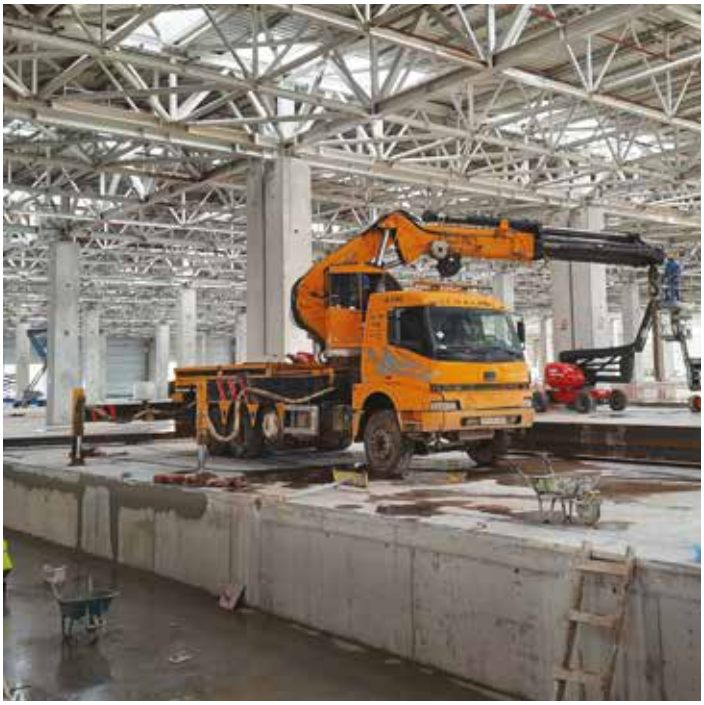
# TOGG Gemlik Campus

Bursa, Turkey

**ABS Plus H250 cm**

# FILLS BETWEEN FOUNDATION FOOTINGS REFERENCE APPLICATION





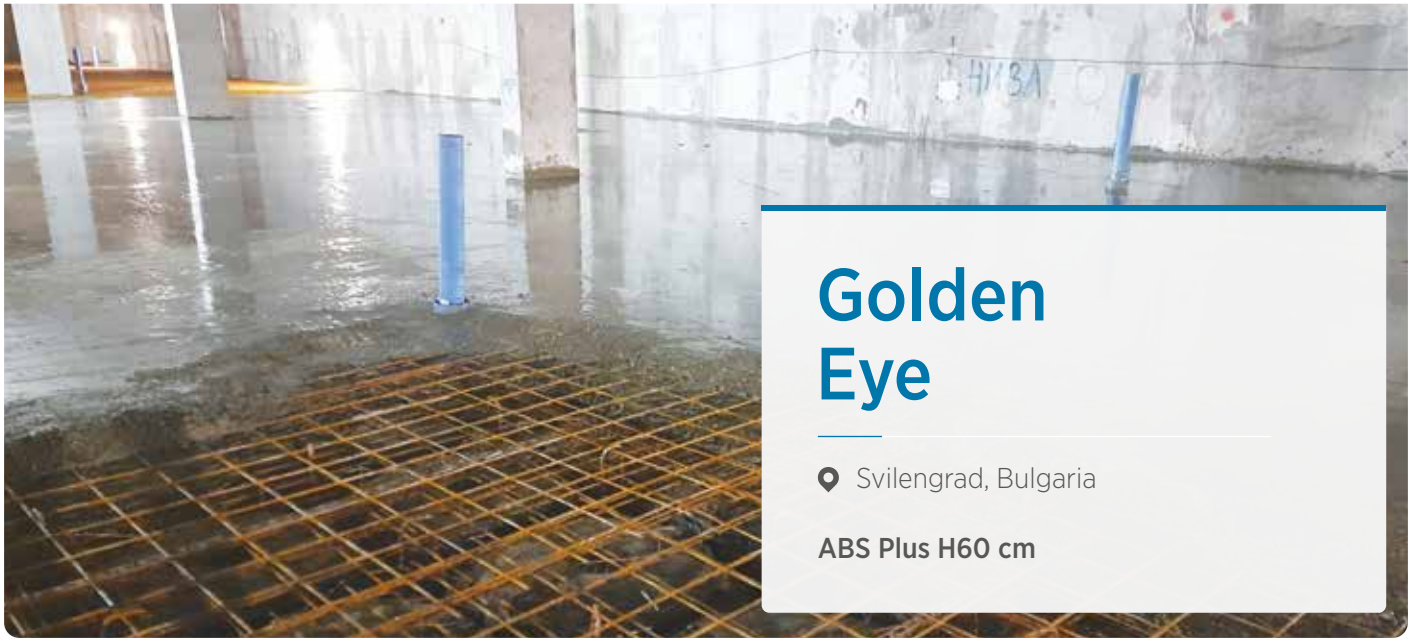
# FILLS BETWEEN FOUNDATION FOOTINGS REFERENCE APPLICATION

## Abdi İpekçi Sports Complex

İstanbul, Turkey

**ABS Plus H110 cm**

# FILLS BETWEEN FOUNDATION FOOTINGS REFERENCE APPLICATION

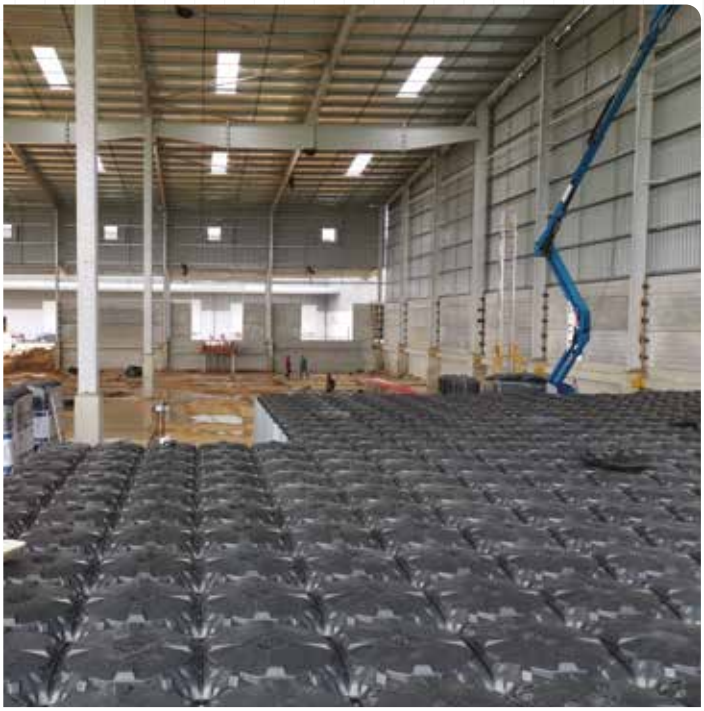


## Golden Eye

Svilengrad, Bulgaria

**ABS Plus H60 cm**

# FILLS BETWEEN FOUNDATION FOOTINGS REFERENCE APPLICATIONS



## NDR Warehouse

Chennai, India

**ABS Plus H235 cm**

# FILLS BETWEEN FOUNDATION FOOTINGS REFERENCE APPLICATION

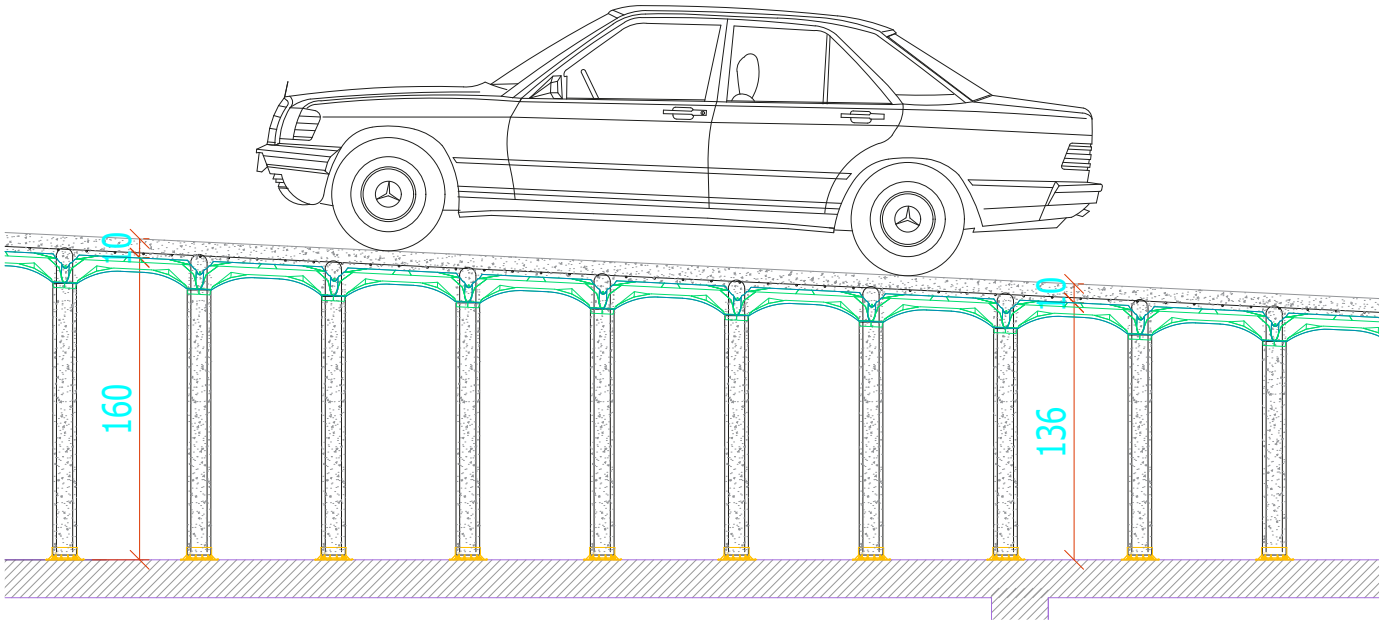
## 3Sun Gigafactory

Catania, Italy

**ABS Plus H196 cm**

# RAMP CONSTRUCTION


Conventional car park ramp designs require shear walls and beams to support the weight of vehicle traffic on an inclined surface. ABS Void Formworks enable the construction of a flat slab at the location of