abs Disposable Formworks

DISPOSABLE FORMWORKS FOR LIGHTWEIGHT FILLINGS

Turkey

Discover the potential

LIGHT FAST EASY ECONOMICAL

FIXED

ABS LEVEL

ADJUSTABLE

ABS PLUS

absyapi

Innovative Structural Solutions

ABS DISPOSABLE FORMWORKS FOR LIGHTWEIGHT FILLINGS

ABS Plus

ABS DISPOSABLE FORMWORKS FOR LIGHTWEIGHT FILLINGS

ABS Disposable Formworks are concrete shaping structures made of recycled plastic that are used only once. They are also called void formers, permanent formworks or single-use formworks. They create reinforced concrete raised floors up to 300 cm (118.11 in), thus providing a light, fast, easy and economical filling in any structure. Reinforced concrete raised floors are constructed faster and easier, are lighter weight and are more economical than conventional filling applications.

ABS Disposable Formworks can be used for any sort of lightweight filling application. Uses include sunken slab fillings, landscape fillings to create a hard surface, inverted beam fillings, fillings between foundation footings, carpark ramps, pool decks, elevator/staircase hallway fillings and crawlspace construction. In addition, reinforced concrete raised floors created with disposable formworks can be used instead of modular raised floors by adding a grid of simple junction boxes to the system.

ABS Level

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 (39.37 in), 1 truck of disposable formwork equivalents 50 trucks of alternative filling 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 filling application on lower floors, as the filling 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 59 cm (23.23 in).

FAST AND EASY

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

RAMP CONSTRUCTION

PVC pipes 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

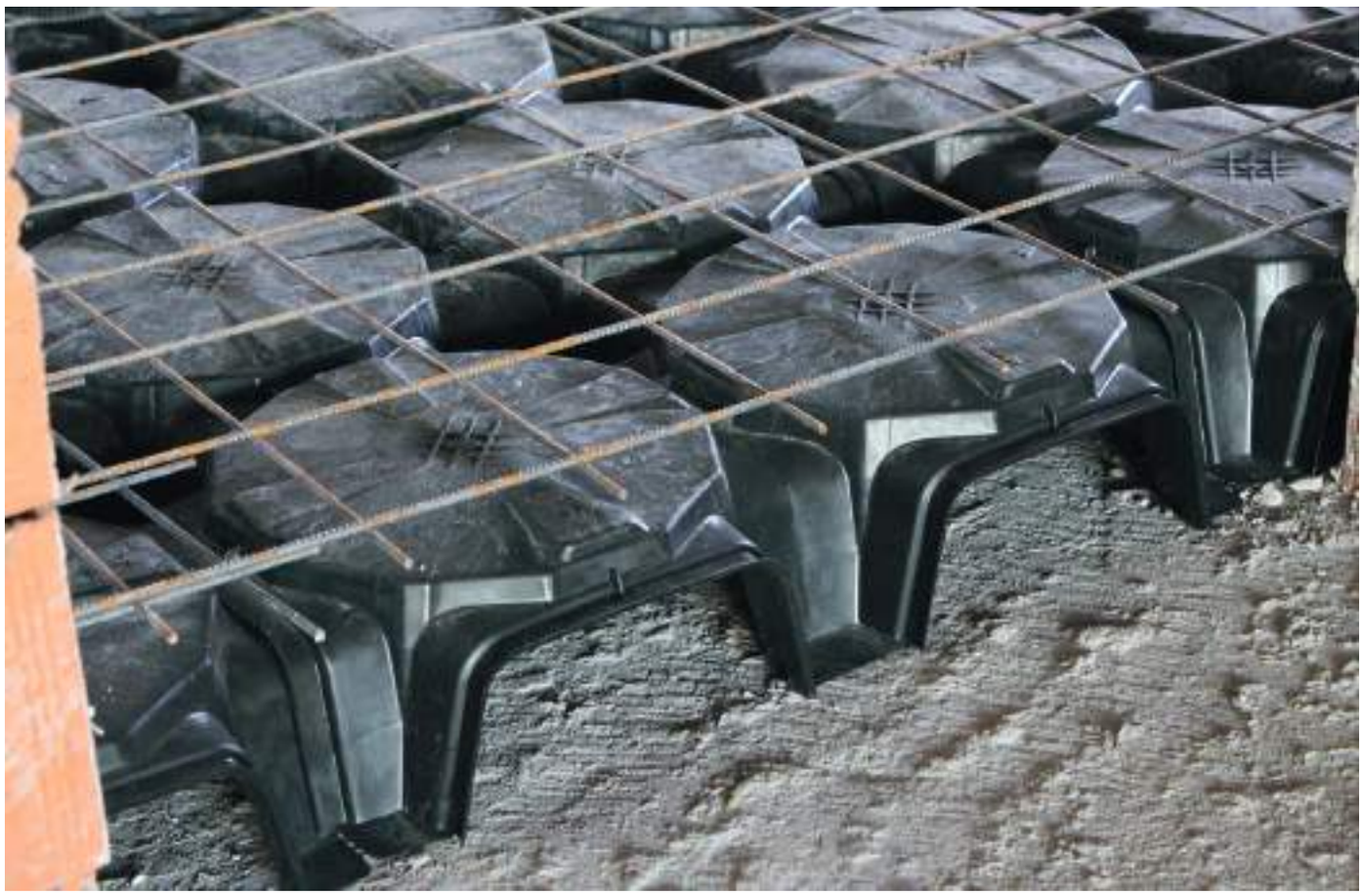
Separator walls can be installed directly on the newly created concrete surface.

