

OTAI SPECIAL STEEL is 20CrMnTi bearing/Gearing steel stockholders and suppliers from china. more 16 years experience in GB 20CrMnTi steel supply.

GB 20CrMnTi bearing/Gearing steel is GB standard Alloy Carburizing Bearing/Gearing steel, GB 20CrMnTi properties is a chromium, manganese, titanium alloy steel specification. 20CrMnTi is equivalent with others standard bearing/Gearing steel, gearing steel. 20crmnti steel properties as below:

Related Specifications ASTM A29/A29M EN 10083/3 JIS G4053 GB/T GB/T 3077-1988

Form of Supply

GB 20CrMnTi bearing/Gearing steel, we can supply the round bar, steel flat bar, plate, hexagonal steel bar and steel square block. GB 20CrMnTi steel Round bar can be sawn to your required lengths as one offs or multiple cut pieces. 20CrMnTi bearing/Gearing steel Rectangular pieces can be sawn from flat bar or plate to your specific sizes. Ground tool steel bar can be supplied, provide a quality precision finished bar to tight tolerances.



Round



sheet



Square



Plate

Chemical composition

C(%)	0.95~ 1.05	Si(%)	0.15~0.35	Mn(%)	0.25~ 0.45	P(%)	≤0.025
S(%)	≤0.025	Cr(%)	1.40~1.65				

Heat treatment Related

① Annealing of 20CrMnTi Alloy bearing/Gearing steel

Slowly heated to 790–810 °C and allow enough times, let the steel to be thoroughly heated, Then cool slowly in the furnace. Different annealing ways will get different hardness. The 20CrMnTi bearing/Gearing steel will get Hardness MAX 248 HB (Brinell hardness) .

② **Quenching and temperature of 20CrMnTi Alloy bearing/Gearing steel**

Heated slowly to 788° C, Then put in salt-bath furnace keep 1191 °C to 1204 °C. quenching by oil get 60 to 66 HRC hardness. **High temperature tempering:** 650–700°C, cool in air, get hardness 22 to 30HRC. **Low temperature tempering:** 150–200 °C, Cool in air, get 61–66HRC hardness.

③ **Hot work and cold work of 20CrMnTi Alloy bearing/Gearing steel**

GB 20CrMnTi steel can hot worked at 205 to 538° C, 20CrMnTi Bearing/Gearing steel can be cold worked using conventional techniques in the annealed or normalized conditions.

Mechanical Properties

The mechanical properties of annealed GB 20CrMnTi bearing/Gearing steel (typical for steel) are outlined in the table below:

Tensile	Yield	Bulk modulus	Shear modulus	Poisson's ratio	Thermal conductivity
MPa	Mpa	Gpa	Gpa		W/mK
520	415 Min	140	80	0.27–0.30	46.6

Applications

GB 20CrMnTi steel is widely used for a variety of applications in the used to the bearing/Gearings in rotating machinery. Typical applications such as valve bodies, pumps and fittings, the high load of wheel, bolts, double-headed bolts, gears, internal combustion engine. Electric locomotives, machine tools, tractors, steel rolling equipment, boring machine, railway vehicle, and mining machinery

transmission shaft on the steel ball, roller and shaft sleeve, etc.

Regular size and Tolerance

1) Hot Rolled round bar

Diameter (mm)	Diameter Tolerance (mm)	Diameter (mm)	Diameter Tolerance (mm)
≤12.70	-0.13 ~0.30	>50.80~63.5	-0.25~0.76
12.7~25.40	-0.13~0.41	>63.50~76.20	-0.25~1.02
>25.4~38.10	-0.15~0.51	>76.20~101.60	-0.30~+1.27
>38.1~50.80	-0.20~0.64	>101.60~ 203.20	-0.38~3.81

2) Hot Rolled steel plate

Thickness (mm)	Thickness Tolerance (mm)	Thickness (mm)	Thickness Tolerance (mm)
≤25.4	-0.41~0.79	>127~152	-1.60~2.39
>25.4~76	-0.79~1.19	>178~254	-1.98~3.18
>76~127	-1.19~1.60	>254~305	-2.39~3.96

Others 20CrMnTi have not specified size, pls [contact](#) our experienced sales team.

[Processing](#)

GB 20CrMnTi bearing/Gearing steel round bar and flat sections can be cut to your required sizes. 20CrMnTi bearing/Gearing steel ground bar can also be supplied, provide a high quality tool steel precision ground tool steel bar to your required tolerances. GB 20CrMnTi steel is also available as Ground Flat Stock / Gauge Plate, in standard and nonstandard sizes.

Contact our experienced sales team to help you with your 20CrMnTi bearing/Gearing steel questions and enquiry by [Email](#) or Telephone. The questions will be reply in 24 hours.

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