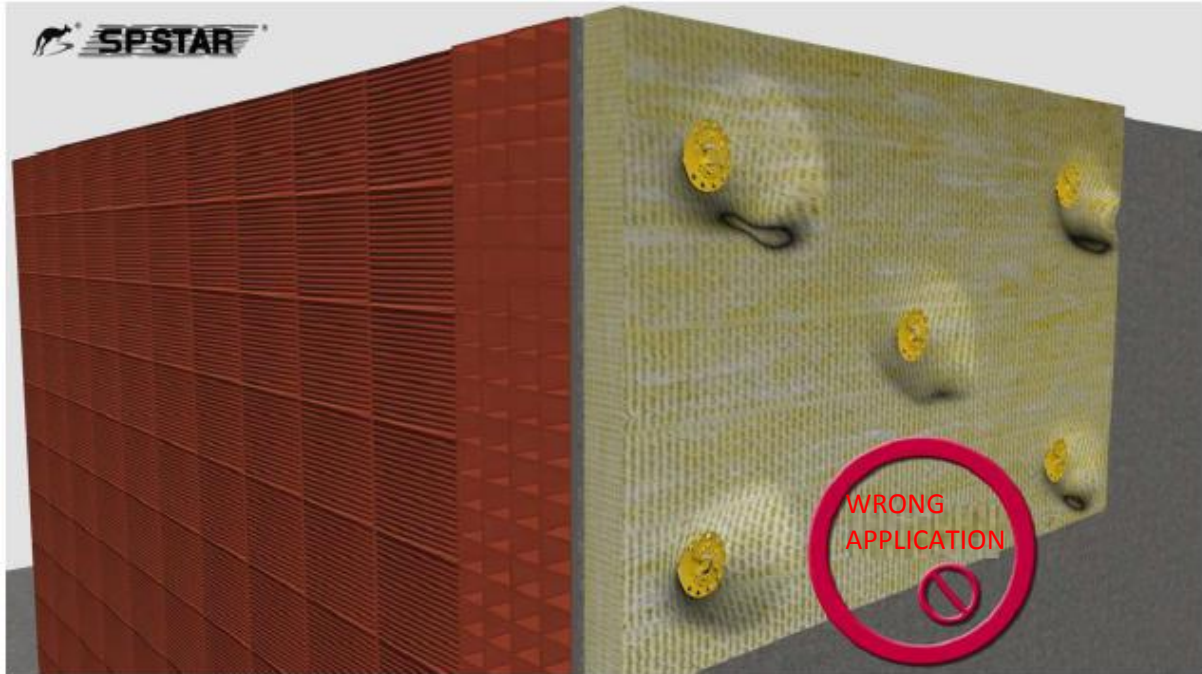
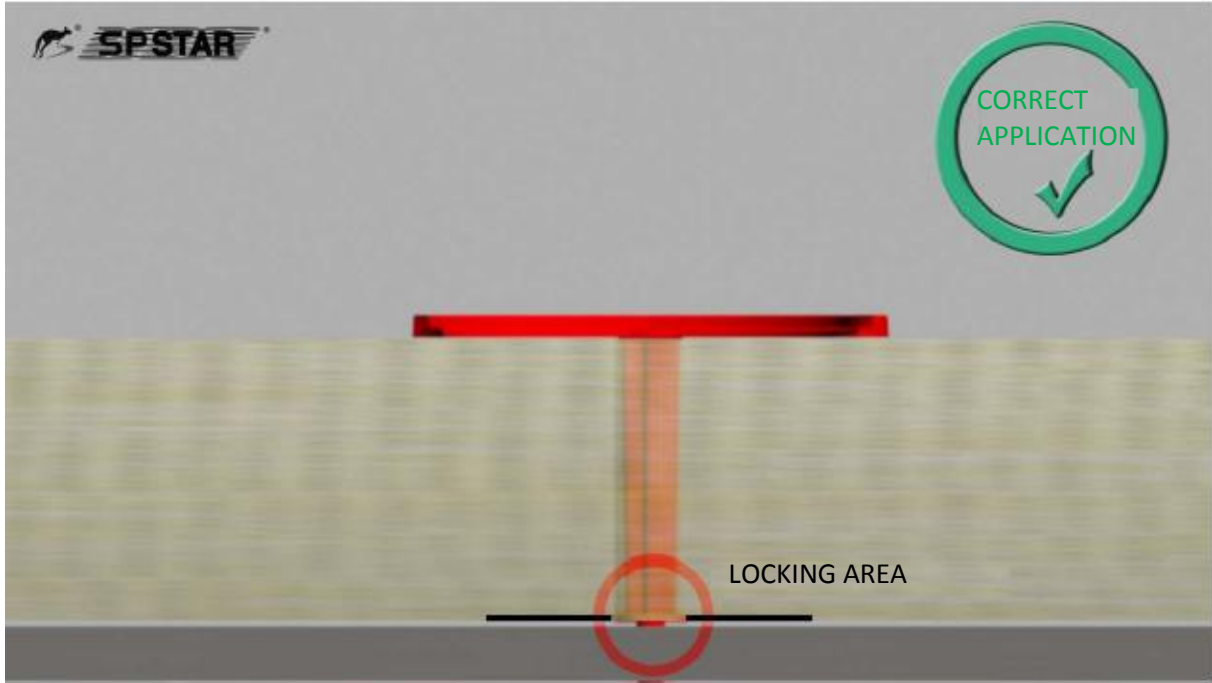




# SP STAR



COLOR AND VISUAL QUALITY, CORPORATE IDENTITY OF THE FIRMS, NATIONAL AND INTERNATIONAL DOCUMENTS ARE THE QUALITY REGISTRATION OF THE PRODUCT



SP STAR PLASTİK YAPI ELEMANLARI İZOLASYON MALZEMELERİ SAN. TİC. A.Ş  
Ortaköy Merkez Mahallesi Dumlupınar Caddesi No:44 Ortaköy/Silivri- İstanbul-TÜRKİYE

[www.spstarplast.net](http://www.spstarplast.net)

**WHAT SHOULD BE REQUIRED IN THERMAL INSULATION CONNECTION COMPONENTS SPECIFICATIONS**



The main rule to be careful about in order for the plate connections in the external thermal insulation systems is to select the most proper connection dowel and to make the mechanical connection on the proper surface with the proper product after checking wall structure, plate type and building height. No matter for which wall type they are designed, the wall surface and the thermal insulation dowel selected accordingly with the plate must hold at least 36 kgf adherence power and must have enough tensile and shearing strength.

They must be completely produced of original material with tearing type suitable for the wall types as polyamide nailed or steel nailed.