ENVIRONMENTAL VALUE

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

ABS LEVEL

FIXED-HEIGHT (5, 10, 15 cm / 1.97, 3.94, 5.90 in)

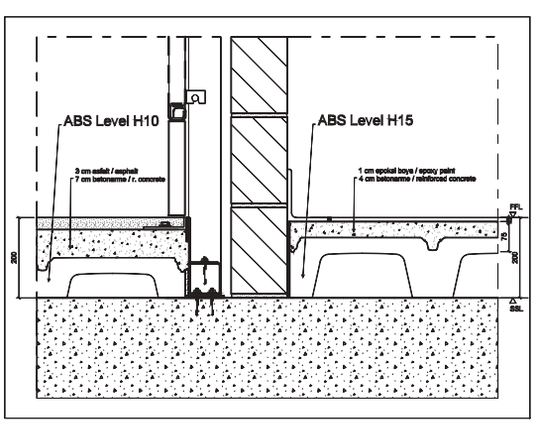


ABS LEVEL | FIXED-HEIGHT DISPOSABLE FORMWORKS FOR LIGHTWEIGHT FILLINGS (5, 10, 15 cm /1.97, 3.94, 5.90 in)

The 'Level' series of ABS Disposable Formworks offers fixed-heights of 5, 10 and 15 cm / 1.97, 3.94, 5.90 in to create reinforced concrete raised floors in commercial or industrial structures quickly, easily and extremely economically. The formworks are made of recycled plastic and are specifically designed to enable cable trays and/or plumbing pipes to pass through.

The products can be used alternatively to modular raised floor applications with metal pedestals. Moreover, commercial areas there are conventionally filled with 8-10 cm dry screed to obtain as smooth concrete finish can be constructed as a reinforced concrete raised floor using ABS Level disposable formworks and junction boxes, which allows electrical and mechanical installations to pass through them. The space that normally would have been lost, can now be added to the usage area of the building.

1) ABS Level - H5 (2 pcs = 1 m² / 10.76 ft²)
2) ABS Level - H10 (2 pcs = 1 m² / 10.76 ft²)
3) ABS Level - H15 (2 pcs = 1 m² / 10.76 ft²)



Sample Cross Section

ABS Level - H5

abs Disposable Formworks

ABS PLUS

ADJUSTABLE-HEIGHT (20 cm - 300 cm / 7.90 - 118.11 in)

ABS PLUS | ADJUSTABLE-HEIGHT DISPOSABLE FORMWORK SYSTEM FOR LIGHTWEIGHT FILLINGS (20 cm - 300 cm / 7.90 - 118.11 in)

ABS Plus is an adjustable-height disposable concrete formwork system made of recycled plastic. The system creates reinforced concrete raised floors up to 300 cm, thus providing a light, fast, easy and economical filling in any structure.

To accommodate project-specific heights, the PVC pipes are cut to specification at the factory before delivery. Alternatively, standard-length pipes can be cut on-site by the customer fitting exact heights.

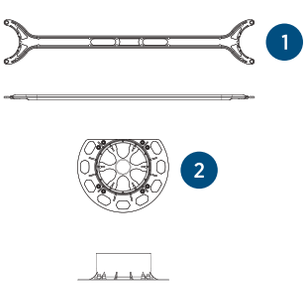
Unlike similar systems, the ABS Plus system consists of 2 legs per m², which, in addition to all of its advantages, providing additional ease of application and significant cost saving on concrete and steel.

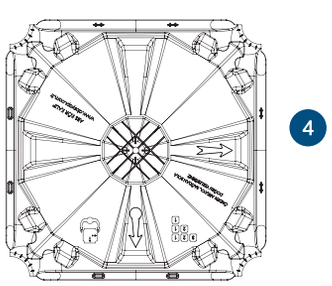
1) ABS Plus - Spacer (min. 2 max. 4 pcs per m², depending on the project)

