



## AISI 4130 Alloy Steel

Quality 4130 alloy steel cut and delivered straight to your workshop.

### **AISI 4130 alloy steel stockholders and suppliers, delivering to the whole of the UK.**

AISI 4130 is a chromium molybdenum alloy steel specification. It is supplied as round bar commonly in the hardened and tempered condition with a hardness of 18-22 HRC. With a lower carbon content range AISI 4130 provides better weldability, at the expense of through thickness strength, than that of other oil and gas steel grades such as [AISI 4140](#) or [AISI 4145](#). AISI 4130 alloy steel is readily machineable in the supply condition of 18-22 HRC.

### **Other AISI [oil and gas steel](#) grades we supply:**

[4140](#) | [4145](#) | [4330](#) | [4340](#) | [8620](#) | [6150](#)

### **Form of Supply**

West Yorkshire Steel are AISI 4130 steel stockholders and suppliers of round bar. Diameters can be supplied as full bar lengths or cut blanks. AISI 4130 ground steel bar can be supplied, providing a high tensile alloy steel precision ground bar to tight tolerances.



Contact our experienced sales team who will assist you with your AISI 4130 enquiry.

■ Diameter

## Applications

AISI 4130 is widely used for a variety of applications in the oil and gas sector. Typical applications include components such as valve bodies, pumps and fittings.

## Analysis

Carbon	0.28-0.33%	Silicon	0.15-0.35%
Manganese	0.40-0.60%	Chromium	0.90-1.10%
Molybdenum	0.15-0.25%	Nickel	0.25% max
Sulphur	0.040% max.	Phosphorous	0.035% max.

## Forging

Preheat carefully, then raise temperature to 950-1200°C for forging. Do not forge below 950°C.

## Annealing

Heat the AISI 4130 slowly to 850°C and allow enough time for the steel to be thoroughly heated. Cool slowly in the furnace to 480°C followed by air cooling.

## Stress Relieving

When parts are heavily machined, ground or otherwise subject to cold work, stress relieving will be beneficial prior to any hardening.

## Hardening

AISI 4130 steel is usually supplied ready heat treated with a hardness of 18-22HRC. If further heat treatment is required annealed AISI 4130 should be heated slowly to 870-890°C and after adequate soaking at this temperature quench in oil. Temper as soon as tools reach room temperature.

## Tempering

Heat carefully to a suitable temperature selected by reference to a tempering chart or table (usually between 400-570°C, soak at the temperature for 2 hours per 25mm of ruling section, then allow to cool in the air. Tempering between 250-375°C is not advised as tempering within this range will seriously reduce the impact value.

## Typical Mechanical Properties\*

	Tensile KSI	0.2% Proof Stress KSI	Elongation %	Reduction of Area %	Hardness HRc	Hardness Brinell
Min	95	75	20	40	18	217
Max	130	110			22	235

(\* at room temperature heat treated to 18-22HRC)

## Heat Treatment

Heat treatment temperatures, including rate of heating, cooling and soaking times will vary due to factors such as the shape and size of each 4130 steel component. Other considerations during the heat treatment process include the type of furnace, quenching medium and work piece transfer facilities. Please consult your heat treatment provider for full guidance on heat treatment of 4130 steel.

## Quality Assured Supply

4130 alloy steel is supplied in accordance with our ISO 9001:2015 registration.



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