the ramp (i.e., a surface similar to the main slab structure). Later, ABS Void Formworks can be used to create the incline (ranging from 0 to 3 meters), adding only the weight of the slope's concrete—and a little more for the ABS columns. This provides a faster, lighter, and more economical solution compared to conventional methods.



# RAMP CONSTRUCTION REFERENCE APPLICATION

## Emaar Square

İstanbul, Turkey

**ABS Void Formwork various heights**

# RAMP CONSTRUCTION REFERENCE APPLICATION

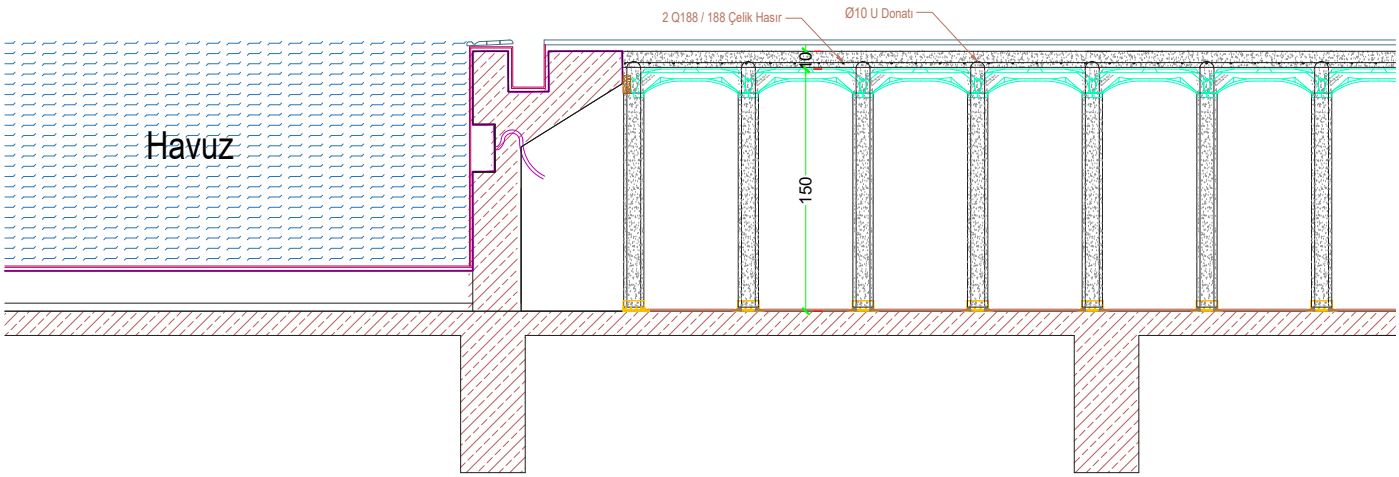
## Sabah Al-Salem University

Kuwait City, Kuwait

**ABS Plus various heights**


# SWIMMING POOL DECKS

Constructing a swimming pool on a flat reinforced concrete foundation or floor slab is much easier and more economical than other designs. Once the shear walls of the pool are erected, the pool deck can be constructed using ABS Void Formworks. Since the fill is hollow, it can also accommodate MEP (mechanical, electrical, plumbing) installation passages.



