

### CONSTRUCTION TECHNOLOGY

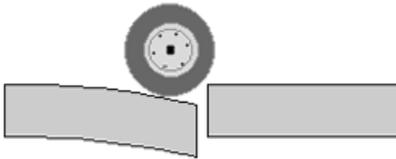
# DOWEL BAR

#### PROPERTIES

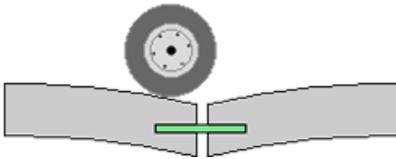
- Significantly improves the performance of road connections
- Prefabricated leave-in-place cages, for positioning dowels at the correct height and spacing in the slab
- Reduces the life cycle cost
- Simple geometry of the formation of the joint without the need of additional measurement or adjustment
- Simple formwork and time saving installation
- Stainless Steel or Epoxy coated (optional)



0% load transfer efficiency



100% load transfer efficiency



Dowel Bars are short steel bars that provide a mechanical connection between slabs without restricting horizontal joint movement. Before passing over the load, they make the release plate take on some of the load and increase the efficiency of load transfer. This reduces joint deviation and stress in the approach and dispersion slabs.

Half of the length of this bar is embedded in one of the concrete slabs and the rest is adhered to the adjacent slab. One end of the rod is kept free for movement during expansion and contraction of the slab depending on temperature change.

Epoxy-Coated Dowel Bars protect by using various mechanisms. Epoxy-Coated Dowel Bars have shown that the corrosion rates of Steel Reinforcement Rods is 40 to 50 times lower than similar uncoated bars.

Epoxy Coated rebar can be used in any concrete that is exposed to corrosive conditions. These may include exposure to de-icing salts or seawater.



#### HEADQUARTERS

Caferağa Mah. Albay Faik Sözdener Cad.  
No:7/23 Kadıköy- İstanbul / TURKEY  
Phone : +90 216 405 21 55 / PBX  
info@regbar.com

#### PLANT

Sanayi Mah. İzmit Sanayi Sitesi  
13. Cadde 318 Blok Apt. No:318/132  
No:9 İzmit-Kocaeli / TURKEY  
Mobile: +90 541 932 3751

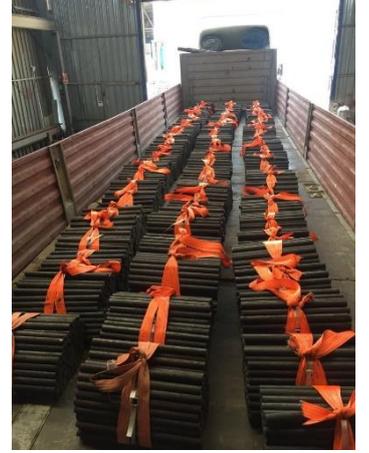
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Lesnaya Plaza 4, 4th, Lesnoy Pereulok  
No:24/8125047 Moscow / RUSSIA  
W: +7 (495) 641 37 64

Dowel bar is widely used in constructions such as:

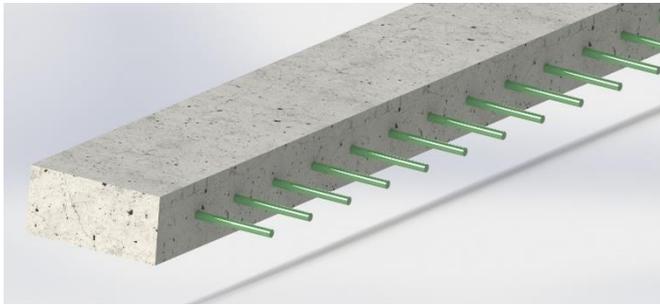
- Marine structures (harbors, airports, tunnels, etc.)
- Sidewalks (highway, airport runway, etc.)
- Park structures
- Buildings (seaside, power plants, etc.)
- Repairing

As REGNUM, we offer the best products, services and support that best fit to your needs of Dowel Bar. We produce epoxy coated, galvanized, stainless Dowel Bars.



### SIMPLE INSTALLATION

1. Place Dowel bars on the center line of joint and fix it to ground.
2. Install the slab reinforcement mesh (if specified) as directed by the slab designer.
3. Pour the concrete ensuring that concrete placement and minimum reinforcement coverage is achieved as per slab design.



4. Saw cut the slab over the centerline by diamond saw to a depth of 25 ~ 30% total slab thickness, as soon as it is possible to cut without damaging the arrises (within 24 hours). Control the depth of the cut to make sure the dowels are not cut through.



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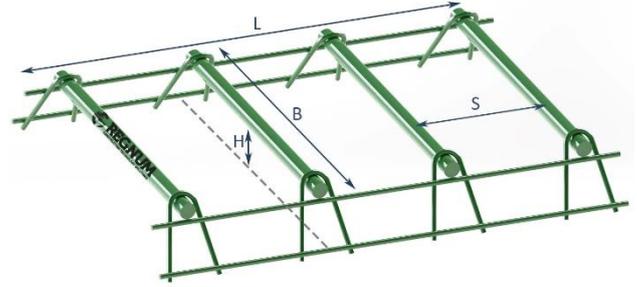
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## DIMENSIONS

Regnum produces various types of Dowel Bars according to your needs. Dowel diameters can change from 16mm to 32 mm while dowel lengths can change from 200 mm to 600 mm.

Different types of Regnum Dowel Bars are selected according to following criteria:

- Slab Depth. Is required to determine the type of the Dowel Bar as the dowels have to be positioned always in the center of the slab. Advisable slab depths are stated in table below.
- Environment. For internal floors, basic plain steel Dowel Bars is suggested. For external applications and where corrosion resistance is required, it is recommended to use stainless steel or epoxy coated Dowel Bars.



The table below indicates most used types of dowel bars.

Product Code	Height from Ground (H)		Dowel Type	Dowel Centers Span (S)		Total Length of Unit (L)		Advisable Slab Depth	
	[mm]	["]		[mm]	["]	[mm]	["]	[mm]	["]
RDB63	63	1-3/16	Round bar dowel D32 x 450 mm *	450	17-23/32	1000	39-3/8	125	4-59/64
RDB75	75	1-27/64						150	5-29/32
RDB88	88	1-21/32						175	6-57/64
RDB100	100	1-57/64						200	7-7/8
RDB113	113	2-23/64						225	8-55/64
RDB125	125	2-61/64						250	9-27/32

Regnum Construction  
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<http://tiny.cc/regnumct>



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