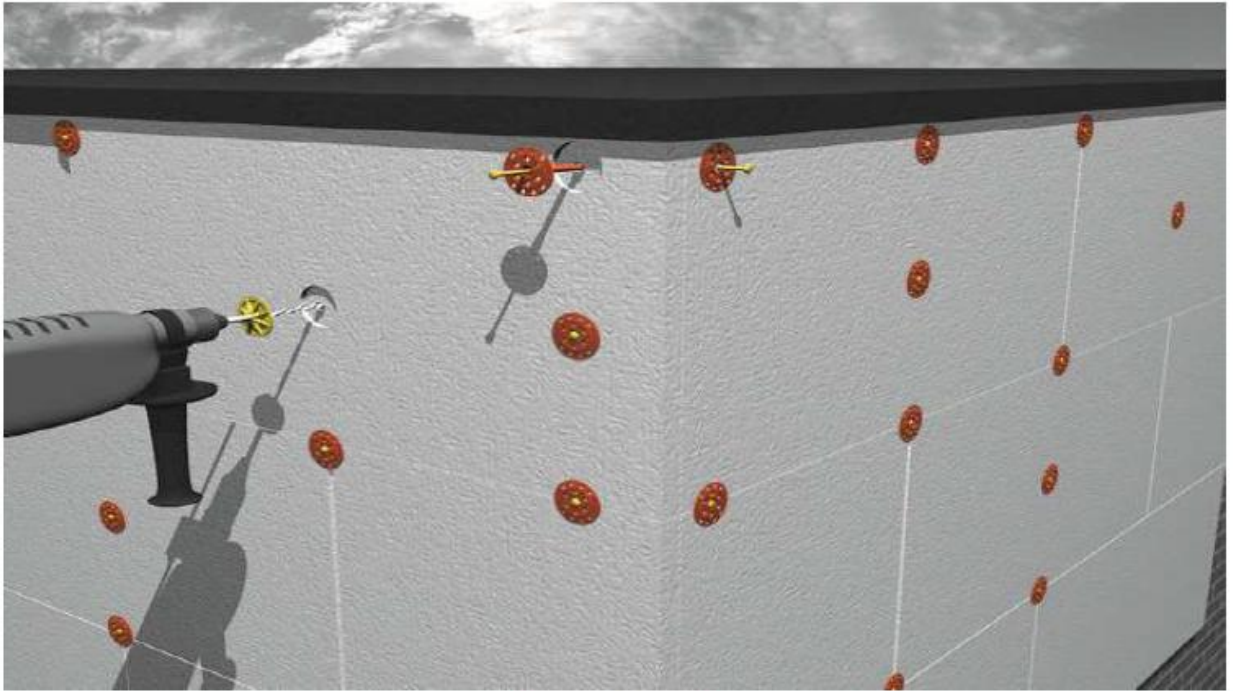
They must be conforming to TSE standards and most importantly they must have ETAG 014 certificate which is used as CE of the thermal insulation connection components in European Union countries.

In order to check the product with this document online ETA number and the original of the documents must be asked for.

All of the detail materials used in thermal insulation have very important technical properties for the system. The warrantee of the quality application lies beneath the details which consists the 3% of the whole system. Star Plastik A.Ş. has acquired all the necessary documents of the detail that it produces, has set up teams to provide the technical support and the warrantee of these documents and equipped the worksite with devices that can measure the values of the product.

No matter where you obtain the details produced by Star Plastik A.Ş., the technical support will be provided by Star Plastik A.Ş.

**COLOR AND VISUAL QUALITY**, CORPORATE IDENTITY OF THE FIRMS, NATIONAL AND INTERNATIONAL DOCUMENTS ARE THE QUALITY REGISTRATION OF THE PRODUCT





# SP STAR



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## **DOWELLING OF SHEATHING PLATES**

Dowelling starts after the adhesive mortar is completely dried (at least 24 hours). The factors such as position of the building in terms of wind, wind force, height of the building play a role in determining the number of the dowels. The purpose of dowelling is to fix the sheets on the walls mechanically and to prevent the sheets fall off in time. Generally 6 dowels are implemented per metersquare. Most applied implementation is to put 1 dowel on sheet corners and 2 dowels on the center. Building corners are effected much from the wind in high buildings. Therefore, more number of dowels is used in building corners in higher grades. 6/m<sup>2</sup> dowels for heights up to 8 m.; 8 dowels/m<sup>2</sup> for heights up to 8-20 m.; and 10/m<sup>2</sup> dowels for heights 20 and above are used. Doweling is applied by leaving 10-15 cm distance to the edge on windows and window corners. Plastic nail dowels are used in brick walls and steel nailed plastic wide capped dowels are used on concrete surfaces. It must be assured that the dowels are not produced of scrap plastic. The dowel must be fastened on an at least 3 cm width hanging surface, it must be inserted to gas concrete walls at least 6 cm, to brick walls at least 5 cm, to concrete walls at least 4 cm. The hole must be opened 1 cm longer than the dowel diameter. They are on market generally as 95mm-115mm-135mm sizes. For gas concrete walls this size increases to 160mm. When choosing the dowel length sheet thickness+adhesion thickness (5mm)+scratch coat (10mm)+anchorage depth (50mm) are considered. For wooden surfaces OSB dowels are used. While plastic dowels are used for XPS and EPS sheets, for stone wool sheets steel dowels are used.

## **DOWELS USED IN SHEATHING SYSTEM DO NOT DAMAGE BUILDING'S BEARING ELEMENTS!!!**

Those who assert such claims are so far from being scientific and they claim this being directed by some opponent sectors.

The dowels used for mechanical fixing of the thermal insulation sheets in sheathing remain in the section called concrete cover which prevents the irons against corrosion. Moreover, if we calculate the average 6 dowels with average steel dowel diameter as 10 mm: the hole area that one dowel creates on the wall is  $=\pi r^2=3,14 \times 5\text{mm}^2=78,5\text{mm}^2=0,0000785\text{m}^2$ .

The hole surface of 6 dowels:  $6 \times 0,0000785\text{ m}^2=0,000471\text{ m}^2$ , this means only a total of 0,000471 m<sup>2</sup> hole area for 1 m<sup>2</sup> of thermal insulated area, which is an ignorable value. Dowel is a product that fills and removes this area as a matter of its structure.



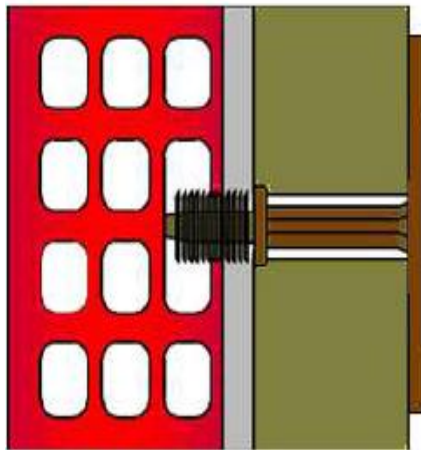
# SP STAR®

## LOW DENSITY STONE WOOL AND GLASS WOOL DOWEL



This product has low density and enough insulation value and it is designed for fixing stone wool and glass wool sheet onto the surface with locking proper to sheet thickness. At the end of the 3 cm hanging part a locking part is designed not to damage the sheet thickness. The mounting is conducted by drilling 8 mm on exposed concrete and cavity wall surface. If the wall surface is gas concrete the drill diameter must be 7 mm. When low density sheets are tried to be connected to the surface with standard dowels, crushes can occur on the sheets and this leads to visual deformity and breakdown in insulation values, and the sheet is mounted unnecessarily on many places. Because of its special design, in the applications done with low density stone wool dowels, no change occurs in the appearance and value of the insulation sheet. Mounting is completed with two adze hits on the hole drilled on the surface. Adherence power is 20 kg and above. It is not used in sheathing.

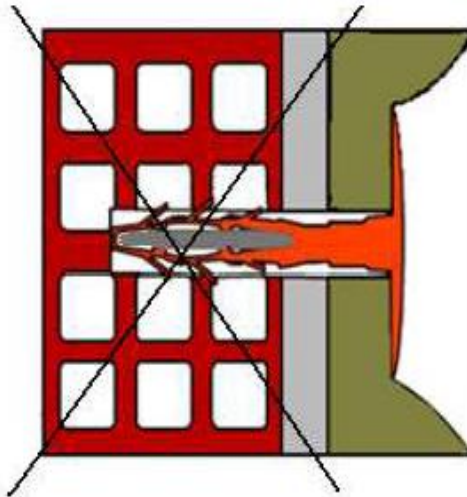
Hollow brick    Plaster 1 cm    Low density thermal insulation sheet



**STAR DOWEL**  
Low Density  
Glass Wool  
and Stone  
Wool Dowel

**CORRECT** Application  
Mounting of Cladding Beneath Façade

Hollow brick    Plaster 1 cm    Low density thermal insulation sheet



Standard  
Mounting  
Dowel

**WRONG** Application  
With sheathing dowel



## LOW DENSITY STONE WOOL AND GLASS WOOL DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 30 mm
Hole Diameter	: 7mm on gas concrete, 8mm on brick and concrete surface
Washer Diameter	: 90 mm
Consumption	: About 5 per 1 m <sup>2</sup> for thermal insulation systems