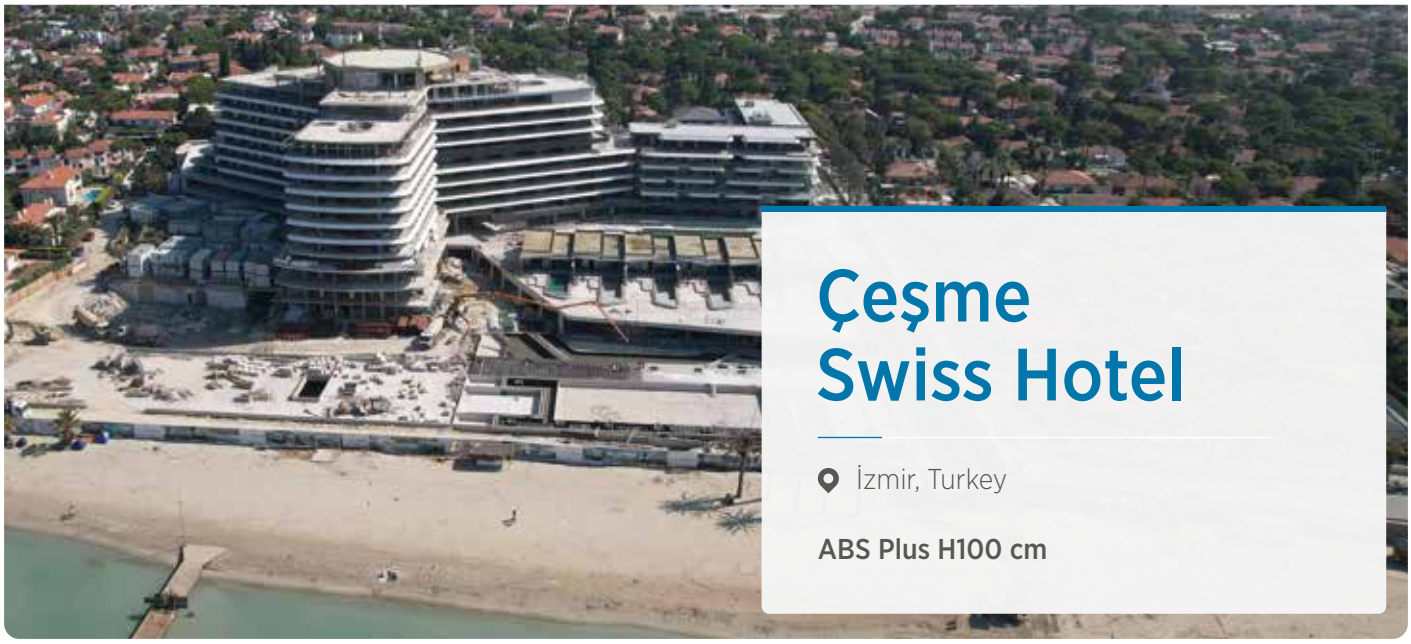
# SWIMMING POOL DECKS REFERENCE APPLICATION

## Rumeli Villas

İstanbul, Turkey

**ABS Plus H180 cm**

# SWIMMING POOL DECKS REFERENCE APPLICATION



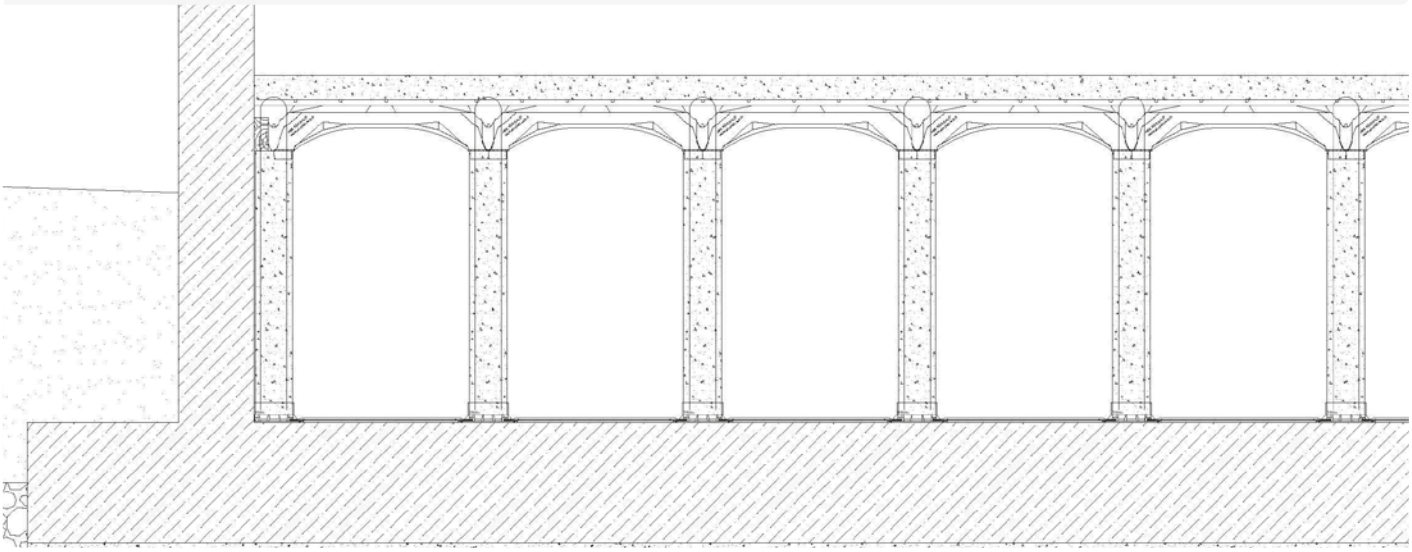
## Çeşme Swiss Hotel

İzmir, Turkey

**ABS Plus H100 cm**

# CRAWL SPACE CONSTRUCTION

Most single or two-story houses are elevated 40 to 50 cm above natural ground level. This construction tradition offers numerous benefits, including flood prevention, protection against radon gas and vapor intrusion, humidity control, and the provision of passages for MEP (mechanical, electrical, and plumbing) installations. The elevation is typically achieved using brick or concrete pillars connected by wooden beams. ABS Void Formworks provide a much more rigid and durable method of creating a crawl space while offering all the same benefits. The ABS plastic void formworks can be installed according to the house's layout and later filled and covered with concrete, creating a reinforced concrete raised floor with exceptionally high load-bearing capacity and excellent resistance to decay.



