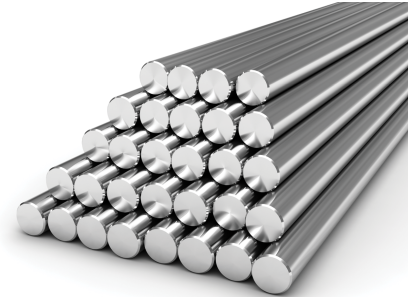


# Dowel Bar - Stainless Steel

## Description

The excellent corrosion resistance of stainless steel dowel bars eliminates the risk of structural damage due to rust and the need for costly refurbishment that can arise as a result.

When compared with the costs associated with the use of carbon steel, stainless steel can reduce total lifetime costs significantly. Dowel bars are normally made from plain round steel. They are cast or drilled into concrete and are used to transfer loads across joints in concrete. In applications where movement is expected, the dowel bar is cast in one side and de-bonded in the other side of the joint.



- Grade 304 (1.4301) suitable for most atmospheric and concrete covered environments.
- Grade 316 (1.4401) the recommended grade for marine and corrosive environments.
- The strength physical characteristics for stainless steel dowel bar are Proof Strength - 250 N/mm<sup>2</sup>, Ultimate Tensile Strength - 550 N/mm<sup>2</sup>
- Standard stainless steel dowel bar diameters range from 6mm to 50mm.
- Stock lengths are up to 6m and bars can be supplied cut to any length.
- Threaded ends with ISO metric threads to BS 3643 can be supplied for fixing applications.
- A full range of accessory products are available including square backing plates, nuts, washers, tying wire, end caps and de-bonding sleeves

### GRADES OF DOWEL BAR READILY AVAILABLE

Key:

1. Appropriate choice for corrosion resistance and cost
2. Over specification of corrosion resistance for the application
3. May be suitable in some instances specialist advice should be obtained
4. Grades suitable for specialist applications which should only be specified after consultation with corrosion specialists
5. Unsuitable for application

Grades in accordance with BS EN 10088-1	Readily Available Dowel Bar Grades	For structures or components with either a long design life, or which are inaccessible for future maintenance	For structures or components exposed to chloride contamination with no relaxation in durability design (e.g. concrete cover or water proofing treatment requirements)	Reinforcement bridging joints, or penetrating the concrete surface and also subject to chloride contamination (e.g. dowel bars or holding down bolts)	Structures subject to chloride contamination where reductions in normal durability requirements are proposed (e.g. reduced cover, concrete quality or omission of water proofing treatment)
1.4301 [304]	x	1	1	5	3
1.4307 [304L]	x	1	1	5	3
1.4401 [316]	x	2	2	1	1
1.4404 [316L]	x	2	2	1	1
1.4462 F51	x	2	2	1	1
1.4501 F55	x	4	4	4	4

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## SIZES AND STRENGTHS

Dowel bar is generally supplied with a 0.2% proof of 250 N/mm<sup>2</sup> and a UTS of N/mm<sup>2</sup>. Higher proof strength of 500 N/mm<sup>2</sup> and 650 N/mm<sup>2</sup> are available.

### Grade 304 and 316 DOWEL BAR 250 PROOF - 500 UTS

Ref	Kg/m	Ultimate tensile load kN	Proof load 0.2% N/mm kN
DB 5	0.154	9.5	4.7
DB 6	0.222	14	7
DB 8	0.395	25	12
DB 10	0.617	39	19
DB 12	0.888	56	28
DB 16	1.578	100	50
DB 20	2.466	157	78
DB 25	3.853	245	122
DB 32	6.313	402	201
DB 40	9.865	618	314
DB 50	15.41	981	490

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