### Hollow Brick

Tensile	Shearing	Peel
65	65	20
70	70	19
68	68	23
67,7 kgf	67,7 kgf	20,67 kgf

### Gas Concrete

Tensile	Shearing	Peel
65	65	28
70	70	30
68	68	26
67,7 kgf	67,7 kgf	28 kgf

### Exposed Concrete

Tensile	Shearing	Peel
65	65	23
70	70	26
68	68	24
67,7 kgf	67,7 kgf	24,3 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Length (cm)	Nail	Amount in the Pack (pcs)
50 mm	Without Nail	500
80 mm	Without Nail	500





# SP STAR



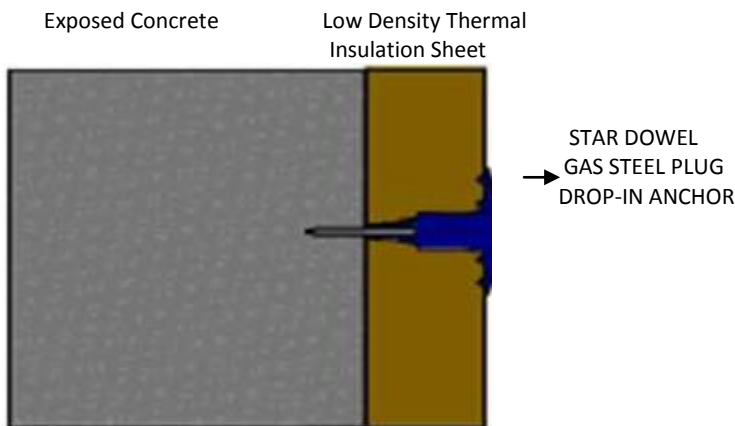
## GAS STEEL PLUG DROP-IN ANCHOR



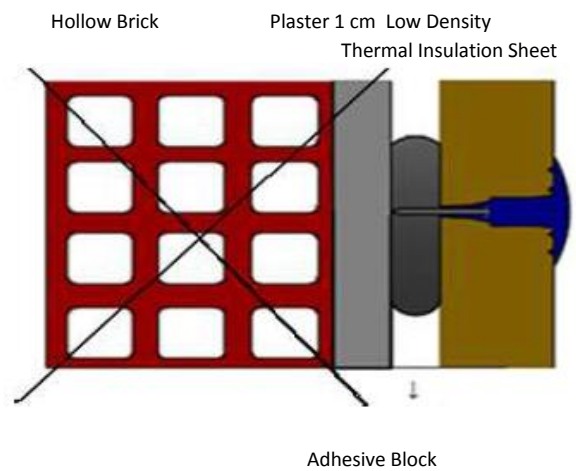
SP Star Gas steel plug drop-in anchor is designed for being used in mounting of cladding beneath façade stone wool, garage ceiling and connection of beneath balcony insulation sheet which is hard to work on. The biggest MISTAKE about this product is to think that it can be used for every application and giving information in this direction. No matter what the length of the gas steel plug drop-in anchor is, the length of the nail that does the mounting is stable. Therefore, using a product which can only be inserted 1 cm on the surface on every place is THE BIGGEST MISTAKE. All the

defects on the building façade can be corrected with sheathing. In the correcting application, all the sheets are detached by blocking, after second floor, the thickness of the blocks start to be higher than the gas steel plug drop-in anchor. For the sheathing of a multistory building, you will be conducting the mechanical connection only on adhesive blocks instead of the building after the second story. The worst part of the mistake is that when you check the product with hand it seems to have adhered. But this adherence is only the adherence of your adhesive mortar. The mechanical connection that will support this adhesion does not have any function. If this product is to be used in the rightest place, the thing to be sure about is the quality of ANCHOR, NAIL, FUEL CELL AND GUN. Does the fuel cell complete the declared hitting number? Is the concrete nail 100% stainless hot-dip galvanize? How many product can the mounting gun mount and what is its value? If the answers for these questions are yes, we can say that the mounting of gas steel plug drop-in anchor is fast and advantageous. If the answer is maybe, it is not possible to talk about the speed and the advantage of this product. THE ANSWER "YES" TO ALL THESE QUESTIONS IS UNDER THE WARRANTEE AND ASSURANCE OF STAR PLASTIK YAPI ELEMANLARI IZOLASYON MALZEMELERI SAN. TIC. A.Ş..

### CORRECT Application (Curtain Wall Mounting)



### WRONG Application (Sheathing)





## GAS STEEL PLUG DROP-IN ANCHOR

### Pulling Test

Material	Nail Used	Tensile Breaking Force
PE	Steel Nail	120
PE	Steel Nail	130
	Steel Nail	140
	Average	130 kgf

### Shear Test

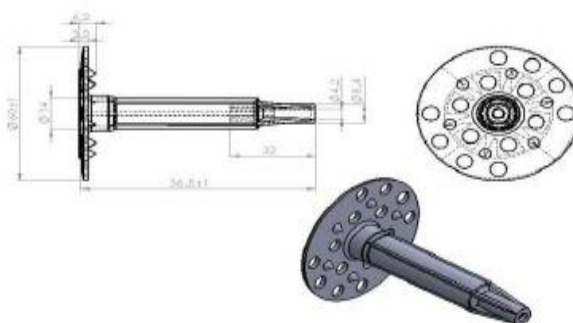
Material	Nail Used	Tensile Breaking Force
PE	Steel Nail	200
PE	Steel Nail	250
	Steel Nail	260
	Average	236,6 kgf

### Adherence Test

Material	Nail Used	Tensile Breaking Force
PE	Steel Nail	90
PE	Steel Nail	100
	Steel Nail	90
	Average	93,3 kgf

### PRODUCT LENGTHS AND PACKAGING

Anchor Length (cm)	Amount in Pack
60*40	1000 Pcs
60*50	1000 Pcs
60*60	1000 Pcs
60*70	1000 Pcs
60*80	1000 Pcs
60*90	1000 Pcs





# SP STAR

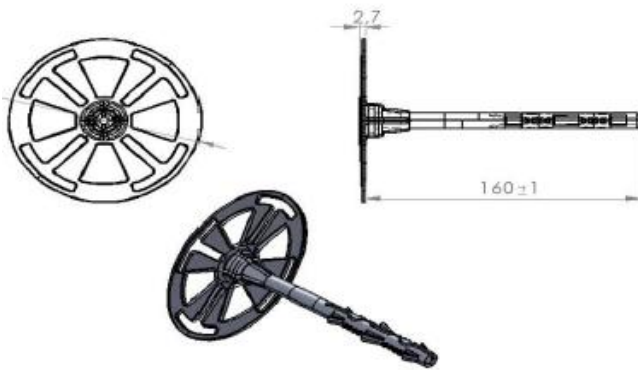


## NEW EURO STONE WOOL DOWEL



It is a sheathing dowel which increases its position on the market as a sheet type in external sheathing system and it is designed to be used for stone wool sheet applications. Stone wool dowel, with its 6 connection components per metersquare, has 50% wider cap diameter than the standard sheathing dowel. Once produced by widening the cap became a standard in the production. It completely removes the possibility of being forgotten in the worksite though delivered or the possibility of incomplete application although the expenses are paid. Because it is packed separately in the delivery, it provides 50% saving of freight cost. The tearing design of the product is designed so as to be implemented on all kinds of walls with the changeable drill diameters.

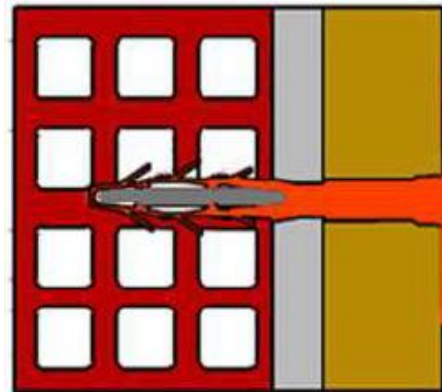
(Tearing design is under the patent of Star Plastik A.Ş.) For hollow bricks (brick, iso brick, pumice) 8 mm drill diameter, for exposed concrete 9 mm drill diameter, for gas concrete 8 mm drill diameter must be selected 1 cm longer for the other wall types.