# CRAWL SPACE CONSTRUCTION REFERENCE APPLICATION

## Manavgat Villas

Antalya, Turkey

**ABS Plus H75 cm**

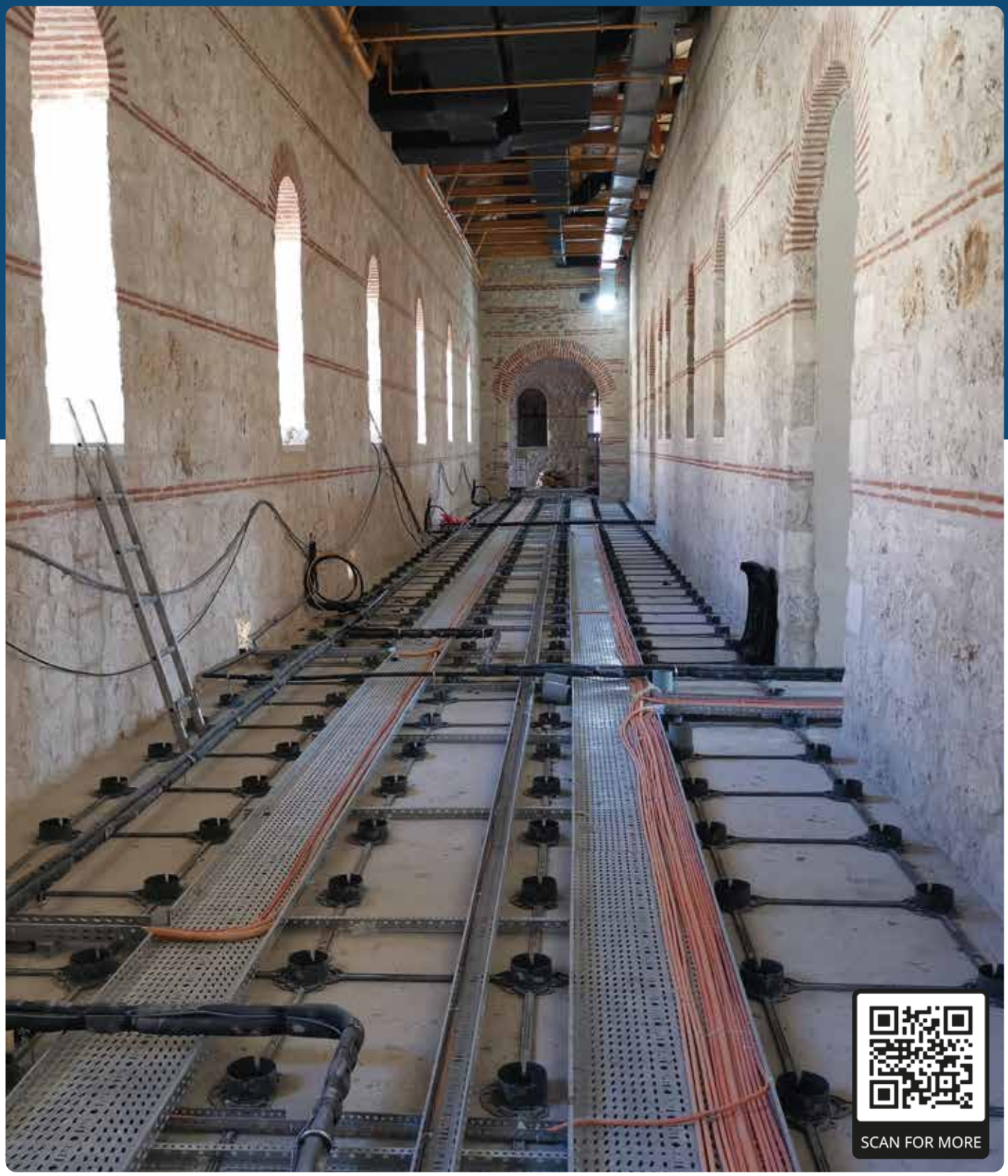
# CRAWL SPACE CONSTRUCTION REFERENCE APPLICATION

