

735A50 Spring Steel

735A50 steel suppliers and stockholders delivering to the whole of the UK. West Yorkshire Steel are suppliers of 735A50 chromium vanadium type spring steel in round bar. Supplied in the as rolled condition 735A50 is suitable for oil hardening and tempering. When used in the oil hardened and tempered condition this spring steel combines spring characteristics with good wear and abrasion resistance. When hardened 735A50 offers excellent toughness and shock resistance which makes it a suitable alloy spring steel for parts exposed to stress, shock and vibration.

We welcome export enquiries for chrome vanadium spring steel. Contact our sales office and consult our [shipping policy](#) for further details.

Related Specifications

BS970 735A51 1.8159 AISI 6150 50CrV4 50CV4 ASTM A829

Alternative spring steel grades we supply

[CS70](#) | [CS80](#) | [CS95](#) | [CS100](#) | [EN42](#) | [EN43](#) | [EN45](#) | [EN47](#) | [6150](#) | [301](#)

Form of Supply

West Yorkshire Steel are suppliers of 735A50 spring steel round bar sizes. Diameters in 735A50 can be sawn to your required lengths as one offs or multiple cut pieces. Centreless ground 735A50 spring steel bar can be supplied, providing a high quality precision ground spring steel bar to tight tolerances.

Contact our experienced sales team who will assist you with your 735A50 spring steel enquiry.

- Diameter
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Applications

Commonly used in the motor vehicle industry and widely used for many general engineering applications. 735A50 is suitable for applications that require high tensile strength and toughness. Typical applications include gears, spindles, pumps, crankshafts and steering knuckles.

Analysis

Carbon	0.46-0.54%	Molybdenum	0.15% max
Manganese	0.60-0.90%	Nickel	0.40% max
Silicon	0.10-0.40%	Sulphur	0.04% max
Chromium	0.80-1.10%	Phosphorous	0.04% max
Vanadium	0.15% min		

Forging

Preheat the steel carefully, then raise temperature to 1050°C for forging. Do not forge below 840°C. After forging cool slowly, preferably in a furnace.

Annealing

Heat the steel slowly to 820-840°C, soak well. Cool slowly in the furnace.

Hardening

Slowly heat the 735A50 to 650-700°C and thoroughly soak. Continue to heat the steel to the final hardening temperature of 830-860°C and allow the component to be heated through. Quench in oil.

Tempering

Temper the steel component immediately after quenching whilst tools are still hand warm. Re-heat to the tempering temperature then soak for one hour per 25 millimetre of total thickness (two hours minimum) Cool in air. For most applications tempering will be between 400-600°C.

Heat Treatment

Heat treatment temperatures, including rate of heating, cooling and soaking times etc.. will vary due to factors such as the shape and size of each 735A50 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 735A50 chrome vanadium steel.

Welding

We recommend you contact your welding consumables supplier who should provide you full assistance and information on welding 735A50 chrome vanadium spring steel.

Certification

Spring Steel 735A50 is available with cast and analysis certification, please request when placing any orders.

Quality Assured Supply

735A50 spring steel is supplied in accordance with our ISO 9001:2015 registration.