

## Alloy Steel

Try a company with a strong heritage in high strength alloy steel

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**Alloy steel stockholders and suppliers, delivering to the whole of the UK.** Alloy steel grades are stocked in round bar, flat bar and plate. Specifications are supplied in a comprehensive range of grades conforming to British, European, American and International standards.

If you do not find the alloy steel grade you require on our web site please contact our sales team who may be able to assist you with your enquiry.

Alloy steel is ideally suited for applications that require higher strength, improved toughness or better wear resistance than standard carbon steel grades. The choice of an alloy steel is often determined by the tensile strength and ruling section of the steel. Other considerations are the wear resistance and impact properties of the steel. The mechanical properties achievable are dependent on the addition of elements such as nickel, chromium, molybdenum and vanadium. Other factors to be taken in to consideration are the availability of the alloy steel. The majority of alloy steel specifications are only available in diameters. [EN24T flat bar](#) can be produced by bandsaw cutting pieces from large rectangular block.

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

### Popular grades we supply

[EN16T](#) | [EN19T](#) | [EN24T](#) | [EN26W](#) | [EN30B](#) | [EN31](#) | [EN32](#) | [EN36](#) | [EN40B](#) | [EN41B](#) |

[605M36T](#) | [709M40T](#) | [708M40T](#) | [817M40T](#) | [826M40W](#) | [835M30](#) | [535A99](#) | [655M13](#) | [722M24](#) | [905M39](#) |

[4130](#) | [4140](#) | [4145](#) | [4330V](#) | [4340](#) | [8620](#) | [6150](#) | [S690QL](#) |

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## Alloy Steel Form of Supply

West Yorkshire Steel are stockholders and suppliers of alloy steel grades in round bar, flat bar and cut plate. Diameters and flats can be supplied as full bar lengths or cut pieces. Diameters in alloy steel grades can be precision ground to tight tolerances.

Contact our friendly sales team who will assist you with your alloy steel enquiry.

- Flat
  - Diameter
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## Engineering Steel

[Engineering Steel](#) grades are commonly alloy steels which can be hardened and tempered to a range of high tensile strengths and mechanical properties. Engineering steel grades are tough, easily heat treated and do not suffer from temper brittleness. These steels are used in a wide variety of applications where high tensile properties are required. Common engineering components produced include crankshafts, gears, bolts and machine parts.

BS970	BS970 Part 1 to 5	Werkstoff	DIN
EN14	150M19	1.6582	34CrNiMo6
<a href="#">EN16</a>	<a href="#">605M36</a>	1.7225	<a href="#">42CrMo4</a>
<a href="#">EN16T</a>	<a href="#">709M40</a>	1.6747	30NiCrMo16-6
<a href="#">EN19</a>	<a href="#">708M40</a>	1.6745	40NiMoCr10 5
<a href="#">EN19T</a>	<a href="#">817M40</a>		
<a href="#">EN24</a>	<a href="#">826M40</a>		
<a href="#">EN24T</a>	<a href="#">835M30</a>		
<a href="#">EN26</a>	<a href="#">535A99</a>		
<a href="#">EN26W</a>			
<a href="#">EN30B</a>			
<a href="#">EN31</a>			

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## Nitriding Steel

[Nitriding Steel](#) grades are commonly chromium molybdenum (chrome moly) and chromium aluminium molybdenum types, such as EN40B and EN41. Nitrided EN40B can achieve a surface hardness in excess of 65HRc. The addition of aluminium to EN41 nitriding steel enables this grade to achieve a surface hardness in excess of 68HRc. Flat bar sizes are limited in these specifications, we can offer [1.2311](#) or [1.2312](#) nitriding steel grades as an alternative.

BS970	BD970 Part 1 to 5	Werkstoff	DIN
<a href="#">EN40B</a>	<a href="#">722M24</a>	1.7361	32CrMo12
<a href="#">EN41B</a>	<a href="#">905M39</a>	1.8509	41CrAlMo7
<a href="#">EN40</a>			
<a href="#">EN41</a>			

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## Case Hardening Steel

[Case Hardening Steel](#) grades are commonly supplied in the as rolled condition and can be carburised heat treated to give a high surface hardness and (with alloy case hardening steel grades) a tough core. The nickel and chromium combination of EN36 make this a good quality case hardening steel specification offering higher strength

levels and a more uniform hardness than that of other carburising grades.

BS970	BD970 Part 1 to 5	Werkstoff	DIN
<a href="#">EN32</a>	080A15	1.0401	<a href="#">16MnCr5</a>
EN34	080M15	1.5752	14NiCr14
<a href="#">EN36</a>	665M17		
EN39	<a href="#">655M13</a>		
EN32B			
EN36B			
EN39B			

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## Oil & Gas Steel

[Oil & Gas Steel](#) grades are supplied in round bar only, diameters can be cut to your required lengths. These grades are commonly supplied heat treated conforming to SAE and AISI steel specifications.

AISI / SAE

[4130](#)

[4140](#)

[4145](#)

[4330](#)

[4330V](#)

[4340](#)

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## Alloy Spring Steel

Silicon manganese [spring steel](#) (often used for producing and repairing leaf springs) is supplied in flat bar with a limited range of sizes in round bar. Chromium vanadium alloy spring steel is available in a limited range of round bar.

BS970	BD970 Part 1 to 5	DIN	AISI
BS970	BD970 Part 1 to 5	DIN	AISI
<a href="#">EN45</a>	250A53	50CrV4	<a href="#">6150</a>
<a href="#">EN47</a>	250A57	<a href="#">51CrV4</a>	
	<a href="#">735A50</a>		
	7345A51		

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## Heat Treatment

Heat treatment temperatures for alloy steel specifications, including rate of heating, cooling and soaking times etc. will vary due to factors such as the shape and size of each alloy 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 alloy steel grades.

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## Welding

We recommend you contact your welding consumables supplier who should provide you with full assistance and information on welding alloy steel grades.

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## Certification

Alloy steel is commonly available with BS EN 10204 3.1 mill certificate, please request when placing any orders.

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## Quality Assured Supply

All our alloy steel specifications are supplied in accordance with our ISO 9001:2015 registration.