Hollow Brick

Plaster

Thermal Insulation Plate



STAR  
DOWEL  
NEW EURO  
STONE  
WOOL  
DOWEL





# SP STAR



## NEW EURO STONE WOOL DOWEL

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Steel Nail	120
PE	Steel Nail	130
PE	Steel Nail	120
Average		123,3 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Steel Nail	725
PE	Steel Nail	760
PE	Steel Nail	740
Average		741,7 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Steel Nail	50
PE	Steel Nail	60
PE	Steel Nail	60
Average		56,6 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack (Pcs)
60*8*11,5	Steel	500
60*8*13,5	Steel	500
60*8*15,5	Steel	500

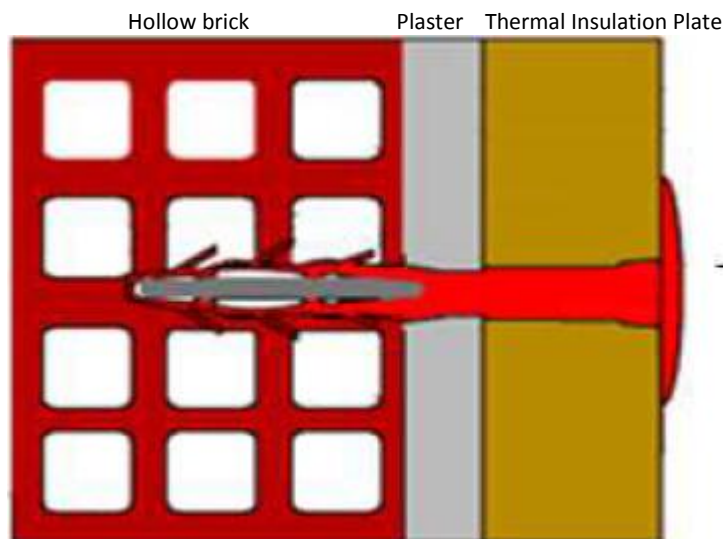


# SP STAR<sup>®</sup>

## EURO MECHANIC CLAMPING DOWEL



If the holding feature of the wall surface (hollow unplastered brick) is not trusted in external sheathing applications, mechanic clamping dowel is the best option. This dowel has clamps that close when it enters the wall and open when it is released in the space it finds in the wall in case of the hole diameter widening (breaking, cracking of the holding surface). Because of this feature however wide the hole diameter gets, holding occurs. The necessary dowel for wall surfaces with no good quality is mechanic clamping dowels especially if the wall has rough plaster or no plaster at all.



**STAR  
DOWEL**  
EURO MECHANIC  
CLAMPING DOWEL



# SP STAR



## EURO MECHANIC CLAMPING DOWEL

### TECHNICAL SPECIFICATIONS

Anchorage Length on Bearing Ground	: 50 mm
Drill Diameter	: 8 mm
Washer Diameter	: 60 mm
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

### Pulling Test

Material	Nail Used	Tensile Breaking Force	Average
PE	Steel Nail	120-130-120	123,3 kgf
PE	Plastic Nail	75-65-60	66,6 kgf

### Shear Test

Material	Nail Used	Tensile Breaking Force	Average
PE	Steel Nail	725-760-740	741,6 kgf
PE	Plastic Nail	180-175-180	178,3 kgf

### Adherence Test

Material	Nail Used	Tensile Breaking Force	Average
PE	Steel Nail	59-58-60	59 kgf
PE	Plastic Nail	59-59-59	59 kgf

### PRODUCT SIZE AND PACKAGING

Dowel Size (cm)	Nail	Amount in Pack (Pcs)
60*8*9,5	Steel-Plastic	500
60*8*11,5	Steel-Plastic	500
60*8*13,5	Steel-Plastic	500
60*8*15,5	Steel-Plastic	500



# SP STAR



## EURO CONCRETE DOWEL

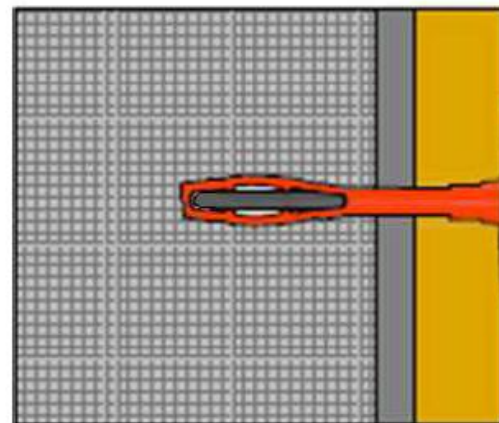
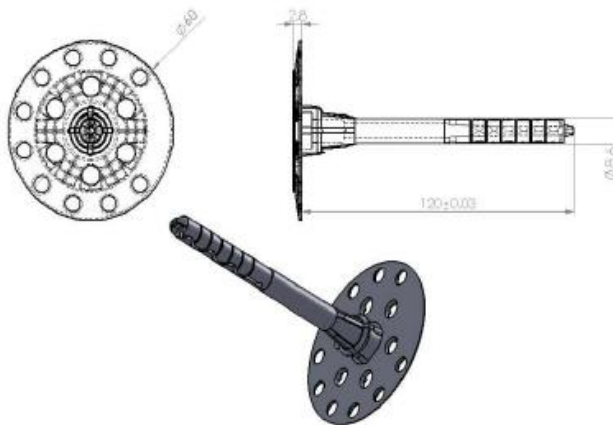


It comes with wide cap plastic-steel nail or screw. If insulation sheets are EPS or XPS, wide cap but plastic covered PA body nails (dowels) must be used. Plastic dowel body diameter must be 8 mm. Dowel size must be selected in a way to insert 4 cm of the application surface on filled application surface. For hollow application surfaces it must be selected in a way to insert 5 cm inside the surface. Dowel cap must be 60 mm. SP Star Plastik nail dowel has same or even more pulling, shearing and adherence force with those in European Union countries. It is a product providing the absolute solution on wall surfaces conforming to new reliable standards. The material is applied on healthy wall surfaces (iso brick, plaster on brick) by being drilled

with 8 mm drill. 9 mm drill must be used in exposed concrete. If drill measures are not obeyed, application mistakes and customer complaints will occur. For the high buildings after 10<sup>th</sup> floor beneath the balconies and on the northern façades where the wind load reaches high points, the number of dowels per m<sup>2</sup> must be raised from 6 to 8 and steel screw dowels must be used.

Exposed Brick

Plaster Thermal Insulation Plate



STAR  
DOWEL  
Euro  
Concrete  
Dowel



# SP STAR



## EURO CONCRETE DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 50 mm
Drill Diameter	: 8 mm
Washer Diameter	: 60 mm
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

Pulling Test			
Material	Nail Used	Tensile Breaking Force	Average
PE	Steel Nail	120-130-120	123,3 kgf
PE	Plastic Nail	75-65-60	66,6 kgf
PE	Screw	120-130-120	123,3 kgf

Shear Test			
Material	Nail Used	Tensile Breaking Force	Average
PE	Steel Nail	725-760-740	741,6 kgf
PE	Plastic Nail	180-175-180	178,3 kgf
PE	Screw	725-760-740	741,6 kgf

Adherence Test			
Material	Nail Used	Tensile Breaking Force	Average
PE	Steel Nail	59-58-60	59 kgf
PE	Plastic Nail	59-59-59	59 kgf
PE	Screw	60-59-60	59,6 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack (Pcs)
60*8*9,5	Steel-Plastic	500
60*8*11,5	Steel-Plastic	500
60*8*13,5	Steel-Plastic	500
60*8*15,5	Steel-Plastic	500
60*8*180	Screw	200
60*8*200	Screw	200
60*8*220	Screw	200
60*8*240	Screw	200
60*8*260	Screw	200
60*8*280	Screw	200
60*8*300	Screw	200





