

Stainless Steel Dowel Bars

Working towards forever.

We work with our customers and partners to create long lasting solutions for the tools of modern life and the world's most critical problems: clean energy, clean water and efficient infrastructure.

Because we believe in a world that lasts forever.

Dowel bars are used to transfer shear loads across construction and movement joints in concrete. Typically dowels have equal embedment within the two concrete elements they connect. In order to allow for thermal movement of the concrete elements, it is usual to de-bond the dowel within one of the concrete elements. However, at movement joints care must be taken to accurately align the dowels with the direction of movement. Dowels are often either cast or placed into a drilled hole within the concrete.

Outokumpu stainless steel dowel bars are produced and processed at our works in Sheffield, UK.

Product Availability

BS 6744:2001 +A2:2009 specifies the use of stainless steel bars in concrete

Steel designations:

Outokumpu steel grade	International steel designation	
	EN	ASTM/UNS
4301	1.4301	304
4436	1.4336	316
LDX 2101*	1.4162	S32101
2304	1.4362	S32304

Other stainless steel designations are available upon request.

For guidance on the use of different steel designations in various service conditions please see BS 6744:2001 +A2:2009 Table B.1

Available grades:

BS 6744 grade	0.2% Proof strength (N/mm ²)	UTS (N/mm ²)
200	200	220
500	500	550
650	650	715

All other mechanical properties are as specified in BS 6744

The standard Outokumpu dowel system is available in five diameters, with each diameter available in two lengths. Stainless steel and durable plastic de-bonding sleeves are available, both with integral nail plates for easy fixing to the shuttering.

Dowel Systems

Stainless Steel Dowel and Sleeve (DSS System)

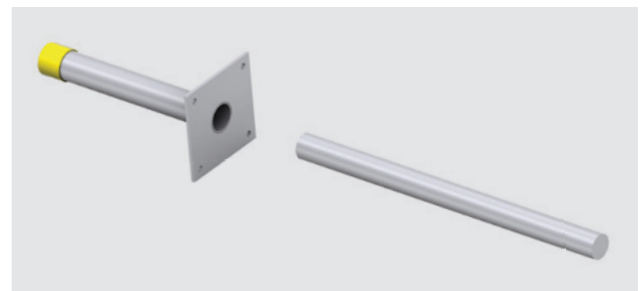


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Stainless Steel Dowel and Plastic Sleeve (DPS System)

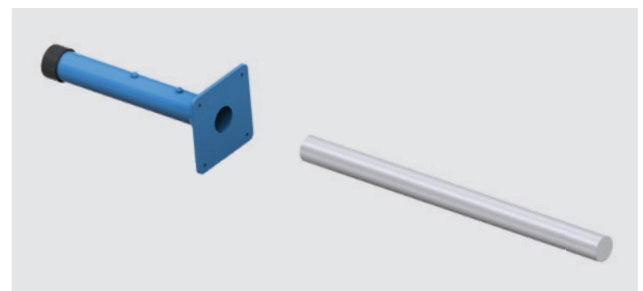


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Dowel Diameter (mm)		Dowel Length (mm)	DSS Sleeve (stainless steel)		DPS Sleeve (plastic)	
DSS Ref			DSS Ref	Length (mm)	DPS Ref	Length (mm)
20	300	300	20 300	175	20 300	170
20	400	400	20 400	225	20 400	220
22	300	300	22 300	175	22 300	170
22	400	400	22 400	225	22 400	220
25	300	300	25 300	175	25 300	170
25	400	400	20 400	225	25 400	220
30	300	300	30 300	175	30 300	170
30	400	400	30 400	225	30 400	220
35	350	350	35 350	200	35 350	195
35	470	470	35 470	260	35 470	260

The internal diameter of the sleeves is nominally 1mm larger than the dowel bar diameter.

All stainless steel sleeves are supplied in 1.4301 designation unless otherwise stated. Other diameters and lengths of dowels and sleeves are available upon request.

Manufacturing Tolerances

Unless agreed at the time of enquiry the following tolerances will apply:
 Dowel Length ±25mm or ±0.5% whichever is the greater
 Dowel Diameter h9 as defined in ISO286-2:2010

- Also available:
- BS 6744:2001 +A2:2009 straight lengths up to 12m
 - Cut & Bend to BS 8666:2005
 - Stainless steel rebar couplers
 - Stainless steel fabric mesh to BS 4483 mesh sizes

Contact information:

Outokumpu Stainless Ltd
 PO Box 161, Europa Link, Sheffield,
 S9 1TZ, United Kingdom
Email: sales.rebar@outokumpu.com
Web: www.outokumpu.com

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