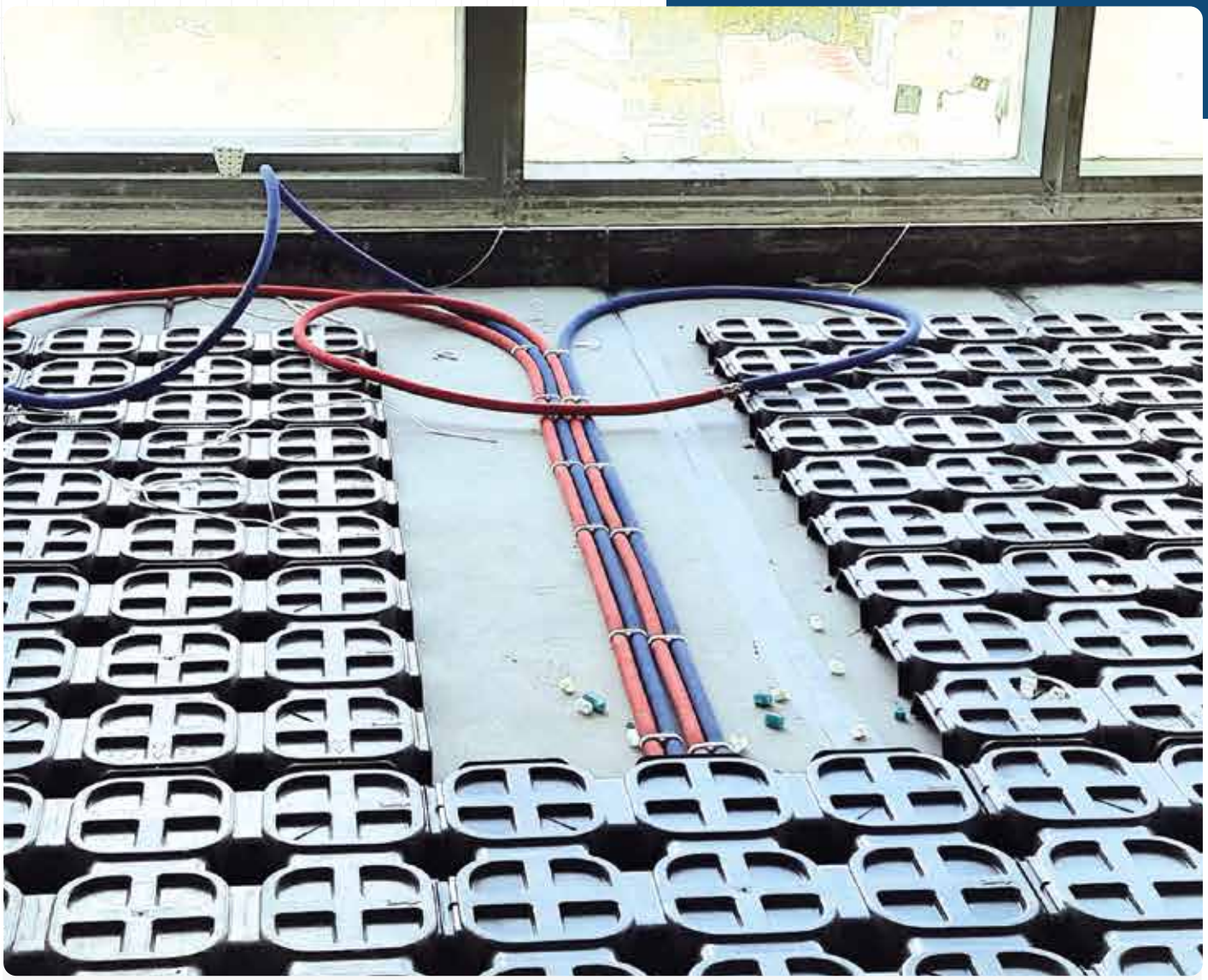
## Limak Villas

İstanbul, Turkey

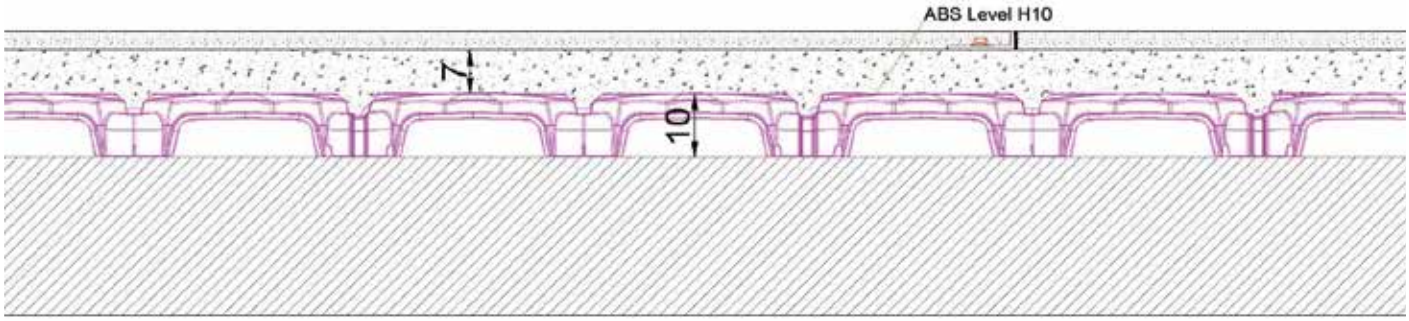
**ABS Plus H35 cm**

# REINFORCED CONCRETE RAISED FLOOR

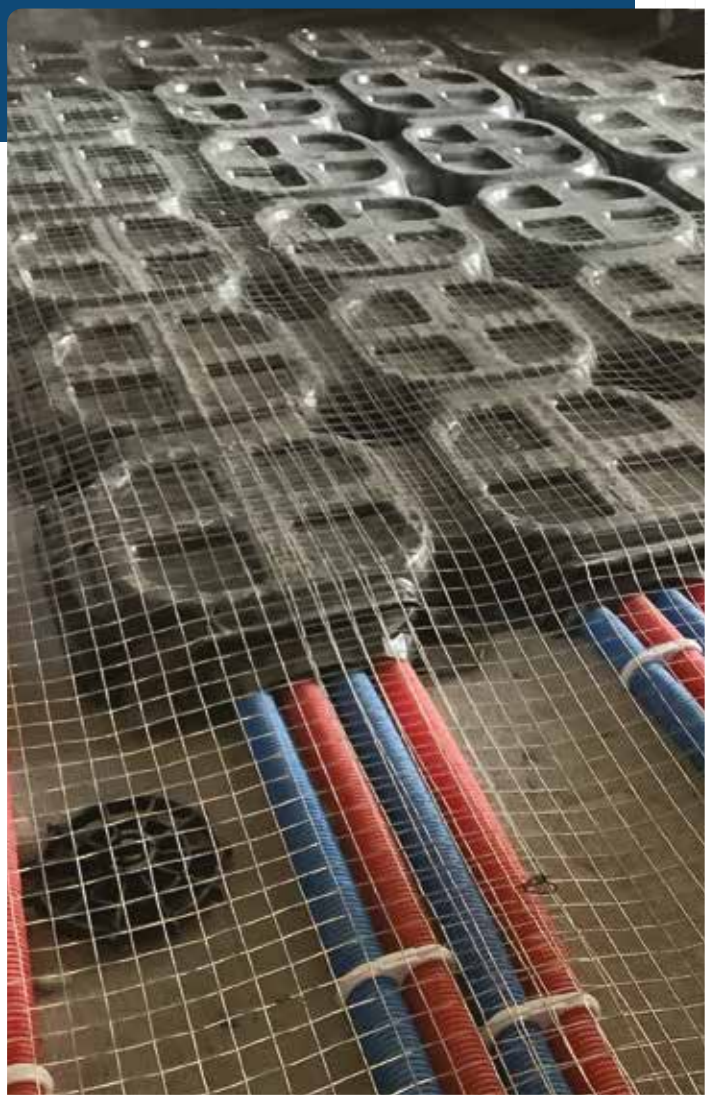


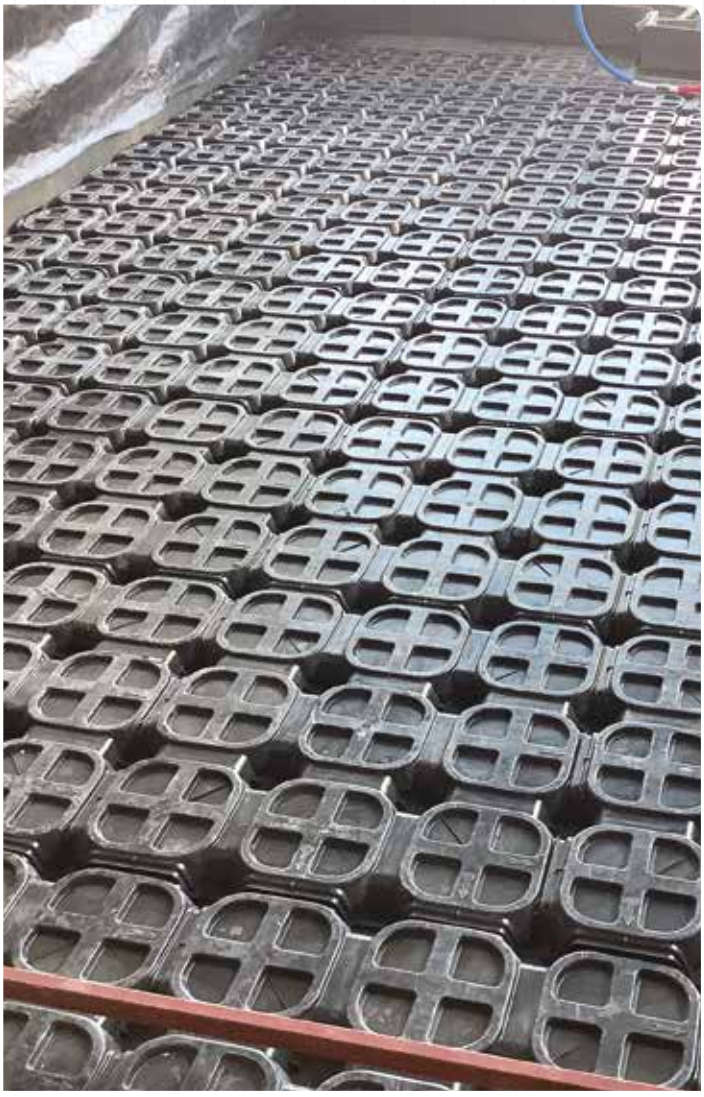


Reinforced concrete floors constructed using ABS Void Formworks are 95% empty, so the void space can be used for passing MEP (electrical, mechanical, plumbing) installations in a manner similar to that used for modular raised floors on steel pedestals. This system can be used as an alternative to all modular raised floor applications with metal pedestals. In addition, using ABS Level Void Formworks and junction boxes means that each commercial area to be filled with 8-10 cm of dry screed can be converted into a reinforced concrete raised floor. Volume that would normally have been lost can now be used for electrical and mechanical installations, thus increasing the total usage area of the building.



