

## Damstahl + Prodec® a unique partnership

In Prodec®, Damstahl has found a strong partner. The close and collaborative partnership between the two companies has resulted in a level of service quality that has not been achieved before.

In addition to the excellent technical properties of the material, which are particularly noticeable in its excellent machinability, the cooperation between Prodec® and Damstahl offers you great added value:

### + Expertise and service

Damstahl's knowledge of materials and processing, coupled with the Prodec® customer service and product support, offers a unique symbiosis for quality.

### + Availability and flexibility

Delivery, including of samples, is carried out from Damstahl's own warehouses. With the commissioning of the fully automated high-bay warehouse at the Langenfeld site in summer 2024, efficiency will increase further. In addition, we have direct access to the stocks in Sheffield, thus offering full flexibility.

### + Cost-effective and sustainable

The use of European materials not only reduces the carbon footprint, but also our Prodec® material is a clear cost-effective solution. By focusing on speed and efficiency, we can achieve long-term cost savings.

Should you have any queries, our team is available to assist. Please visit our webshop or contact your local Damstahl representative. We are happy to help.

**Damstahl + Prodec® – Make the winning move**



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Prodec® is a registered trademark of Marcegaglia Stainless Sheffield.

[damstahl.com](https://damstahl.com)

# Make the winning move

Superior machinability with Prodec®



Discover our new steel bar portfolio  
for improved machinability.  
Exclusively in Damstahl Central.

 **DAMSTAHL**  
+ PRODEC®

# Make the winning move

With Prodec® steel bars, we now offer you highly optimised material that enables higher machining speeds, resulting in longer tool life and improved quality. Prodec® is melted, rolled and finished within the UK giving 100% European origin for the produced bars.

Thanks to extensive technical knowledge, the machinability properties of the material have been improved in all stages of the machining process. With Damstahl as a partner for Prodec® material, you benefit from our direct cooperation, the flexible deliveries that go with it, as well as extensive support and customer service. Unlike typical grades optimized for machinability, Prodec® products have similar corrosion resistance to conventionally produced stainless steel grades.

## Your product benefits at a glance:

- + Better machinability of the material
- + Consistent and constant quality
- + Less tool wear – up to 110% longer tool life
- + Faster machinability (up to 300 m/min) and lower maintenance expenses
- + Cost savings of up to 54% per component
- + Time and cost savings = increased efficiency

Experience the advantages of using Prodec® material.

## Damstahl's Prodec® range

	EN	AISI	Diameter	Lenght	Tolerance	Standard
<b>Prodec®</b>	1.4305	303				
<b>Prodec®</b>	1.4301/1.4307	304/304L	10 - 80 mm	3000 mm	EN 10278, h9	EN 10088-3
<b>Prodec®</b>	1.4401/1.4404	316/316L				

As optional processing options, we offer centreless grinding, polishing (grit 240) and chamfering (standard, 45°).

## Technical properties

**1.4301/1.4307, 304/304L**

**1.4401/1.4404, 316/316L**

**1.4305, 303**

### Machining guidelines

The general rules for machining stainless steel also apply to the Prodec® grades. The difference is that Prodec® grades enable a longer tool life and/or tougher machining conditions.

### Characteristics

Material with improved machinability. Improves productivity with faster machining, longer tool life, better dimensional tolerances, superior machined surface quality, and improved yields compared to conventionally produced material.

### Typical applications

Fasteners, flanges and valves, pressure fittings, machined components

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Nuts, bolts, and screws, gears, shafts, bearings, machined parts for process equipment