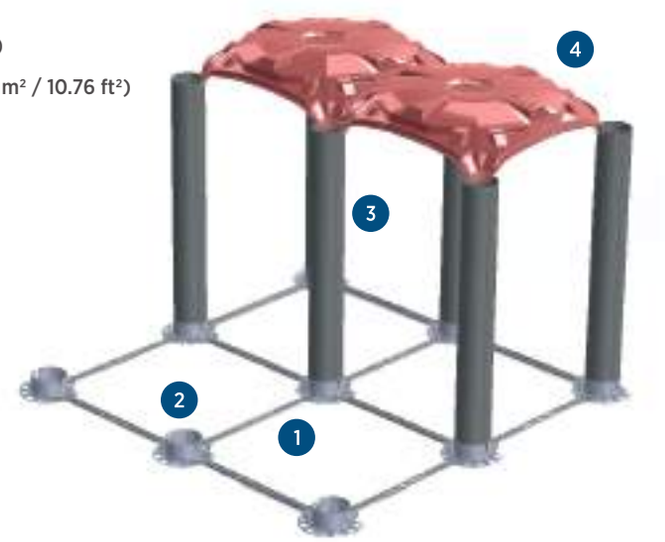
2) ABS Plus - Base (2 pcs = 1 m², Ø125 mm, H 2,5 cm / 10.76 ft², Ø5 in, 0.98 in)

3) PVC Pipe Ø125 / Ø5 in (cut to the heights required by the project, 2 pcs = 1 m² / 10.76 ft²)

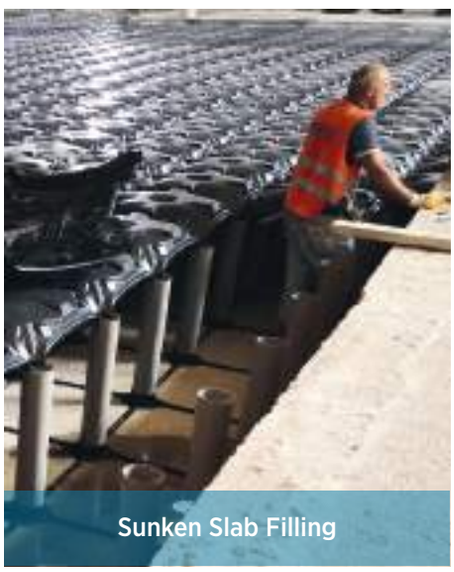
4) ABS Plus - H15 Dome (2 pcs = 1 m² / 10.76 ft²)







USAGE AREAS

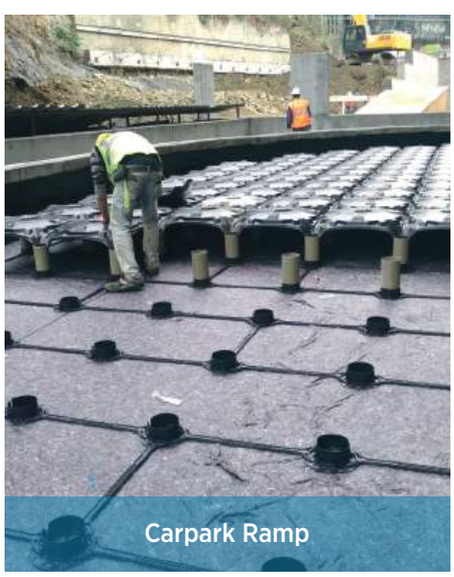


Sunken Slab Filling

Landscape Filling

Inverted Beam Filling

Filling Between Foundation Footings



Carpark Ramp

Pool Deck Slab Filling

Elevator/Staircase Hallway Filling

Crawl Space Construction

Reinforced Concrete Raised Floor

abs Disposable Formworks

REFERENCE APPLICATION

LIGHTWEIGHT FILLING ON FLOOR

PROJECT : AND Pastel

LOCATION : Istanbul, Turkey

PRODUCT : ABS Plus, variable heights

APPLICATION : Lightweight filling application above the carpark slab to construct a concrete surface

REFERENCE APPLICATION

LIGHTWEIGHT FILLING ON FLOOR

PROJECT : Şaşkınbakkal Residence

LOCATION : Istanbul, Turkey

PRODUCT : ABS Plus H235 cm / 92.51 in

APPLICATION : Lightweight filling application above the carpark slab to construct a concrete surface

REFERENCE APPLICATION

LIGHTWEIGT FILLING ON FLOOR

PROJECT : Feneryolu Residence

LOCATION : Istanbul, Turkey

PRODUCT : ABS Plus H50 cm / 19.7 in

APPLICATION : Lightweight filling application above the car park slab to construct a concrete surface

