

## Material Data Sheet 100Cr6 1.3505

### Bearingsteel for universal application:

- High toughness
- High efficiency
- Universal application  
(ejector pin, nozzle pin, valve pin, mandrels, pump shaft)

### // Chemical Analysis %

C	Si	Mn	P	S	Cr	Mo
0,93	0,15	0,25	<	<=	1,35	<=
1,05	0,35	0,45	0,025	0,015	1,6	0,1

See also DIN EN ISO 683-17

<b>Density:</b>	7,8 kg/dm <sup>3</sup>
<b>E- Modulus:</b>	at 20°C 210 GPa
<b>Thermal Expansion:</b> (benchmark)	20° C - 100° C = 11,5 x 10 <sup>-6</sup> K <sup>-1</sup> 20° C - 200° C = 12,5 x 10 <sup>-6</sup> K <sup>-1</sup> 20° C - 300° C = 13,3 x 10 <sup>-6</sup> K <sup>-1</sup> 20° C - 400° C = 13,9 x 10 <sup>-6</sup> K <sup>-1</sup>
<b>Roundness:</b>	½ Diameter tolerance
<b>Surface:</b>	Grinded, polished surface finish Ra <= 0,30 µm
<b>Straightness:</b>	0,05 mm / 150 mm
<b>Hardened:</b>	Hardened through and temper to 58 – 62 HRC
<b>Dimensions:</b>	Ø 3 mm – Ø 20 mm
<b>Length:</b>	Automatic hardening machine max. 3.500 mm Pull through furnace max. 4.500 mm

### // Standard Diameters

Standard Ø (mm)	Tolerance (µm) h 9	* Production Length (mm)
3,2	0 - 30	3.200
3,7		
4,2		
4,7		
5,2		
5,7	0 - 36	3.200
6,2		
6,7		
7,2		
7,7		
8,2		

Length tolerance ± 300 mm.

### Testing:

100% diameter check with laser. 100% Eddy current test Fa. Förster Magnetest D3.623. 100% Crack detection Fa. Förster Circograph with rotating sensor. Demagnetization before and after testing. Mechanical separation for good and faulty pieces.

### Specials:

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

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