

# TOOLOX® ENGINEERING & TOOL STEEL DIMENSIONAL PROGRAM BARS

## Toolox round bar dimension range

Products	Ø (mm)
Toolox® 44	21.0 - 353.0
Toolox® 46	151.0 - 353.0

## Dimensions

Stock dimension Ø (mm)	Standard length (mm)	
	Toolox® 44	Toolox® 46
21	5000	-
26	5000	-
31	5000	-
36	5000	-
41	5000	-
46	5000	-
51	5000	-
56	5000	-
61	5000	-
71	5000	-
81	5000	-
91	5000	-
101	5500	-
111	5000	-
121	5000	-
126	5500	-
131	5000	-
141	5000	-
151	3500	4000
161	4200	4000
172	3700	4100
182	3300	3700
202	4000	3600
225	3200	3600
232	3000	3400
242	4200	4200
262	3600	3600
282	4600	4600
302	4000	4000
323	3500	3500
353	3000	3000

Length tolerance according to EN 10060 with tolerances -0/+200 mm.

## Diameters

Dimension Ø (mm)	Tolerances, Turned surfaces (mm)	
	Min	Max
21 - 23	0	+ 0.4
24 - 31	0	+ 0.5
32 - 41	0	+ 0.6
42 - 54	0	+ 0.8
55 - 75	0	+ 1.0
76 - 125	0	+ 1.0
126 - 220	0	+ 2.0
221 - 250	0	+ 3.0
> 250	0	+ 5.0

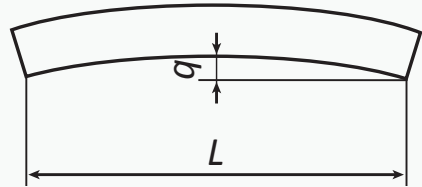
According to EN 10060 Limit deviation Precision for  $\text{Ø} \leq 71$  mm.  
SSAB specification for  $\text{Ø} \geq 81 - 282$  mm.

## Ovality

Tolerances for both rolled and turned according to EN 10060 meaning the deviation of roundness shall not exceed 75% of the diameter tolerance range.

## Straightness

Tolerances according to EN 10060. The deviation is considered as the maximum height of the arch, while using a calibrated 1 meter ruler. The maximum allowed deviation is 2mm/m.

Straightness, $q$	
	
Normal Ø	Tolerances
$q < d \leq 25$	Not fixed
$25 < d \leq 80$	$q \leq 0.4\%$ of L
$80 < d \leq 250$	$q \leq 0.25\%$ of L

## Surface conditions

Turned surface with:

maximal  $R_A$  2  $\mu\text{m}$  for  $\varnothing \leq 71$  mm.

maximal  $R_A$  3  $\mu\text{m}$  for  $\varnothing > 75 \leq 141$  mm.

maximal  $R_A$  16  $\mu\text{m}$  for  $\varnothing > 141$  mm.

## New rolling order

One bar in each bundle may have deviations in length due to sampling.

Rolled surfaces can be supplied upon request.  
Minimum order quantity 4 ton.

## Delivery condition

Toolox<sup>®</sup> bars are delivery with turned and oiled surface.

## Testing

Toolox<sup>®</sup> round bars are ultrasonic tested according to EN 10308 or EN 10228-3, with extra demands according to specification SSAB V6.

Mechanical properties are tested for each heat treatment batch. Bar hardness is measured on a milled surface, with indents positioned as impact test according to EN 10083. Impact testing according to EN 10083 and EN ISO 148.

## Contact information

[www.ssab.com/contact](http://www.ssab.com/contact)