REFERENCE APPLICATION

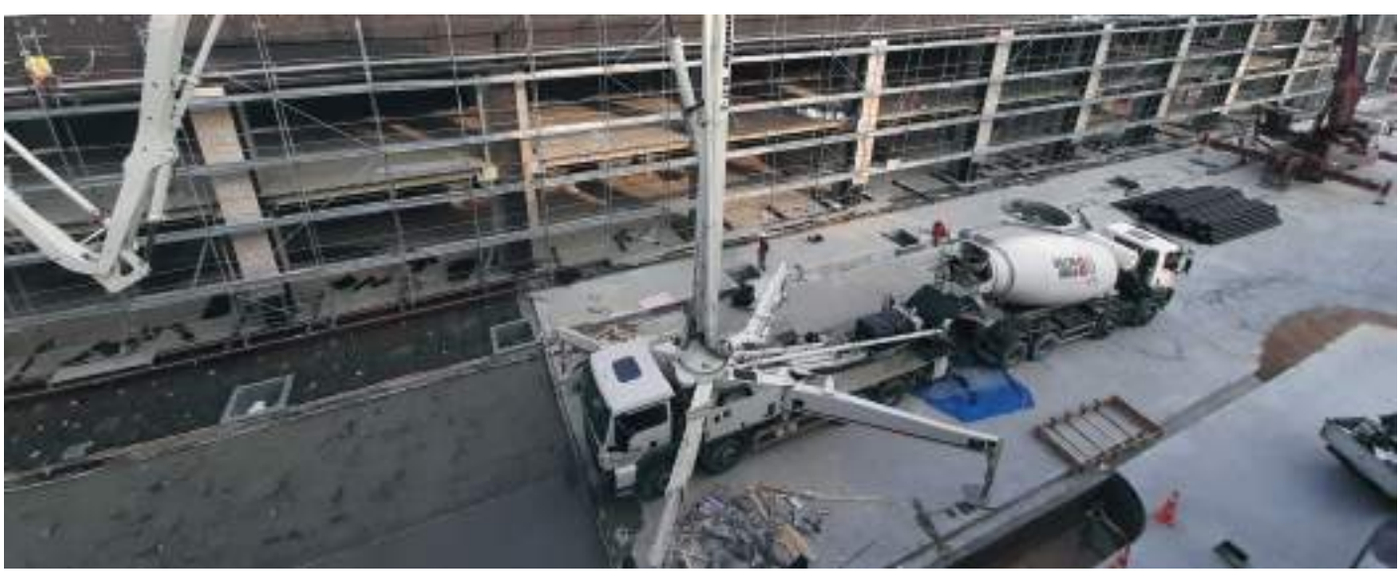
LIGHTWEIGT FILLING ON FLOOR

PROJECT : IstinyePark Izmir

LOCATION : Izmir, Turkey

PRODUCT : ABS Plus various and graded heights

APPLICATION : Lightweight filling application on the main arcade and podium areas of the shopping mall



REFERENCE APPLICATION

INVERTED BEAM FILLING

PROJECT : IC İÇTAŞ Head Quarters
LOCATION : Istanbul, Turkey
PRODUCT : Disposable Formwork H50 cm / 19.7 in
APPLICATION : Inverted beam filling on terrace floor

REFERENCE APPLICATION

SUNKEN SLAB FILLING

PROJECT : Gateway Visa Center
LOCATION : Çankaya, Turkey
PRODUCT : ABS Plus H35 cm / 13.78 in
APPLICATION : 35 cm sunken slab filling applicaton on floor

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REFERENCE APPLICATION

SUNKEN SLAB FILLING

PROJECT : Antik Dantel Headquarters

LOCATION : Istanbul, Turkey

PRODUCT : ABS Plus H65 cm / 25.60 in

APPLICATION : 65 cm sunken slab filling application on ground floor

REFERENCE APPLICATIONS

LANDSCAPE FILLING

PROJECT : Emaar Square Shopping Mall

LOCATION : Istanbul, Turkey

PRODUCT : Disposable Formwork H15 cm / 5.60 in

APPLICATION : Lightweight landscape filling application above podium floor to construct a concrete surface

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REFERENCE APPLICATIONS

LANDSCAPE FILLING

PROJECT : Gaziantep Iconova

LOCATION : Gaziantep, Turkey

PRODUCT : ABS Plus H50 cm / 19.70 in

APPLICATION : Lightweight landscape filling application above podium floor to construct a concrete surface

REFERENCE APPLICATION

FILLING BETWEEN FOUNDATION FOOTINGS

PROJECT : Portonovi Hotel

LOCATION : Herseg Novi, Montenegro

PRODUCT : ABS Plus H135 cm / 53.15 in

APPLICATION : Filling application between the foundation footings above raft the foundation with many installation passages

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REFERENCE APPLICATION

FILLING BETWEEN FOUNDATION FOOTINGS

PROJECT : İstanbul Tower

LOCATION : Istanbul, Turkey

PRODUCT : Disposable Formwork H120 cm/ 47.24 in

APPLICATION : Filling application between the foundation footings above raft foundation

REFERENCE APPLICATION

FILLING BETWEEN FOUNDATION FOOTINGS

PROJECT : Borusan Oto

LOCATION : Istanbul, Turkey

PRODUCT : Disposable Formwork H80 cm/ 31.50 in

APPLICATION : Filling application between the foundation footings above raft foundation