# REINFORCED CONCRETE RAISED FLOORS REFERENCE APPLICATION



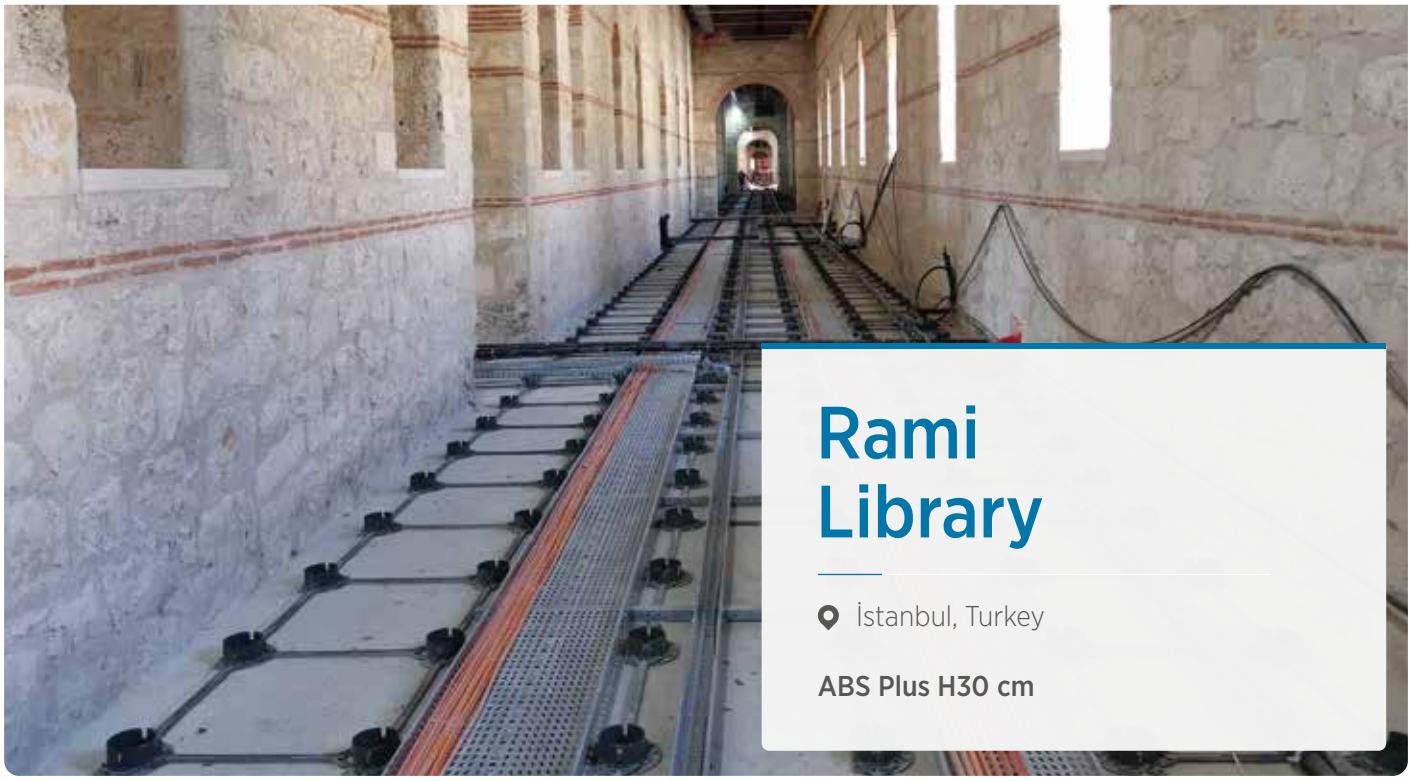


## The Address Hotel Emaar Square

İstanbul, Turkey

**ABS Level H5 cm**

# REINFORCED CONCRETE RAISED FLOORS REFERENCE APPLICATION



## Rami Library

İstanbul, Turkey

**ABS Plus H30 cm**

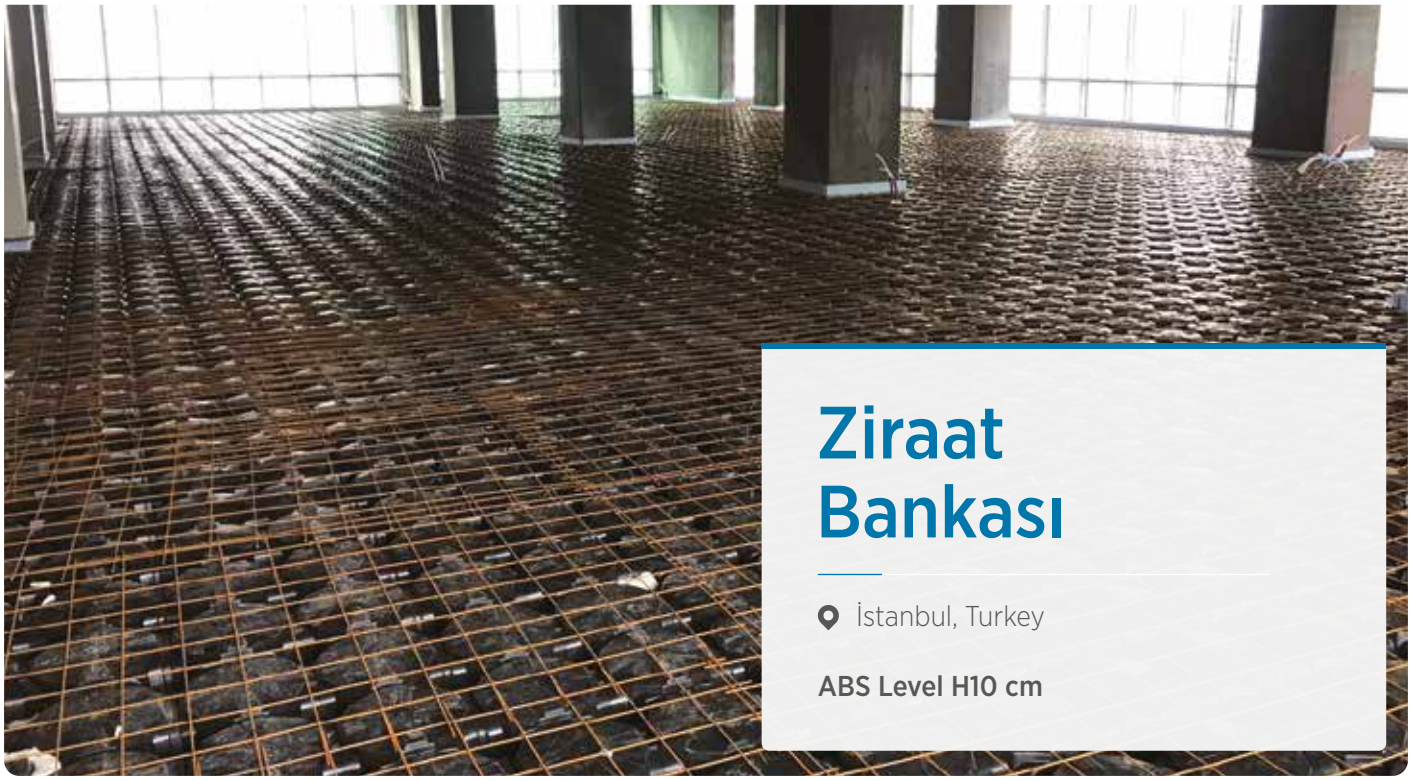
# REINFORCED CONCRETE RAISED FLOORS REFERENCE APPLICATION