### Corrosion resistance

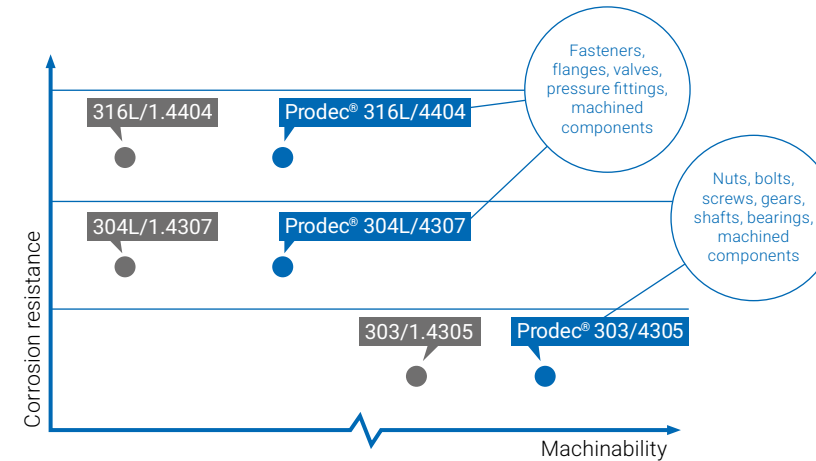
Prodec® 304L/4307 is a versatile, general-purpose stainless steel with good resistance to atmospheric corrosion, many organic and inorganic chemicals, as well as foods and beverages. It has also been used in vacuum-processing equipment and specialized instruments where high integrity is essential.

Prodec® 1.4401/ 1.4404, 316/ 316L provides improved resistance to pitting and crevice corrosion in environments containing chlorides and other halides.

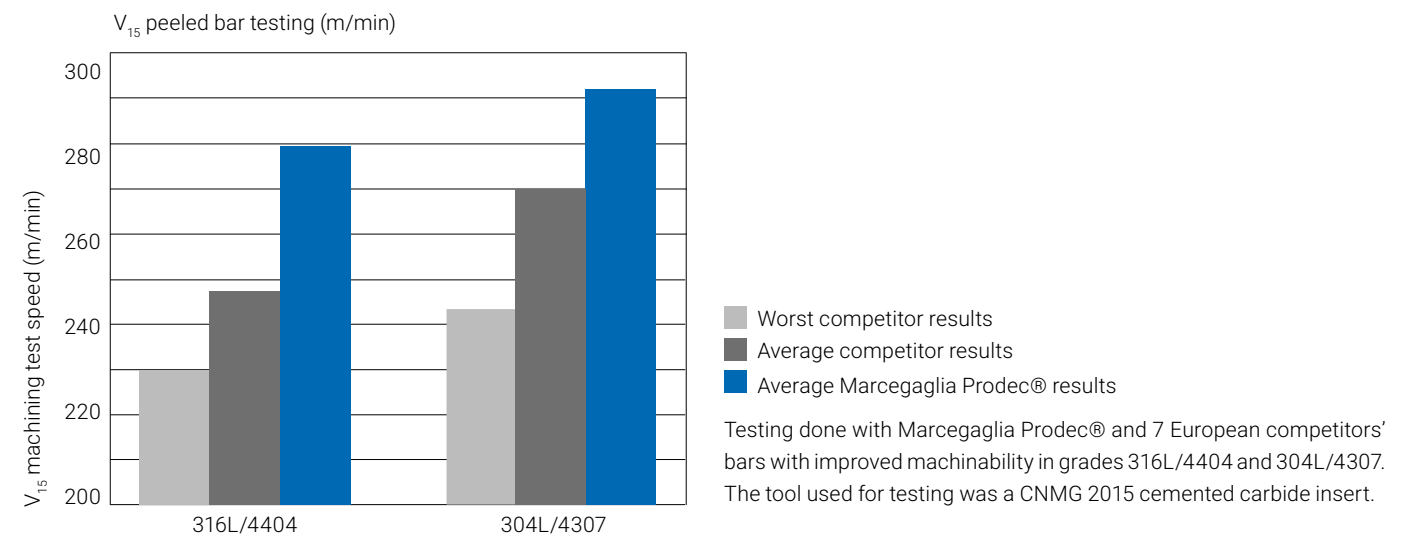
Prodec® 4305/ 303 is resistant to mildly corrosive environments. In order to achieve the best possible corrosion resistance, all Prodec® 303/4305 parts should be chemically treated to remove sulfides from the final surface.

# Product performance comparison

## Corrosion resistance vs machinability



## Bar – faster machining with Prodec®



## Bar – cost savings with Prodec®

		Standard 316L/4404	Prodec® 304L/4307	Improvement
<b>Cutting speed</b>	m/min	92	137	45
<b>Processing time/component</b>	min	16,9	7,7	54%
<b>Total machining cost/component</b>	€	23,1	10,6	55%
<b>Productivity increase</b>	%			54%
<b>Savings/component</b>	€		12,6	

A cost saving example for rough turning a 6» diameter Prodec® 316L/4404 peeled bar with a cemented carbide tool.