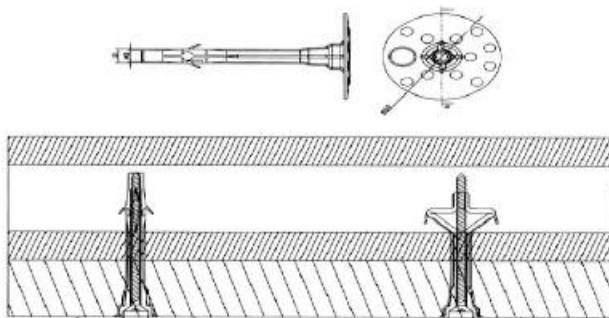
# SP STAR®

## EURO EXTERNAL HOLLOW BRICK DOWEL



one of the important details in thermal insulation sheathing system is sheathing dowel. Sheathing dowel fixes the insulation sheet on the wall surface mechanically. The dowel is mounted in the wall surface after drilling process and its screw is mounted in it. The tip of the dowel fastens there by widening 3-4 mm on its own diameter. Thanks to this fastening, the desired pulling shearing and adherence values are acquired. Dowel is a connection component which holds the right wall surface by fastening. (Excluding the gas concrete and hollow naked brick and betopan surfaces, although we have designed and presented the products that can provide the necessary adherence on gas concrete surfaces). We have worked on products that could provide 100% solution on products like unplastered hollow bricks for long time. Within this process, STAR PLASTIK has manufactured new

designs for the right and absolute application, and has put a new product in life with the studies made on Research and Development laboratories. Because of the weakness of the hollow brick holding surfaces, it has a structure which during the application the desired hole diameter is damaged and got bigger, and by breaking it allows the connection. The newly designed product is mounted in hollow brick after the brick is drilled. The hole diameter is 8 mm. Even this diameter gets bigger up to 9mm, 10mm or 11 mm while drilling, it is designed to go up to 4 times of its own diameter when the product is screwed. The product is delivered mounted with its screw. Thanks to this, its application is very easy. The expert applying it does not apply the dowel and the nail separately. The hole is drilled and the product is mounted in its place. The product is fixed to its place only by fastening the screw. With screwed sheathing dowel you will have a practical mounting and connect the sheet on the wall like bolt nutted connection. Hollow brick dowel, whose registration of design belongs to STAR PLASTIK, is the only product that has provided 100% solution on unplastered hollow brick surface.





# SP STAR



## EURO EXTERNAL HOLLOW BRICK DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 50 mm
Dowel Size	: 100 mm
Hole Diameter	: 8 mm on hollow surface, 9 mm on filled surface
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	124
PE	Screw	130
PE	Screw	126
	Average	126,6 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	735
PE	Screw	760
PE	Screw	754
	Average	749,6 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	54
PE	Screw	60
PE	Screw	60
	Average	58 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack
60*8*100	Screwed	500 Pcs



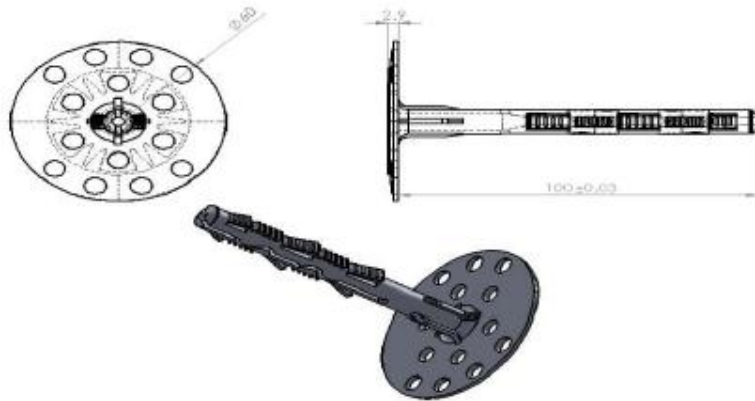
# SP STAR<sup>®</sup>

## WIDE CAP UNIVERSAL DOWEL

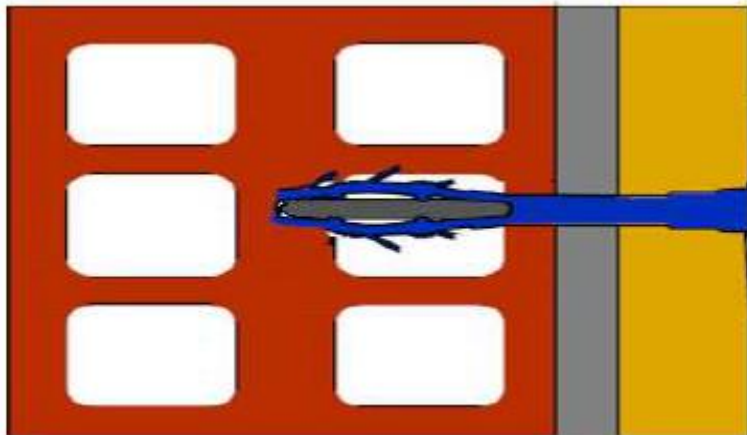


Wide cap universal dowel has been designed by combining application experiences of Star Plastik A.Ş. based on years in order to remove the difficulties created by differences of wall structures and differences of adherence structures. It has been designed for providing holding on every isolation thickness with special angle and recessed wings on its body. It has maximum bearing capacity and opens only when there are spaces during the application. Its most important feature is that it provides holding in more than 10% of the products that have been designed so far when it is used with

correct drill bits however the structure of the wall is. It is applied on hollow wall surface with 11 mm diameter drill.



Pumice Brick      Plaster      Thermal Insulation Plate



STAR  
DOWEL  
Wide Cap  
Universal  
Dowel



## WIDE CAP UNIVERSAL DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 50 mm
Hole Diameter	: 10 mm
Washer Diameter	: 60 mm
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	80
PE	Plastic Nail	70
	Plastic Nail	60
	Average	70 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	180
PE	Plastic Nail	175
	Plastic Nail	180
	Average	178,3 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	60
PE	Plastic Nail	50
	Plastic Nail	60
	Average	56,7 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack (Pcs)
50*10*100	Plastic	500
50*10*120	Plastic	500
50*10*140	Plastic	500



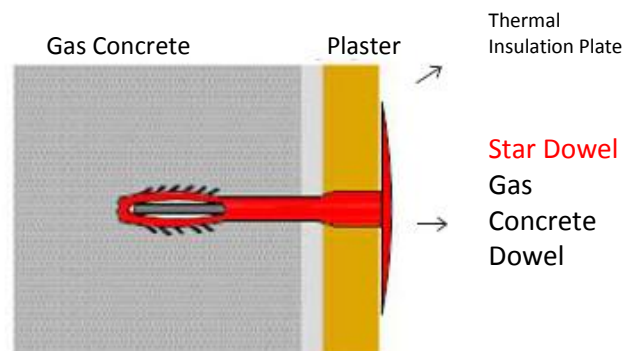
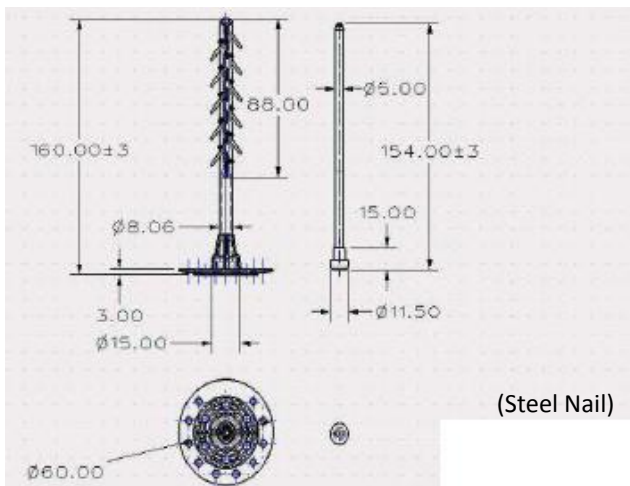
# SP STAR®

## GAS CONCRETE DOWEL



Gas concrete dowel is used in mounting of thermal insulation boards on gas concrete surfaces. Selecting quality dowels is very important for the system. It is a mechanical fixing component used for fixing the insulating sheets on application surface mechanically. It is manufactured of non-recycled plastic and preferably of polyamide. It has minimum 0,20 kN pulling strength. Gas concrete dowel must go inside application surface at least 9 cm except for the isolation material. The operating principle of the gas concrete dowel is drilled with 8 mm drill. While 11 independent clamps is inserted into the hole, it does not change the hole diameter. When the nail is

mounted in it, 11 independent clamps dives into concrete separately. Thanks to this, a big adherence is provided on gas concrete whose adherence is weak. The product must insert to the gas concrete at least 9 cm. Drill diameter must at least be 8 mm. Plastic nailed gas concrete dowel must be used in EPS and XPS plates, for stone wool plates steel nailed gas concrete dowel must be used. For the plates whose isolation thickness is higher than 8 cm, screwed gas concrete dowel must be used. Dowel size must be chosen as isolation thickness + 10 cm., the unevenness on the wall must be considered.