## Premier Kampüs Ofis

İstanbul, Turkey

**ABS Level H15 cm**

# REINFORCED CONCRETE RAISED FLOORS REFERENCE APPLICATION



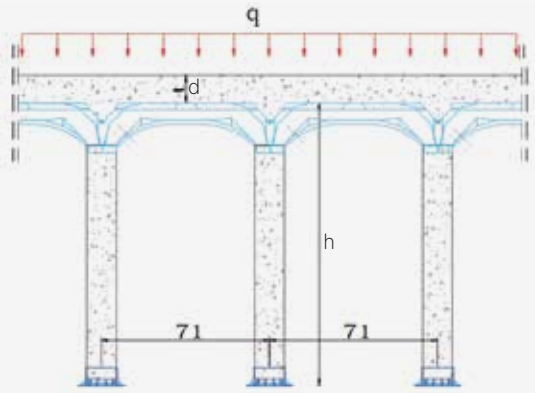
## Ziraat Bankası

İstanbul, Turkey

**ABS Level H10 cm**

# DESIGN DATA SHEET






## TYPICAL SECTION

## ABS PLUS

The design calculation of reinforced concrete raised floors is made based on a simple structure consisting of columns and a slab, as in other reinforced concrete structures. The configuration is just like the column-beam-floor structure of any building. The intended use of the structure is considered when determining the live and dead (fixed) design loads.

The transfer of loads from the slab to the columns takes place through the arches of the domes. However, to stay on the safe side, the load design of the domes and arches is not considered, only the slab and column calculations are made.

## Table: Maximum Allowable Live Load - $q_{max}$ (kN/m²) — İstanbul Technical University, Product Report 2018

| Disposable Formwork Height, H (cm) | | Column Reinforcement | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 250 | 4 x Ø10 | - | - | - | - | - | - | - | - | - | - | - | 55 | 55 | 55 | 55 | 55 | 55 |
| | | 4 x Ø8 | - | - | - | - | - | - | - | - | - | - | - | 55 | 55 | 55 | 55 | 55 | 55 |
| | | 2 x Ø10 | - | - | - | - | - | - | - | - | - | - | - | 55 | 55 | 55 | 55 | 55 | 55 |
| | | 2 x Ø8 | - | - | - | - | - | - | - | - | - | - | - | 55 | 55 | 55 | 55 | 55 | 55 |
| | 200 | 2 x Ø10 | 29 | 50 | 55 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 76 | 76 | 76 | 76 | 76 | 76 |
| | | 2 x Ø8 | 29 | 50 | 55 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 76 | 76 | 76 | 76 | 76 | 76 |
| | | Ø10 | 29 | 50 | 55 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| | | Ø8 | 29 | 50 | 55 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| | 150 | 2 x Ø10 | 29 | 50 | 55 | 79 | 83 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| | | 2 x Ø8 | 29 | 50 | 55 | 79 | 83 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| | | Ø10 | 29 | 50 | 55 | 79 | 83 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| | | Ø8 | 29 | 50 | 55 | 79 | 83 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| | 100 | 2 x Ø10 | 29 | 50 | 55 | 79 | 83 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 |
| | | 2 x Ø8 | 29 | 50 | 55 | 79 | 83 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 |
| | | Ø10 | 29 | 50 | 55 | 79 | 83 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| | | Ø8 | 29 | 50 | 55 | 79 | 83 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| | 50 | 2 x Ø10 | 29 | 50 | 55 | 79 | 83 | 106 | 106 | 106 | 106 | 106 | 106 | 110 | 110 | 110 | 110 | 110 | 110 |
| | | 2 x Ø8 | 29 | 50 | 55 | 79 | 83 | 104 | 104 | 104 | 104 | 104 | 104 | 108 | 108 | 108 | 108 | 108 | 108 |
| | | Ø10 | 29 | 50 | 55 | 79 | 83 | 98 | 98 | 98 | 98 | 98 | 98 | 102 | 102 | 102 | 102 | 102 | 102 |
| | | Ø8 | 29 | 50 | 55 | 79 | 83 | 98 | 98 | 98 | 98 | 98 | 98 | 102 | 102 | 102 | 102 | 102 | 102 |
| | | w/o rebar | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Applies to both C25 and C30 concrete classes | | Slab Reinforcement (mm) | Ø6 / 150 x 150 | Ø8 / 150 x 150 | Ø8,5 / 150 x 150 | Ø6 / 150 x 150 | 2 x Ø6 / 150 x 150 | Ø8 / 150 x 150 | 2 x Ø8 / 150 x 150 | Ø8,5 / 150 x 150 | 2 x Ø8,5 / 150 x 150 | Ø10 / 150 x 150 | 2 x Ø10 / 150 x 150 | 2 x Ø8 / 150 x 150 | 2 x Ø8,5 / 150 x 150 | 2 x Ø10 / 150 x 150 | 2 x Ø8 / 150 x 150 | 2 x Ø8,5 / 150 x 150 | 2 x Ø10 / 150 x 150 |
| | | **Slab Thickness, t** (cm) | **5** | | | **10** | | | | | | | | **15** | | | **20** | | |

## Laboratory Test Results

Please visit our website at absvoidformwork.com/documents for all and more precise data tables.

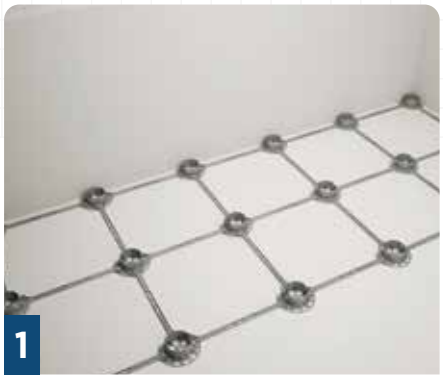
İstanbul Technical University, Load Test Report 2018, 2021

| Type | ABS Plus System Height (cm) | Slab Concrete Thickness (cm) | Rebar in Legs | Total Height (cm) | Maximum Load Record (kN) |
|---|---|---|---|---|---|
| H250 | 250 | 20 | Yes (4xΦ 10) | 270 | 570,2 |
| H250 | 250 | 15 | Yes (4xΦ 10) | 265 | 484,2 |
| H100 | 100 | 10 | Yes (2xΦ 10) | 110 | 278,6 |
| H50 | 50 | 10 | Yes (2xΦ 10) | 60 | 283,2 |
| H50 | 50 | 10 | No | 60 | 238,5 |
| H50 | 50 | 5 | No | 55 | 125,9 |

İstanbul Technical University, Formwork Resistance Report 2018

| Sample No | Sample Type | Sample Size (mm) | Comp. Surface (mm) | Maximum Load | |
|---|---|---|---|---|---|
| | | | | (kN) | (kN/m²) |
| 1A | ABS PLUS | 710x710x300 | Φ245 | 1,3462 | 8,6 |

# OUR REPORTS AND CERTIFICATES

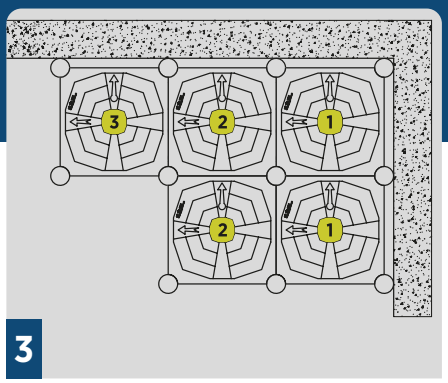


1

Place the bases using the spacers so that the base's flat side is adjacent to the wall. Cut the base creating a second edge so that it fits into a corner.