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REFERENCE APPLICATION

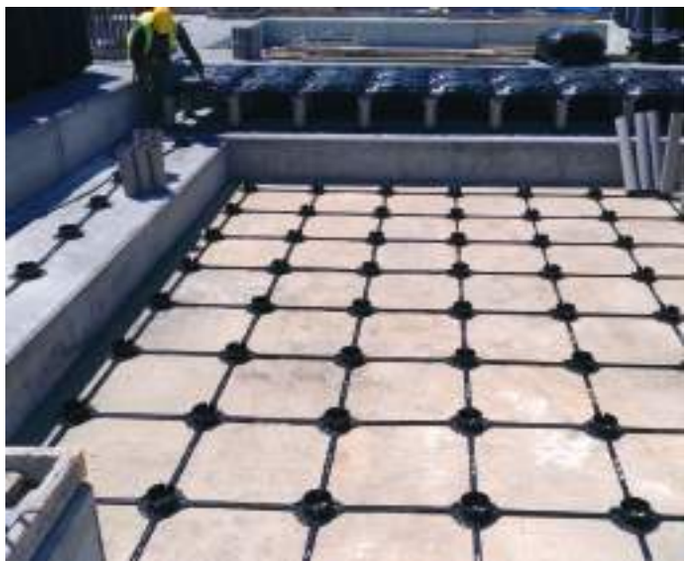
FILLING BETWEEN FOUNDATION FOOTINGS

PROJECT : Kurkcuoglu Factory

LOCATION : Izmit, Turkey

PRODUCT : ABS Plus H100 cm / 39.37 in

APPLICATION : Kurkcuoglu Generator Company preferred ABS Plus adjustable-height disposable formwork system at its new factory to fill between the column/wall footings and their connector beams above the raft foundation.



REFERENCE APPLICATION

CAR PARK RAMP

PROJECT : Vadikoru Istanbul

LOCATION : Istanbul, Turkey

PRODUCT : ABS Plus, variable heights

APPLICATION : Car park ramp construction above car park floor slab

REFERENCE APPLICATION

CAR PARK RAMP

PROJECT : Emaar Square Shopping Mall

LOCATION : Istanbul, Turkey

PRODUCT : Disposable Formwork, variable heights

APPLICATION : Car park ramp construction above gradual carpark floor slab

REFERENCE APPLICATION

POOL DECK SLAB FILLING

PROJECT : Tekinalp Residence

LOCATION : Istanbul, Turkey

PRODUCT : ABS Plus H50 cm / 19.70 in

APPLICATION : Lightweight filling application above the car park slab and around the swimming pool to construct a concrete surface

REFERENCE APPLICATION

POOL DECK SLAB FILLING

PROJECT : IstinyePark Izmir

LOCATION : Izmir, Turkey

PRODUCT : ABS Plus various heights

APPLICATION : Lightweight filling application above a regular floor slab and around the swimming pool to construct a concrete surface

REFERENCE APPLICATION

POOL DECK SLAB FILLING

PROJECT : Rumeli Villas

LOCATION : Istanbul, Turkey

PRODUCT : ABS Plus H180 cm / 70.87 in

APPLICATION : Lightweight filling application and construction of a concrete surface around a swimming pool that was constructed above an indoor floor.

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REFERENCE APPLICATION

REINFORCED CONCRETE RAISED FLOORS

PROJECT : Centrum Kozyatağı

LOCATION : Istanbul, Turkey

PRODUCT : Disposable Formwork H5 cm / 1.97 in

APPLICATION : Reinforced concrete raised floor application that allows installations to pass underneath the surface via junction boxes

REFERENCE APPLICATION

REINFORCED CONCRETE RAISED FLOORS

PROJECT : Lapishan

LOCATION : Istanbul, Turkey

PRODUCT : Disposable Formwork H10 cm / 3.94 in

APPLICATION : Reinforced concrete raised floor application that allows installations to pass underneath the surface via junction boxes

