

Linear Bearing Shaft with:

- Good hardening properties
- Excellent corrosion resistance

Selected for use in High Quality Linear Bearing Guide-way systems where Induction Hardened materials are required.

Chemical Analysis:

Designation	C	SI	MN	P	S	Al
Cf 53	0.50	0.15	0.40	Max.	Max.	0.02
	0.57	0.35	0.70	0.025	0.035	0.05

Mechanical Properties:

Diameter Ø mm	Re N/mm ²	Rm N/mm ²	A %
> 17	= > 360	= > 670	= > 5
> 17 – 41	= > 325	= > 630	= > 6
> 41 – 110	= > 325	= > 630	= > 8

Density: 785 kg / m³

Roundness: ½ Diameter tolerance

Surface:

Polished, surface finish Ra <= 0.30µm

Straightness:

<Ø10mm= < 0,30mm/m

(TIR max. 0.6 mm/m)

Ø10 – Ø20mm = 0.2 mm/m

(TIR max. 0.4 mm/m)

=>Ø20mm – Ø110mm = 0.1mm/m

(TIR max 0.2 mm/m)

Induction hardened:

Surface Hardness 60 – 66 HRC

Diameter Ø mm	Depth of Hardness at ends Rht 550 HV1 DIN 501 90
= < 5	> = 0.50 mm
> 5 – 10	0.50 mm + 0.50 mm
> 10 – 18	0.80 mm + 0.50 mm
> 18 – 28	1.20 mm + 0.80 mm
> 28 – 60	1.50 mm + 1.00 mm
> 60 - 80	2.20 mm + 1.00 mm
>80	3.20 mm + 1.50 mm

Non Standard Sizes

Other hardness depths and diameter tolerances are available. Please contact us for detailed information, dimensions and minimum order quantities

Standard Diameters

Standard Ø in mm	Tolerance in µm		Production Length* in mm
	h6	h7	
5	0	0	3800
6	- 8	-12	5800
8	0	0	6000
10	- 9	- 15	6200
12	0 - 11	0 - 18	6000
14			
15			
16			
18	0 - 13	0 - 21	6000
20			
22			
25			
30	0 - 16	0 - 25	7600
32			
35			
36			
40			
45	0 - 19	0 - 30	7000
50			
60			
70	0 - 22	0 - 35	7000
80			
100			

*) Length tolerance + 200 mm. At each end of a production bar up to 60mm length may not be fully hardened and up to 150mm not within tolerance. When providing material for stock this may amount to 10%, we do not invoice this.

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