# SP STAR



## GAS CONCRETE DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 50 mm
Hole Diameter	: 10 mm
Washer Diameter	: 60 mm
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

### Pulling Test

Material	Nail Used	Tensile Breaking Force	Average
PE	Plastic Nail	80-70-60	70 kgf
PE	Steel Nail	120-130-120	123,3 kgf

### Shear Test

Material	Nail Used	Tensile Breaking Force	Average
PE	Plastic Nail	180-175-180	178,3 kgf
PE	Steel Nail	725-760-740	741,6 kgf

### Adherence Test

Material	Nail Used	Tensile Breaking Force	Average
PE	Plastic Nail	50-60-60	56,6 kgf
PE	Steel Nail	60-50-60	56,6 kgf

### PRODUCT SIZES AND PACKAGING

Dowel Size (cm)	Nail	Amount in Pack
60*8*160	Plastic	200
60*8*160	Steel	200
60*8*160	Screw	200
60*8*160	Screw	200
60*8*160	Screw	200
60*8*160	Screw	200
60*8*160	Screw	200
60*8*160	Screw	200
60*8*160	Screw	200
60*8*160	Screw	200



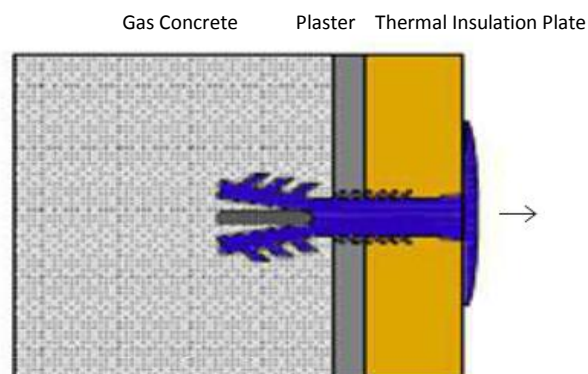
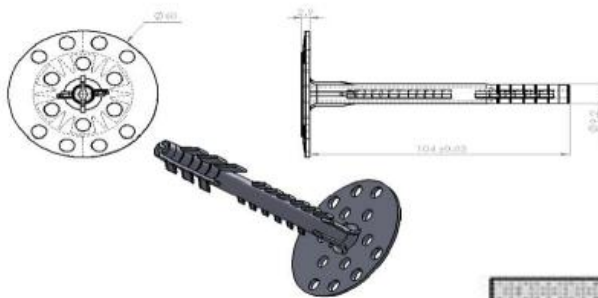
# SP STAR<sup>®</sup>

## HIGH ADHERENCE GAS CONCRETE DOWEL



Gas concrete surface is the most differing surface in terms of adherence in sheathing applications. It is a 8 mm diameter, 16 cm gas concrete dowel with 11 clamps in the applications in all world. When this product is being applied, it is drilled with 8 mm drill, when the dowel goes into its recess 11 independent clamps are embedded in their own diameter without damage. When its nail is mounted 11 clamps goes down into gas concrete surface and these 11 clamps collect 3 kg adherence per clamp and provide 33 kg.

- 36 kg. fastening power. When there is adherence weakness in gas concrete standard it is about the production standard of the product. If the thickness is thin like 13 kg or 13,5 kg, a gas concrete dowel has been improved and it opens 2,5 times bigger (high adherence) than itself. They come 11 cm and 14 cm in length. 11 cm is applied with drill. Minimum 50 kg can be carried on weak adherence gas concrete wall surface. Pieces for usage is 6 per 1 m<sup>2</sup>.



**STAR DOWEL**  
High Adherence  
Gas Concrete  
Dowel



## HIGH ADHERENCE GAS CONCRETE DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 40 mm
Drill Diameter	: 11 mm
Washer Diameter	: 60 mm
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	85,6
PE	Plastic Nail	75,6
PE	Plastic Nail	65,4
	Average	75,5 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	192
PE	Plastic Nail	189
PE	Plastic Nail	196
	Average	192,3 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	64
PE	Plastic Nail	54
PE	Plastic Nail	64
	Average	60,6 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack (Pcs)
60*10*110	Plastic	500
60*10*140	Plastic	500



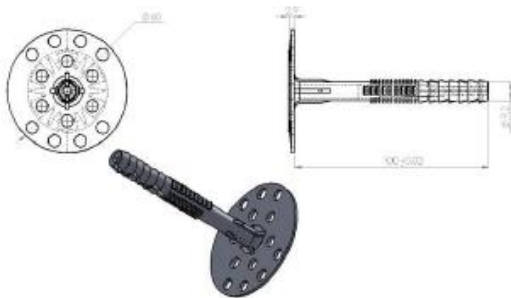
# SP STAR®

## WIDE CAP DOWEL

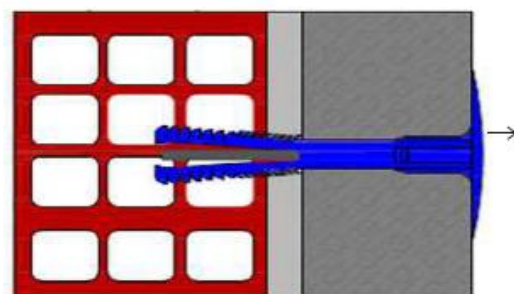


It has a wide cap and plastic nail. When the thickness of the insulation sheets are increased too much, wide cap but plastic covered steel body nails (dowels) must be used. Plastic dowel must have 10 mm body diameter, steel pin, plastic covering and dowel's body diameter must be 8 mm. Dowel size must be selected so as to be inserted in filled application surfaces 3 cm. On hollow application surface, the tip of the dowel must be chosen in a way that it can be go in application surface for 5 cm. Dowel cap must be 60 mm. Dowels appropriate for isolation thickness and density to be used for external thermal isolation must be used. Besides isolation thickness, the wall structure on which the application will be conducted also has importance.

The dowel must be produced of plastic. Dowel size\* must have the size of panel thickness + adhesion thickness + min. 3 cm, surface connection\*. If drill diameter is used same with dowel on filled application surfaces (exposed concrete), (10 mm dowels, 11-12 mm drill) dowel cannot create an opening on application surface. Isolation thickness and the fastening area of the surface on the hollow surfaces must also be calculated carefully and proper size dowels must be used. Star Plastik A.Ş. produces dowels for every isolation thickness and density.