abs Disposable Formworks

REFERENCE APPLICATION

REINFORCED CONCRETE RAISED FLOORS

PROJECT : Newspaper Building

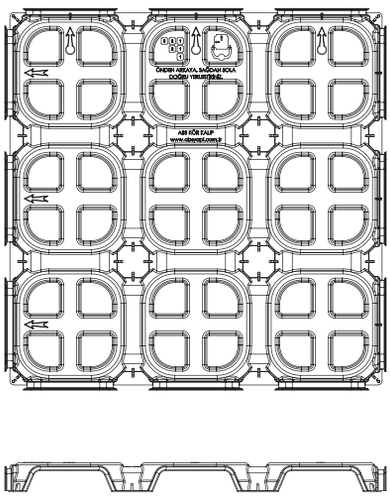
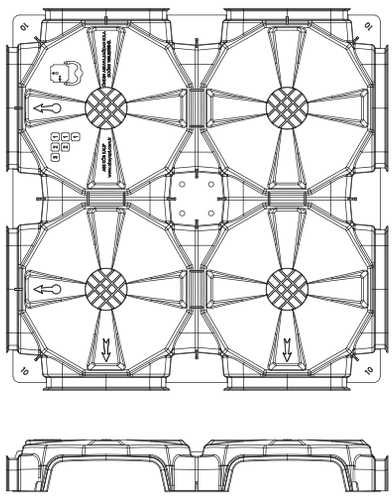
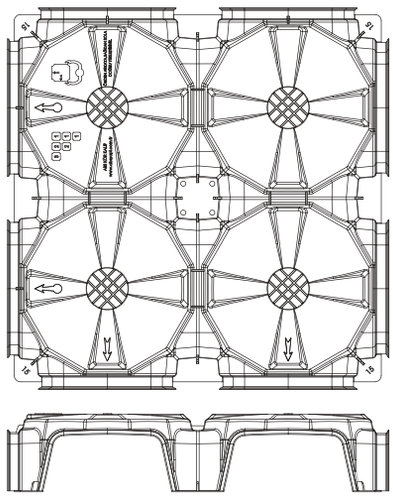
LOCATION : Ankara, Turkey

PRODUCT : Disposable Formwork H15 cm / 5.90 in

APPLICATION : Modular and reinforced concrete raised floor applications used together in order to allow busbar usage

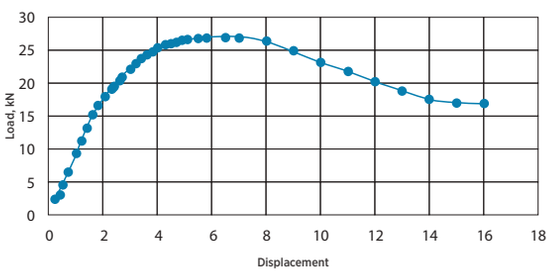
ABS LEVEL

TECHNICAL DATA

ABS Level - H5 / 1.97 in	ABS Level - H101.97 / 3.93 in	ABS Level - H15 / 5.90 in
		
Dimensions		
2 formworks per m² / 10.76 ft² 9 domes per formwork 71 x 71 x 5 cm / 27.95 x 27.95 x 1.97 in Pcs 1,78 kg / 3.924 lb	2 formworks per m² / per 10.76 ft² 4 domes per formwork 71 x 71 x 10 cm / 27.95 x 27.95 x 3.94 in Pcs 1,96 kg / 4.321 lb	2 formworks per m² / per 10.76 ft² 4 domes per formwork 71 x 71 x 15 cm / 27.80 x 27.80 x 5.60 in Pcs 2,16 kg / 4.761 lb
Net arch opening		
Width 16 cm / 6.30 in Height 4 cm / 1.58 in	Width 23 cm / 9.06 in Height 6 cm / 2.36 in	Width 25 cm / 9.84 in Height 11 cm / 4.33 in
Concrete consumption		
0,010 m³/m² - 0.353 ft³/ft² 	0,022 m³/m² - 0.776 ft³/ft² 	0,025 m³/m² - 0.882 ft³/ft² 
Pallet dimensions		
75 x 150 x 260 cm / 29.52 x 59.05 x 102.35 in	75 x 150 x 260 cm / 29.52 x 59.05 x 102.35 in	75 x 150 x 260 cm / 29.27 x 59.05 x 102.35 in
Pieces per pallet and area covered		
300 pcs and 150 m² / 1614 ft²	250 pcs and 125 m² / 1345 ft²	250 pcs and 125 m² / 1345 ft²
Pallet weight		
534 kg / 117.268 lb	490 kg / 1080.265 lb	540 kg / 1190.496 lb

Material: recycled PP
Application speed: 100 m2/ 1076 ft² man-hour on a rectangular area

FORMWORK LOAD BEARING REPORT



Sample No	Sample Type	Sample Size (mm)	Plate Size (mm)	Maximum Size	
				(kN)	(kN/m²)
1	ABS Disposable Formworks H5	710x710x50	450x450	26,950	133,1

- Please contact us for more detailed information.

