

OTAI SPECIAL STEEL is GCr15 bearing steel stockholders and suppliers from china. more 16 years experience in GB GCr15 steel supply.

GB GCr15 bearing steel is GB standard Alloy Bearing steel, It belong to the high quality high carbon, alloy chromium, manganese steel. GB GCr15 properties is a chromium, manganese alloy steel specification. GCr15 is equivalent to AISI 52100, DIN 100Cr6. Most applications can replace each others.

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

Form of Supply

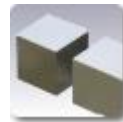
GB GCr15 bearing steel, we can supply the round bar, steel flat bar, plate, hexagonal steel bar and steel square block. GB GCr15 steel Round bar can be sawn to your required lengths as one offs or multiple cut pieces. GCr15 bearing steel Rectangular pieces can be sawn from flat bar or plate to your specific sizes. Ground tool steel bar can be supplied, provide a quality precision finished bar to tight tolerances.



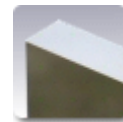
Round



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 GCr15 Alloy bearing 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 GCr15 bearing steel will get Hardness MAX 248 HB (Brinell hardness).

② Quenching and temperature of GCr15 Alloy bearing steel

Heated slowly to 860° C, Then quenching by oil get 62 to 66 HRC hardness. **High temperature tempering:** 650–700°C, cool in air, get hardness 22 to 30HRC. **Low temperature tempering:** 150–170 °C, Cool in ari, get 61–66HRC hardness.

③ Hot work and cold work of GCr15 Alloy bearing steel

GB GCr15 steel can hot worked at 205 to 538° C, GCr15 Bearing steel can be cold worked using conventional techniques in the annealed or normalized conditions.

Mechanical Properties

The mechanical properties of annealed GB GCr15 bearing 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 GCr15 steel is widely used for a variety of applications in the used to the bearings 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 GCr15 have not specified size, pls [contact](#) our experienced sales team.

Processing

GB GCr15 bearing steel round bar and flat sections can be cut to your required sizes. GCr15 bearing steel ground bar can also be supplied, proviGBg a high quality tool steel precision ground tool steel bar to your required tolerances. GB GCr15 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 GCr15 bearing steel questions and enquiry by [Email](#) or Telephone. The questions will be reply in 24 hours.

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