

## Ground Bar

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**Precision ground steel bar stockholders and suppliers, delivering to the whole of the UK.** West Yorkshire Steel are suppliers of ground steel bar in our full range of steel specifications. Ground steel bar is suited for applications which require a tighter tolerance than commercial bright drawn, bright turned or bright peeled bar. Precision grinding of steel bar offers a defined tight tolerance on diameter, good roundness, straightness and a fine surface finish. The roundness and straightness of a ground steel bar ensures its suitability for machining in environments which require minimum vibration as the bars rotate at high speeds. Centreless ground steel bars are well suited for applications such as drive shafts, pump shafts, rolling bearings, pins, bolts and ball bushings.

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

### Form of Supply

Precision ground steel bar is available in our full range of special steel specifications and can be produced to your required sizes in the following steel types; tool steel, high speed steel, carbon steel, alloy steel, high tensile steel and stainless steel ground bar. Dependent on sizes, quantities and specifications required precision ground bar can be produced in approximately 2 to 3 weeks.

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### Ground Steel Bar Stock

From stock we can offer precision ground bar grade BS1407, this carbon steel specification is available from stock in diameters up to 2". BS1407 provides a ground carbon steel bar with medium tensile strength, with an average Brinell hardness of 270. To obtain full wearing resisting hardness with toughness BS1407 can be through hardened up to a maximum hardness of 64HRc.

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## Other Grades of Steel

We can produce the majority of grades we supply as precision centreless ground steel round bar to tight tolerances. Below we list our most popular grades of precision ground steel bar which we can produce in approximately 10 to 14 days. If the grade of steel you require as ground bar is not shown please contact our friendly and helpful sales team.

### Precision Ground Alloy Steel Bar / Rod

[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](#)

### Precision Ground Carbon Steel / Rod

[EN3](#) | [EN8](#) | [EN9](#) | [EN32](#) | [EN43](#) | [070M20](#) | [080M40](#) | [070M55](#) | [080A15](#) | [S275](#) | [S355](#) | [C45](#) | Precision Ground Mild Steel

### Precision Ground Stainless Steel Bar / Rod

[17/4PH](#) | [FV520B](#) | [S31254](#) | [904L](#) | [310](#) | [321](#) | [316](#) | [440B](#) | [440C](#) | [420](#) | [410](#) | [416](#) | [431](#) | [S31803](#) | [S32760](#)

### Precision Ground Tool Steel Bar / Rod

[O1](#) | [D2](#) | [D3](#) | [O2](#) | [D6](#) | [A2](#) | [S1](#) | [H13](#) | [P20](#) | [P20S](#) | [420](#) | [1.2083](#) | [2767](#) | [M2](#) | [M42](#) | [Ground Flat Stock](#) | [1.1730](#)

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## Tolerances

Our steel bar can be centreless ground to your exact sizes and tolerances. Below we list the standard ISO tolerances for precision ground, bright drawn, smooth turned and polished round steel bar (diameters). Below we list details of the popular ISO 'h' tolerances, we can also produce to tight tolerances to ISO 286 such as g5, g6, d8, d9 etc.

### Metric Diameters

Dia - mm	ISO h6	ISO h7	ISO h8	ISO h9	ISO h10	ISO h11
1 < 3	0.006	0.010	0.014	0.025	0.040	0.060
3 < 6	0.008	0.012	0.018	0.030	0.048	0.075
6 < 10	0.009	0.015	0.022	0.036	0.058	0.090
10 < 18	0.011	0.018	0.027	0.043	0.070	0.110
18 < 30	0.013	0.021	0.033	0.052	0.084	0.130
30 < 50	0.016	0.025	0.039	0.062	0.100	0.160
50 < 80	0.019	0.030	0.046	0.074	0.120	0.190
80 < 120	0.022	0.035	0.054	0.087	0.140	0.220
120 < 180	-	-	0.063	0.100	0.160	0.250

Dia - mm	ISO h6	ISO h7	ISO h8	ISO h9	ISO h10	ISO h11
180 < 250	-	-	0.072	0.115	0.185	0.290
250 < 275	-	-	0.081	0.130	0.210	0.320

### Imperial Diameters

Dia - inches	ISO h6	ISO h7	ISO h8	ISO h9	ISO h10	ISO h11
1/32 < 1/8	0.00025	0.0004	0.0006	0.0010	0.0016	0.0024
1/8 < 15/64	0.0003	0.0005	0.0007	0.0012	0.0019	0.0030
15/64 < 25/64	0.0004	0.0006	0.0009	0.0014	0.0023	0.0035
25/64 < 45/64	0.0004	0.0007	0.0010	0.0016	0.0027	0.0043
45/64 < 1 3/16	0.0005	0.0008	0.0012	0.0020	0.0033	0.0051
1 3/16 < 2	0.0006	0.0010	0.0016	0.0025	0.0039	0.0063
2 < 3 1/8	0.0007	0.0012	0.0018	0.0030	0.0047	0.0075
3 1/8 < 4 3/4	0.0009	0.0014	0.0022	0.0035	0.0055	0.0087
4 3/4 < 7 3/32	-	-	0.0025	0.0039	0.0063	0.0098
7 3/32 < 10	-	-	0.0028	0.0045	0.0073	0.0114
10 < 10 7/8	-	-	0.0031	0.0051	0.0083	0.0126

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### Details of your enquiry

When enquiring on precision ground steel bar grades please ensure you provide the following information to our sales team:-

- Size & quantity - details of the diameter of the round bar, length and quantity.
  - Tolerance - please detail the exact size and tolerance allowance.
  - Steel specification - full details of the steel grade.
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## Certification

Ground steel bars are available with BS EN 10204 3.1 mill certificate, a cast and analysis certificate or certificate of conformity. Please request when placing any orders.

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## Quality Assured Supply

All ground steel bars are supplied in accordance with our ISO 9001:2015 registration.  
Contact West Yorkshire Steel with your enquiries for ground steel bar.