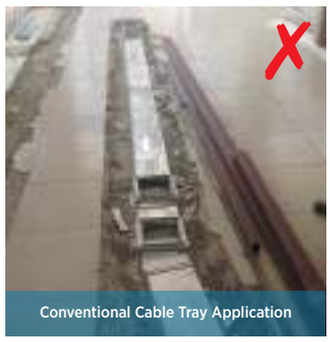
abs Disposable Formworks

ABS LEVEL APPLICATIONS

Reinforced Concrete Raised Floor

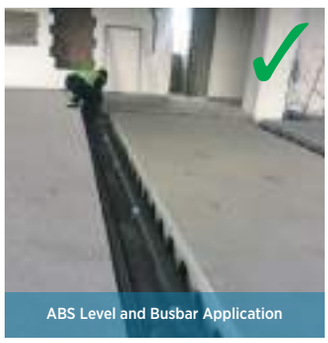

ABS Level and Junction Box Application


ABS Level and Busbar Application

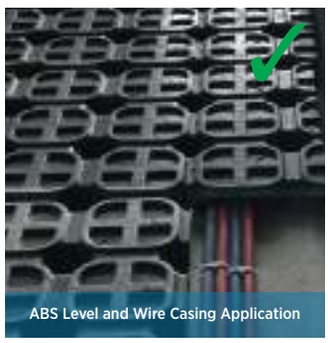

Conventional Cable Tray Application


Conventional Wire Casing Application


ABS Level and Junction Box Application

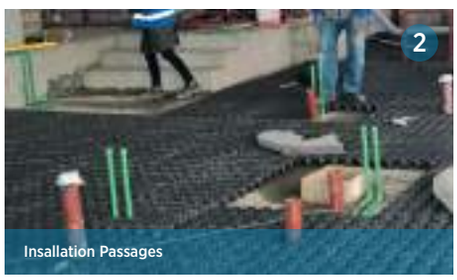

ABS Level and Busbar Application


ABS Level and Cable Tray Application


ABS Level and Wire Casing Application

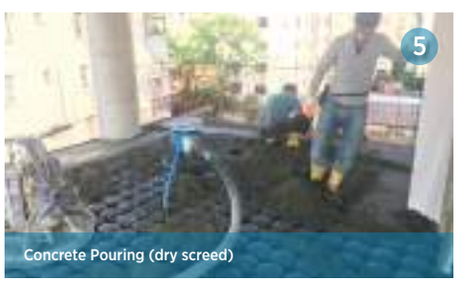
Application Steps


1 Product Placement


2 Insallation Passages

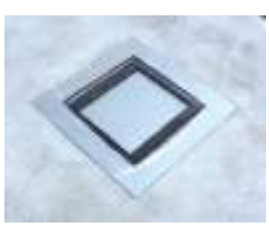

3 Junction Box Placement


4 Leaving Junction Box Reservation


5 Concrete Pouring (dry screed)


6 Real Application Cross Section

Various Finishing Types



ABS PLUS

TECHNICAL DATA

Dimensions

Dome size	71x71 cm, 2 domes per m² / 27.80 x 27.80 in per ft²
Dome height	15 cm, net height w/o leg connections / 5.91 in
Base height	2,5 cm, 2 bases per m² / 0.98 in per ft²
Leg diameter	Ø 125 cm, 2 legs per m² / 4.92 in per ft²
Leg height	Variable cm, depending on requirement
Number of spacers needed	Max 4, lower than 50 cm / 19.70 in heights may not require any spacer at all, however all four spacers are need for height more than 120 cm. / 47.24 in

Pallet dimensions

Pallet dimensions (dome)	75x150x265 cm / 30.00 x 59.1 x 104.30 in
Pieces per pallet (dome)	180 pieces
Area covered per pallet (dome)	90 m² / 969.00 ft²
Pallet weight (dome)	361 kg / 795 lb

Material: dome, base and spacer recycled PP, leg recycled PVC
Application speed: 20 m² / 215 ft² man-hour on a rectangular area

Formulas

h = height in m of the topping concrete calculated separately depending on the live loads needed

H = total height of the ABS Plus system in m before concrete casting

Leg height in m = H - 0,15 m - 0,025 m
Concrete consumption in m³/m² = h + 0,03554 + [(H - 0,15) x (0,02453)]

Table: Maximum Allowable Loads for ABS Plus Disposable Formwork System

qmax (kN/m² Max. Allowable Live Load

H (cm)	Column Reinforcement	*Slab Reinforcement	Q188/188	Q335/335	Q377/377	Q188/188	2xQ188/188	Q335/335	2xQ335/335	Q377/377	2xQ377/377	Q524/524	2xQ524/524	Q335/335	2xQ335/335	Q377/377	2xQ377/377	Q524/524	2xQ524/524
200	2Ø10		29	50	55	78	78	78	78	78	78	78	78	76	76	76	76	76	76
	2Ø8		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	2Ø10		29	50	55	79	83	92	92	92	92	92	92	92	92	92	92	92	92
	2Ø8		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	2Ø10		29	50	55	79	83	104	104	104	104	104	104	104	104	104	104	104	104
	2Ø8		29	50	55	79	83	102	102	102	102	102	102	104	104	104	104	104	104
	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	2Ø10		29	50	55	79	83	106	106	106	106	106	106	110	110	110	110	110	110
	2Ø8		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
	t (cm)		5			10								15					

Tip Type	ABS Plus Sistem Yüksekliği (cm) ABS Plus System Height (cm)	Döşeme Üzeri Beton Kalınlığı (cm) Slab Concrete Thickness (cm)	Döşeme Ayaklarında Donatı Rebar in Legs	Toplam Döşeme Yüksekliği (cm) Total Slab Thickness (cm)	Kaydedilen Maksimum Yük Değeri (kN) Maximum Load Recorded (kN)
H100	100	10	Var (Φ 10)	110	278,6
H50	50	10	Var (Φ 10)	60	283,2
H50	50	10	Yok	60	238,5
H50	50	5	Yok	55	125,9

Numune No Sample No	Numune Bilgisi Sample Type	Numune Boyutları (mm) Sample Size	Plaka Boyutları (mm) Plate Size	Maksimum Yük Maximum Size	
				(kN)	(kN/m²)*
1	ABS Plus	710x710x300	Φ245	1,346	28,6

Applies to both C25 and C30 concerte classes.

