

90MnCrV8 Steel

90MnCrV8 steel suppliers delivering to the whole of the UK. 90MnCrV8 is an oil hardening steel supplied in the annealed condition, available in round bar. With it's suitability for through hardening it offers characteristics of good durability, wear resistance and holds a good cutting edge.

We welcome export enquiries for 90MnCrV8. Contact our sales office and consult our [shipping policy](#) for further details.

Form of Supply

West Yorkshire Steel are suppliers of round and flat bar. Fully annealed 90MnCrV8 ground steel bar can be supplied, providing a high quality tool steel precision ground bar to tight tolerances.

Contact our experienced sales team who will assist you with your tool steel enquiry.

- Plate
 - Flat
 - Diameter
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Applications

Applications include dies, press tools, drawing punches, broaches, bushings, lathe centres, chuck jaws, master cavity sinking hobs, plug gauges, thread gauges, thread cutting tools, cams, and cloth cutting knives.

Analysis

Carbon	0.85-0.95%	Chromium	0.20-0.50%
Manganese	1.80-2.20%	Silicon	0.10-0.40%
Sulphur	0.03% max	Vanadium	0.05-0.20%
Phosphorous	0.03% max		

Forging

Heat the 90MnCrV8 steel slowly and uniformly to 1000°C. Forge within a temperature range of 1050-850°C reheating if required. Cool slowly, in a furnace to avoid setting up stresses.

Annealing

Heat the steel uniformly to 720°C, equalise, then furnace cool. (Hardness about 229 Brinell). Fully machined tools in grade 90MnCrV8 should be packed during annealing.

Hardening

Heat uniformly to 790-820°C until heated through. (If possible pre-heat the component at 300-500°C). Allow 30 minutes per 25 millimetre of section and quench immediately in oil.

Martempering

Martempering is an alternative hardening process which may be used with suitable salt bath equipment.

Tempering

Heat the component uniformly and thoroughly at the selected tempering temperatures and hold for at least one hour per 25mm of thickness.

Temperature [°C]	100	150	200	250	300	400
Hardness [HRc]	64	63	62	60	56	50

Heat Treatment

Heat treatment temperatures for 90MnCrV8, including rate of heating, cooling and soaking times will vary due to factors such as the size and shape of each steel component. Other considerations during the heat treatment process include type of furnace, quenching medium and component transfer facilities. Please consult a heat treatment specialist for full guidance on heat treatment.

Final Grinding

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

Quality Assured Supply

90MnCrV8 steel specification is supplied in accordance with our ISO 9001:2008 registration.