2

Press the legs that have been cut according to the project firmly into the base slots.

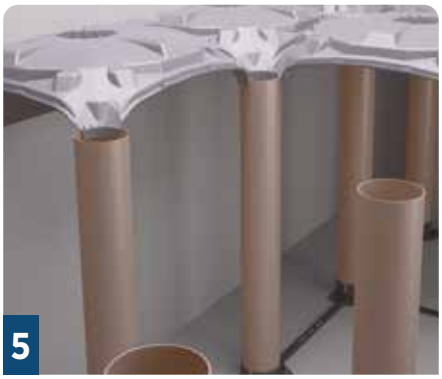



3

Place the domes on the legs, from right to left and from top to bottom, checking that the domes fit over each other and on the legs firmly. The arrows on the domes should always indicate the direction in which the installation operator looks.

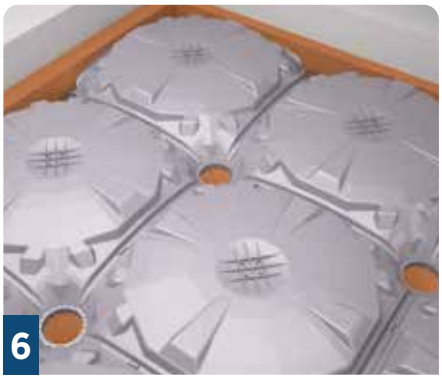
4

Inserting the last row of ABS Plus domes: Example 1; full dome on the wooden console attached to the wall.



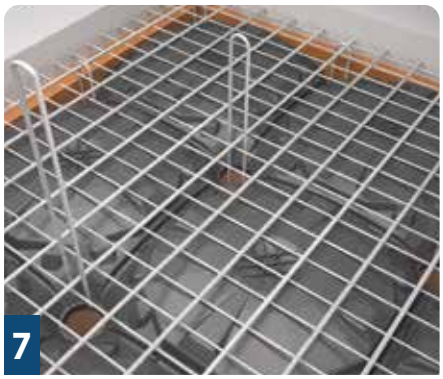
5

Inserting the last row of ABS Plus domes: Example 2; Placing a cut dome on the wooden console attached to the wall.



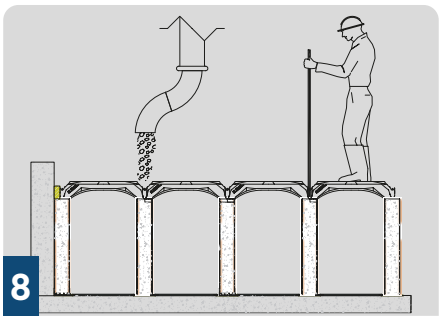
6

In the case of full-dome wall finishes where the PVC pipes legs are adjacent to the walls, place ABS Plus dome side closer or 5x10 wooden wedges on the pipes and close the cavities against concrete leaks.



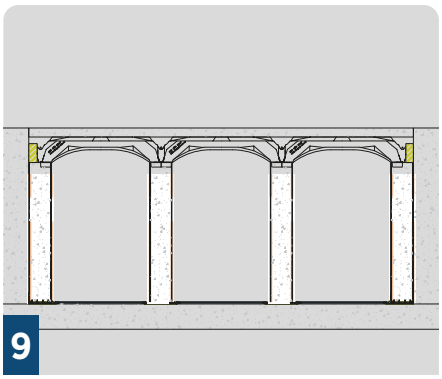
7

Place project specific welded steel mesh on the concrete-sealed void formworks and place vertical steel rebars into the legs.



8

First, fill the pipes with at least C25 class and at least S4 viscose concrete. The mouth of the pump hose should be kept up to 20 cm above the domes. Every legs should be stabbed with a steel rod to release the air trapped in the leg. Fill the domes and topping concrete after filling the pipes.



9

Use a vibrator when pouring the concrete of the domes and topping slab. Depending on the ambient conditions, the concrete should be moistened sufficiently.

**INSTALLATION VIDEO**
absvoidformwork.com/videos

SCAN TO WATCH

**INSTALLATION GUIDE**
absvoidformwork.com/documents

SCAN TO REACH

## Our Quality Standards

Each stage, from raw material procurement to the use of products in the field, is regularly controlled by separate units with separate methods for quality.

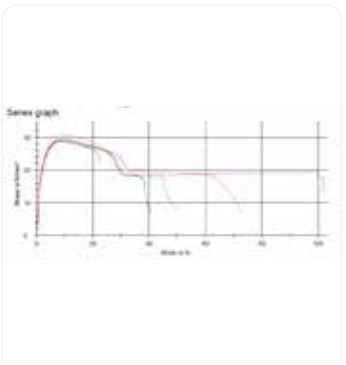
## Raw Material Procurement

Our ready-to-inject raw material, which is manufactured specifically to our specifications, is taken from the bags with strict sampling methods before production and checked for melt flow and tensile strength in our laboratory.

**Quality Control Laboratory**

**Melt Flow Control**

**Tensile Strength Inspection**



**Comparative Result Check**

## Production Process

At predetermined intervals during production, each batch of products is checked for compliance with the National Technical Approval standards, as well as the specifications set by the ABS quality team.

The resistance of domes is checked at regular intervals as standard.

Flexibility and strength of the legs are checked at regular intervals as standard.

Actual lengths of cooled and rested products after production is checked

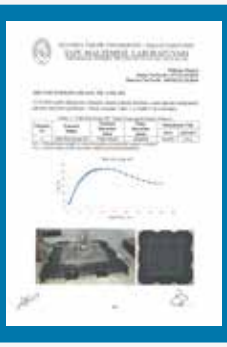
Length control of the complete system consisting of dome, base, spacer and legs is performed at regular intervals.


National Technical Approval
19-1915 TTO


Technical Product Report
Istanbul Technical University

Load Test Report
Istanbul Technical University

Load Test Report
Kuwait University



Formwork Resistance Report
Istanbul Technical University

Formwork and Leg Resistance Report
Eskisehir Technical University

Fire Resistance Report and Certificate
TSE

Thermal Conductivity Report
TSE

Sound Insulation Report
TSE


NFPA 259 Test Report
Intertek


REACH Certificate
Eurocert


Declaration of Conformity to G Mark

### Utility Model & Patents

- TR 2015 15942
- TR 2015 15948
- TR 2017 15699
- TR 2021 009059

### Industrial Design Registrations

- 2017 07565
- 2019 01005
- 2020 03500
- 2021 006515

### Brand Registrations

- 2016 75201
- 2016 105429
- 2016 22882
- 2018 42433
- 2018 41887
- 2012 05630
- 2015 101236
- 2015 101238
- 2016 22908
- 2016 75187

For more information

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