Hollow Brick Plaster 1 cm Thermal Insulation Plate



STAR  
DOWEL  
Wide Cap  
Brick  
Dowel



# SP STAR



## WIDE CAP DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 50 mm
Drill Diameter	: 10 mm on hollow surface, 11 mm on filled surface
Washer Diameter	: 60 mm
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	80
PE	Plastic Nail	70
	Plastic Nail	60
	Average	70 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	180
PE	Plastic Nail	175
	Plastic Nail	180
	Average	178,3 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	60
PE	Plastic Nail	50
PE	Plastic Nail	60
	Average	56,6 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack
60*10*60	Plastic	500
60*10*80	Plastic	500
60*10*100	Plastic	500
60*10*120	Plastic	500
60*10*140	Plastic	500
60*10*160	Plastic	500
60*10*180	Plastic	500
60*10*200	Plastic	500





# SP STAR

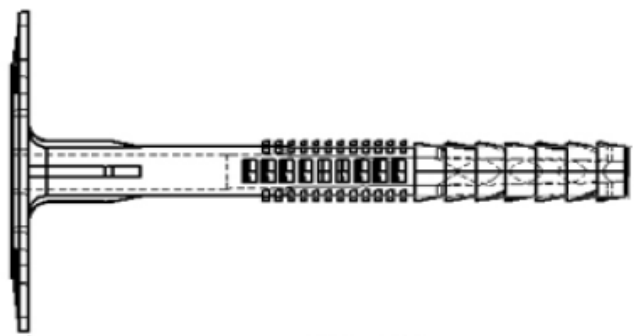
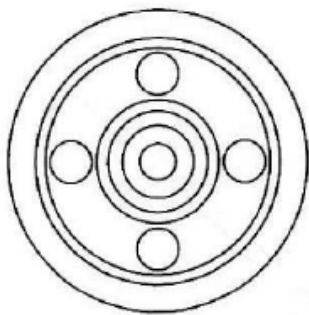


## NARROW CAP DOWEL



SP Star narrow cap dowel is designed to be used in renovation buildings, in other words on wall surfaces for which safe fastening area and wall unevenness calculations cannot be made. It has a tearing structure that allows uneducated applicators diminish their mistakes to the minimum. It is a technical product produced in Turkey. Dowel makes an opening from 10 cm to 11 cm after 2,5 cm in angles, it provides clear holding just as it catches the main thickness. Pulling, shearing and adherence values are in world standard in renovation buildings. The selection of the product size must be isolation thickness + 5 cm. Drill diameter must be 10 mm on insecure surfaces, and 11 mm on secure surfaces. If these diameters is not conformed, customer

dissatisfaction will occur. Selection of SP Star narrow capped thermal insulation dowel straight and narrow cap designed for XPS material application is very important for the system. . It is a mechanical fixing component used for fixing the insulating sheets on application surface mechanically. It is manufactured of non-recycled plastic and preferably of polyamide. It has minimum 0,20 kN pulling strength.





# SP STAR®

## NARROW CAP DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 50 mm
Drill Diameter	: 10 mm
Washer Diameter	: 50 mm
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	80
PE	Plastic Nail	70
PE	Plastic Nail	60
	Average	70 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	180
PE	Plastic Nail	175
PE	Plastic Nail	180
	Average	178,3 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	60
PE	Plastic Nail	50
PE	Plastic Nail	60
	Average	56,7 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack
50*10*80	Plastic	500
50*10*90	Plastic	500
50*10*100	Plastic	500

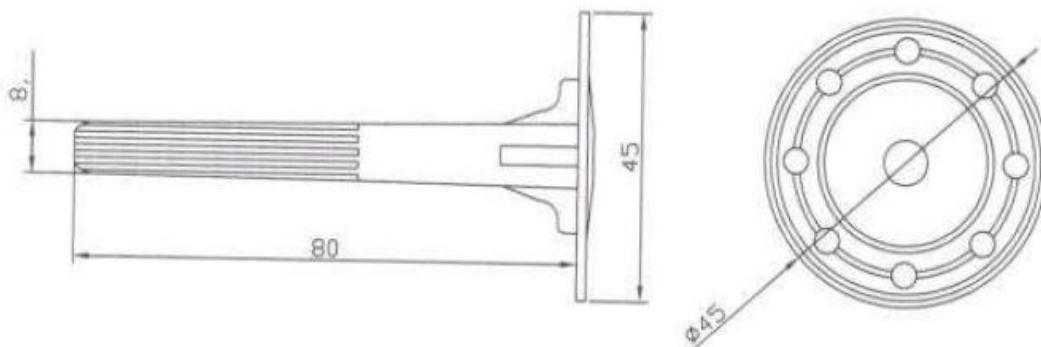


# SP STAR<sup>®</sup>

## NAILLESS CONCRETE DOWEL



It is used in sheathing, especially post and beam sheathing and inner sheathing by drilling with 8 mm drill with hammer method. It is practical in application, and provides excellent fastening on exposed concrete. It provides ease in usage. Prevents difficult working with drill on exposed concrete. It cannot be applied on external sheathing, hollow brick or gas concrete surfaces.





## NAILLESS CONCRETE DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 40 mm
Drill Diameter	: 8 mm
Washer Diameter	: 45 mm
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Nailless	65
PE	Nailless	70
PE	Nailless	68
	Average	67,6 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Nailless	65
PE	Nailless	70
PE	Nailless	68
	Average	67,6 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Nailless	23
PE	Nailless	26
PE	Nailless	24
	Average	24,3 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack
45*8*60	Nailless	500
45*8*80	Nailless	500
45*8*100	Nailless	500



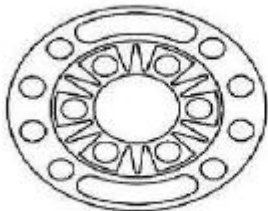
# SP STAR



## OSB DOWEL



Self-drilling dowel proper for mounting of all insulation boards on wooden surface. Star Plastik A.Ş. produces OSB dowels to be used for thermal isolation on wooden surfaces. They are self-drilling dowels enabling easy and quality application with branched screws. Application in other styles, like the ones for concrete or gas concrete surfaces, cannot be applied on wooden surfaces.





## OSB DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 20 mm
Dowel Size	: 80 mm
Intended Use	: Wooden
Washer Diameter	: 60 mm
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack (Pcs)
60*25	Screwless	1000
60*25*40	Screwed	1000
60*25*50	Screwed	1000
60*25*60	Screwed	1000
60*25*70	Screwed	1000
60*25*80	Screwed	1000
60*25*90	Screwed	1000
60*25*100	Screwed	1000





# SP STAR®

## SIDING JAMB DOWEL



T capped connection dowel designed to minimize the repair defects in siding and jamb applications. Because of the thin T cap designed in joint canals it prevents avoiding usage of dowels. Therefore, mechanical fastening of the application provides the mechanical connection regardless of the shape of the plate type. It is the product which causes the least defect.

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 50 mm
Hole Diameter	: 10 mm
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	80
PE	Plastic Nail	70
	Plastic Nail	60
		Average 70 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	180
PE	Plastic Nail	175
	Plastic Nail	180
		Average 178,3 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Plastic Nail	60
PE	Plastic Nail	50
	Plastic Nail	60
		Average 56,7 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack (Pcs)
50*10*100	Plastic	500
50*10*120	Plastic	500



# SP STAR®

## NEW NAILLESS CONCRETE DOWEL



It is used in sheathing, especially post and beam sheathing and inner sheathing by drilling with 8 mm drill with hammer method. It is practical in application, and provides excellent fastening on exposed concrete. It provides ease in usage. Prevents difficult working with drill on exposed concrete. It cannot be applied on external sheathing, hollow brick or gas concrete surfaces.

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 40 mm
Hole Diameter	: 8 mm
Washer Diameter	: 45 mm
Consumption	: About 6 pieces per 1 m <sup>2</sup> for thermal insulation systems

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Nailless	65
PE	Nailless	70
	Nailless	68
	Average	67,6 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Nailless	65
PE	Nailless	70
	Nailless	68
	Average	67,6 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Nailless	23
PE	Nailless	26
	Nailless	24
	Average	24,3 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack (Pcs)
45*8*60	Nailless	500
45*8*80	Nailless	500
45*8*100	Nailless	500

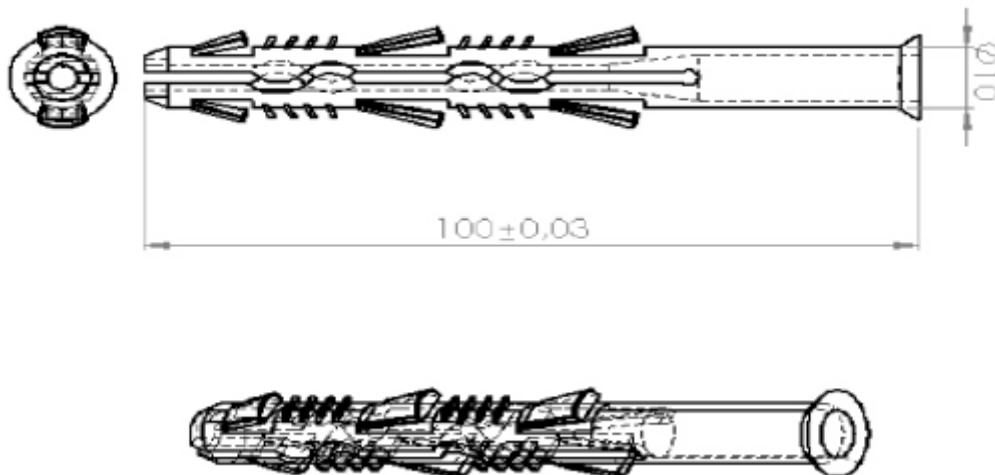


# SP STAR<sup>®</sup>

## HEAVY LOAD DOWEL



Heavy load dowels have very high value of load bearing in gas concrete and hollow brick thanks to their double opening. It provides a secure connection by performing a balanced load distribution in mounting of curtain walls and joinery mounting.





