X210CrW12 Tool Steel

Quality X210CrW12 tool steel cut and delivered straight to your tool room.

X210CrW12 tool steel stockholders and suppliers, delivering to the whole of the UK.

West Yorkshire Steel are suppliers of X210CrW12 tool steel in round and flat bar. A high carbon high chromium tool steel grade offering very high wear resistance with edge holding quality. It is an air hardening alloy tool steel with excellent resistance to wear and abrasion. As a high carbon high chromium tool steel X210CrW12 has good through hardening properties and dimensional stability combined with high resistance to tempering.

Form of Supply

West Yorkshire Steel are stockholders and suppliers of round bar and flat bar. Diameters in X210CrW12 can be sawn to your required lengths as one offs or multiple cut pieces. Rectangular pieces can be sawn from flat bar. X210CrW12 ground tool steel bar can be supplied, providing a quality precision ground bar to your required tolerances.

Applications

Typical applications for X210CrW12 tool steel include blanking and shearing tools, drawing tools, drawing dies, mandrels, press tools, forming tools and shear blades. X210CrW12 is suited to applications where maximum wear resistance is required. Ground tool steel bar can be supplied, providing a quality precision finish bar to close tolerances.
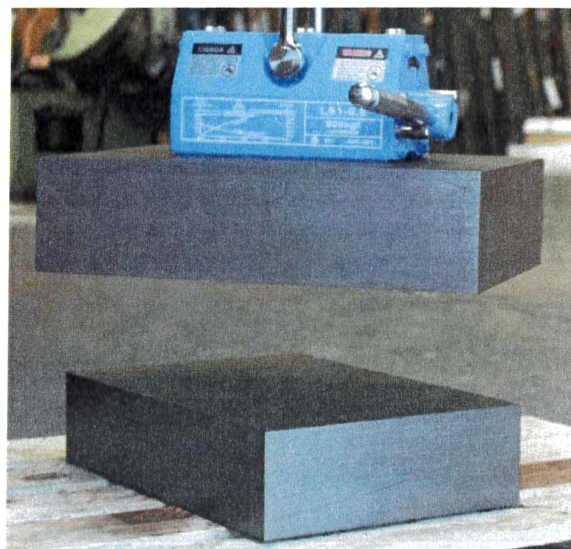
Contact our experienced sales team who will assist you with your enquiry.

- Sheet
- Flat
- Plate
- Diameter

DIN Standard steel grades we supply

45NiCrMo16 | 55NiCrMoV7 | 90MnCrV8
42CrMo4 | X45NiCrMo4 | 60WCrV8 | 31CrMoV9
X100CrMoV5 | X153CrMoV12 | X210Cr12
|60WCrV7 | X210CrW12 | X40Cr14 | X40CrMoV5-1
40CrMnMoS8-6 | HS6-5-2C | 40CrMnMo7
X155CrMoV12-1 | 100MnCrW4

Typical Analysis

Carbon	2.00%	Chromium	12.00%
Manganese	0.35%	Silicon	0.35%
Tungsten	0.75%		

Ground Flat Stock

Precision ground flat stock / gauge plate can be produced using X210CrW12 tool steel. Subject to size suitability and availability pieces can be produced in approximately 2 to 3 weeks. Standard and non-standard sizes are available.

Forging

Heat the X210CrW12 tool steel slowly and uniformly to 700°C then more rapidly to 900-1050°C. After forging cool slowly, preferably in a furnace.

Annealing

X210CrW12 is supplied in the annealed and machinable condition. Re-annealing will only be necessary if the tool steel has been forged or hardened by the toolmaker. To anneal heat to 800-840°C and slow furnace cool. Hardness after annealing will be approximately 225 brinell.

Stress Relieving

If machining operations have been heavy or if the tool has an unbalanced section, remove stresses before hardening by heating up to 650-700°C, equalise, then cool slowly.

Hardening

Pre heat slowly to 750-800°C and thoroughly soak. Continue heating to the final hardening temperature of 950-980°C and allow the component to be heated through. Cool in air or quench in oil. X210CrW12 is suitable for vacuum (high speed gas) hardening.

Tempering

To temper heat uniformly and thoroughly at the selected tempering temperature and hold for at least one hour per 25mm of total thickness. Double tempering should be carried out with intermediate cooling to room temperature.

Temperature °C	100	200	300	400
Hardness HRc	65	63	61	60

Final Grinding

Select the correct grade of wheel in consultation with the grinding wheel manufacturer. Ensure the grinding wheel is in good condition by means of a suitable dressing tool. Wet grinding is a preferable option using a copious supply of coolant. If dry grinding is resorted to then use a very soft wheel.

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 X210CrW12 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 tool steels.

Quality Assured Supply

X210CrW12 tool steel is supplied in accordance with our ISO 9001:2015 registration.