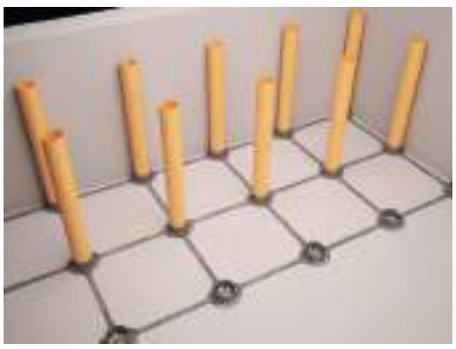
*Q188 x 188 = x 6 mm steel wire and 150 x 150 mm steel wire grid.
Q335 x 335 = x 8 mm steel wire and 150 x 150 mm steel wire grid.
Q377 x 377 = x 8,5 mm steel wire and 150 x 150 mm steel wire grid.
Q524 x 524 = x 10 mm steel wire and 150 x 150 mm steel wire grid.

abs Disposable Formworks

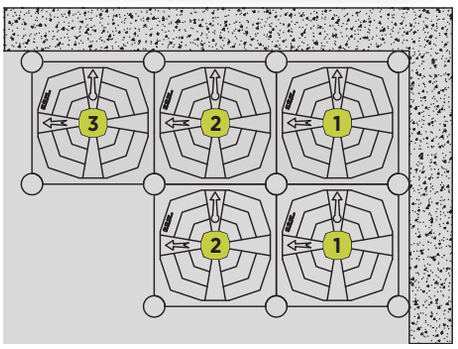
ABS PLUS

INSTALLATION GUIDE

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 PVC pipes that have been cut according to the project firmly into the base slots.

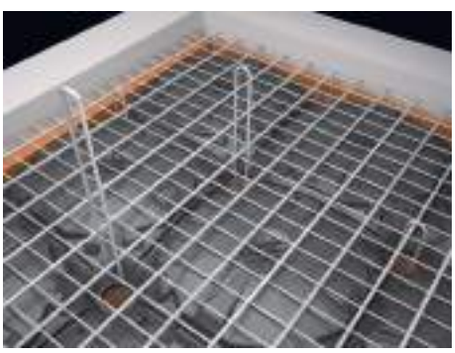


3. Place the domes on the PVC pipes, from right to left and from top to bottom, checking that the domes fit over each other and on the PVC pipes firmly. The arrows on the domes should always indicate the direction in which the installation operator looks.

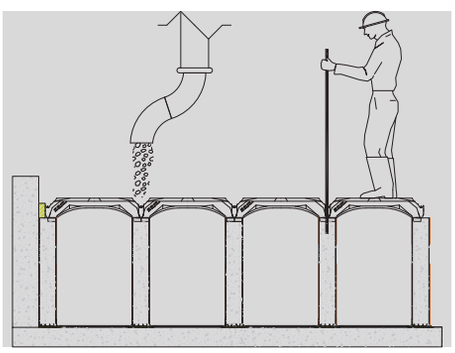
4. Inserting the last row of ABS Plus domes: Example 1; full dome on the wooden console attached to the wall.

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

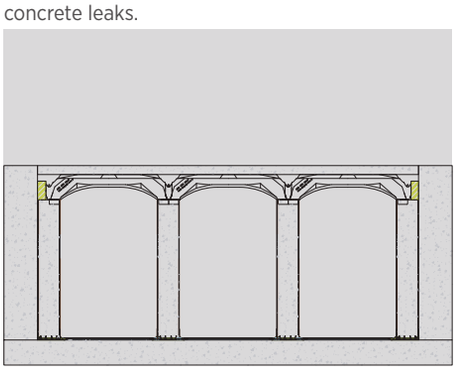
6. In the case of full-dome wall finishes where the PVC pipes are adjacent to the walls, place ABS Plus dome side closer or 5x10 wooden wedges on the pipes and close the cavities against concrete leaks.



7. Place project specific welded steel mesh on the concrete-sealed disposable formworks and place vertical steel rebars into the PVC pipes.



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 PVC pipe should be stabbed with a steel rod to release the air trapped in the pipe. 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. During the 24 to 48 hours following the concrete pouring, joints should be cut in the floor in such a way not to exceed 1/5 of the floor thickness.

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