# SP STAR



## HEAVY LOAD DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 50 mm
Drill Diameter	: 10 mm

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	1000
PE	Screw	1150
PE	Screw	1100
Average		1100 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	1000
PE	Screw	1150
PE	Screw	1100
Average		1083,3 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	250
PE	Screw	260
PE	Screw	240
Average		250 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack
8*100	Screwless	1200
8*120	Screwless	1200
8*140	Screwless	1200
8*160	Screwless	1200
8*100	Screwed	1200
8*120	Screwed	1200
8*140	Screwed	1200
8*160	Screwed	1200

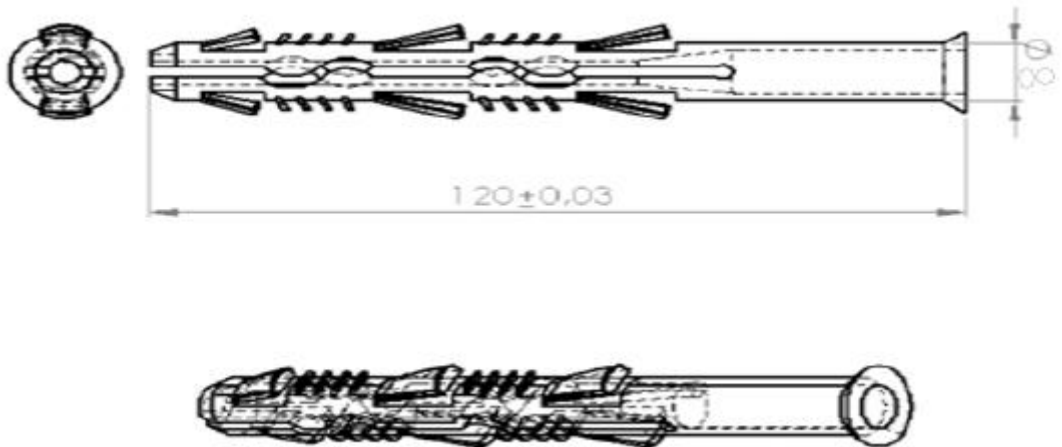


# SP STAR<sup>®</sup>

## HOLLOW BRICK DOWEL



A product designed for effective mounting of the heavy materials on gas concrete, exposed concrete, plastered brick and most importantly unplastered hollow brick in and out of the building. Thanks to its special design during drilling (hammer drill) it provides the maximum tolerance of hole diameter to be opened wide on brick surfaces. It opens 2,5 times of the drill diameter for its own necessity. During the mounting when it goes into the hole, when the closed clamps reach the empty area, it supports tearing. Mounting is easy on all wall surfaces, its pulling strength is high.







# SP STAR



## HOLLOW BRICK DOWEL

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 50 mm
Drill Diameter	: 8 mm

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	400
PE	Screw	430
PE	Screw	420
	Average	416,6 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	1000
PE	Screw	1150
PE	Screw	1100
	Average	1083,3 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	140
PE	Screw	120
PE	Screw	110
	Average	123,3 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack
8*60	Screwless	1000
8*80	Screwless	1000
8*100	Screwless	1000
8*60	Screwed	1000
8*80	Screwed	1000
8*100	Screwed	1000



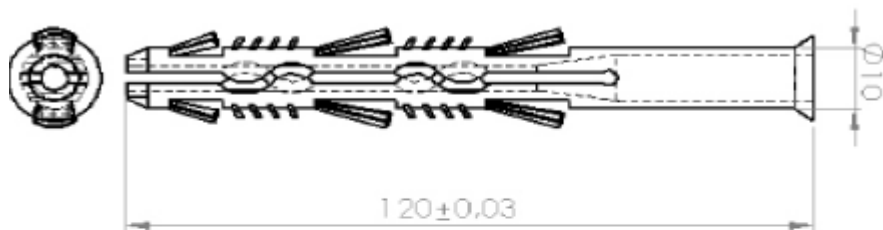
# SP STAR



## EURO WATER BASEMENT AND JAMB DOWEL (CLAPMED)



Water basement dowels are used to perform correct solid connection according to the variety of the wall surfaces. The connection component of the profile which acts as the bearer of the system is one of the most important details of the system because the connection component carries all the load. Dowels and screw sizes are applied according to isolation and wall thickness.





# SP STAR



## EURO WATER BASEMENT AND JAMB DOWEL (CLAPMED)

	TECHNICAL SPECIFICATIONS
Anchorage Length on Bearing Ground	: 50 mm
Drill Diameter	: 8 mm

Pulling Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	400
PE	Screw	430
PE	Screw	420
Average		416,6 kgf

Shear Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	725
PE	Screw	760
PE	Screw	740
Average		741,6 kgf

Adherence Test		
Material	Nail Used	Tensile Breaking Force
PE	Screw	140
PE	Screw	120
PE	Screw	110
Average		123,3 kgf

PRODUCT SIZES AND PACKAGING		
Dowel Size (cm)	Nail	Amount in Pack (Pcs)
8*80	Screwless	1000
8*100	Screwless	1000
8*120	Screwless	1000
8*80	Screwed	1000
8*100	Screwed	1000
8*120	Screwed	1000



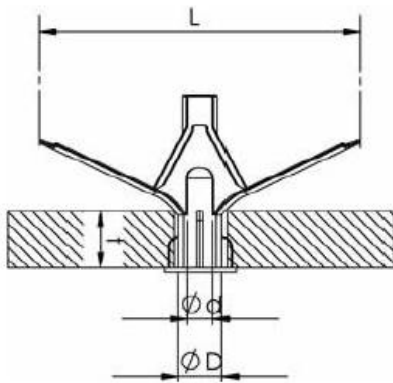
# SP STAR®

## WINGED DRYWALL DOWEL

Drywall dowel is a dowel designed to be used in wall connections like wooden surfaces.

With its special wing structure it provides a secure connection where it is applied.

However, for a secure connection it must be used with proper size screw and the surface thickness and the dowel must be conforming to each other.



Packaging		
Nail Type	Size (mm)	Boxes
2"	10*40	250
3"	10*40	250

## TURBOLET DRYWALL DOWEL

A dowel used for wooden and drywall surfaces.

Provides the easiest mounting of paintings, curtain rods, electricity buttons, lamps and similar materials on drywall covered surfaces.

Its mounting is quite practical



Packaging	
Size (mm)	Boxes
12*25	500



# SP STAR



## INDOOR GAS CONCRETE DOWEL

Specially produced for porous concrete.

Thanks to its spiral reverse angled structure, it performs proper distribution of the pressure and provides high load bearing value on porous concrete.

Because indoor gas concrete dowel has a fastening ability two times of its hole surface, it provides a secure connection on the material.

Does not crack or break during nailing.



Packaging	
Size (mm)	Boxes
8	500
10	500

## STAR STANDARD DOWEL

A dowel with high tractive force.

Because of its special profile it provides easy and secure mounting.

Because of the quality plastic it does not crack or break during application.



Packaging	
Size (mm)	Boxes
6*30	1000
8*40	1000
10*50	1000



# SP STAR

®

