



BRODER METALS GROUP PRODUCT CATALOGUE

Our philosophy: customer service first, second & third — quick response to requests for quote, same day / next day service on UK deliveries, long term relationships, and generally making the extra effort — all to earn our motto of 'Global Reach, Personal Touch'.

Stock range: we hold stocks of the material below and offer a sourcing service to find what you want if it is not in our range. It seems to be appreciated by our UK, European and Worldwide fastener and valve manufacturers and specialist oil & gas sector machinist customer base as it adds up to about 1/3^d of our turnover.

All our material is of European or USA origin, from mills that have certified they do not source conflict minerals in compliance with the Dodd—Frank Wall Street Reform and Consumer Protection Act 2010.

Product Range

High Temperature Power Generation Bolting Steel		
Alloy 286/ 660	A precipitation hardened austenitic iron based steel, suitable for fasteners and other applications requiring high strength, good corrosion resistance at temperatures up to 700 °C, and a high degree of uniformity in developing full strength.	We supply only air melt material to ASTM A453 GR 660, ASTM A653 (Type 1) and UNS S66286. Material is supplied to ASTM A453 with stress rupture tests to conform to 660 grade A and to meet grade D requirements (giving a guaranteed yield strength of 105 ksi minimum).
BMG-AT41	Our Alloy T41 bar is produced to a demanding specification specifically for high temperature applications in coal, and now nuclear, power stations. Produced via the ingot cast route and heat treated in accordance with BSEN 10269: 1 999, (20CrMoVTiB4-10) with appropriate sub-critical annealing, hardening and tempering cycles. Every bar is subject to spectroscopy analysis, and every bar is Circograph and Ultrasonically tested to DIN EN 10308 03/12 Class 4. Our material has exceptional creep resistance and a fine grain size verified by an independent test house.	Our material meets or exceeds the following industry standard specifications: National - BS 1506 681-820, BS 4882 B16A, BSEN 10269 1999, Material Number 1.7729, CEGB - GDCD TD2 ISS2, CEGB 0259604/82 041). GEC Turbine Generators Ltd - spec 30/227 ISS 10/83, Siemens -AG spec TLV 9185 01, Siemens UK 221 Other: Durehete [™] 1055

+44 (0)114 232 9241  

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Special / Custom Products		
CW112C	A copper-nickel-silicon alloy for specialist fasteners, high performance rod bearings and main bearing applications. Very suitable where applications require electrical conductivity, strength & relaxation behaviour.	We can offer 2" or 2 1/4" round bar
Bespoke Forging and Pipework Fittings	We supply bespoke forgings as black or finished machined shapes as well as finished product such as flanges. We complement the latter with a wide variety of fittings for gas and fluid pipework system components — tube, pipe, bar and plate.	
Sourcing Service	We use our extensive industry knowledge and contacts to locate products/grades/sizes that customers prefer us to source for them	Examples include: 15/5PH, 304, 321, 410, 4130, 4140, 4142, 416, 420, 431, 440C, 60, 600, 725, 800H/HT, 904, 925, ALLOY 20, 82, 87, BS1387, BS2870, C22, C276, C61400, C71500, C95800, CZ121, D5, F22, F44, F51, F55, JETHETE, NITRONIC 50, PN102, PH13 8MO, SW342 and many more.
Corrosion Resistance Alloys		
MP35N	A nickel-cobalt-chrome-molybdenum alloy which provides a unique combination of properties including ultra-high strength, toughness, ductility, and outstanding corrosion resistance.	We stock the cold drawn and aged variety to meet the requirements of NACE MR 0175, and can also source the AMS 5844 high strength variety with capability to meet AMS 5845
C276	C276 is resistant to pitting, stress corrosion cracking, and crevice corrosion in a wide range of chemical environments, particularly in chloride gas, hypochlorite and chlorine dioxide solutions.	We stock bar material in the size range: 10 mm dia to 250 mm dia. Standards: ASTM B574, UNS N10276, Werkstoffe 2.4819

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<p>UNS 32760 F55 condition S to meet FG, FLT & FLT+</p>	<p>Super Duplex Alloy F55 has excellent corrosion resistance and very good resistance to pitting and crevice corrosion in seawater and other chloride containing environments, especially where critical pitting temperatures in excess of 50 °C are required. Our specialism is supplying F55 to tolerate in low temperature environments.</p>	<p>We supply F55 to ASTM A276 either as solution treated (condition A) or as cold worked (condition S). We also offer the latter with charpy impact test results meeting FG and FLT requirements, as well as our more demanding specification (FLT+ tested at -101 °C with single minimum 35 Joules, average over 3 tests of 45 Joules minimum).</p>
<p>Alloy 718</p>	<p>A precipitation hardenable nickel chromium alloy, with exceptionally high yield, good corrosion resistance, tensile and creep rupture properties at temperatures up to 700 °C (1300F).</p>	<p>Our stock is bought to meet API 6A 718 and NACE requirements and meets most application uses for the oil industry to maximise resistance to stress corrosion cracking or treated to give maximum strength, high creep resistance and weldability.</p>
<p>Alloy 625</p>	<p>This metal gives high strength (from room temperature to 816 °C), ease of fabrication, and excellent corrosion resistance.</p> <p>It is particularly useful in situations where oxidation resistance and avoidance of pitting is required in the annealed condition, it is fully austenitic and is suitable for machining.</p>	<p>We stock Alloy 625 in the annealed condition to provide good strength and hardness. Our material can be released to the following specifications: ASTM 8446-03 Grade 1, UNS N06625 GRADE 1/DIN 2.4856, AMS 5666 REV F, BS3076 1989 NA21, NACE MR0175 (ISO 151563, latest version). We can also convert to ASTM B446-03 Grade 2.</p>
<p>Alloy K500</p>	<p>A nickel-copper alloy, precipitation hardenable through additions of aluminium and titanium.</p> <p>We supply Alloy K500 material in cold, hot worked and aged to offer mechanical properties: sub-zero temperatures up to about 480 °C, corrosion resistance in both marine and chemical environments ·</p>	<p>We supply Alloy K500 material in both the cold worked and hot worked and aged condition to the following specifications: BS 3076-89 NA18, UNS N05500, ASTM B865-04, QQN-286, NACE MR0175/ISO 15156 -3 2003</p>

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Alloy 825	An austenitic nickel-iron-chromium alloy with additions of copper, molybdenum, and titanium stabilised to resist pitting and intergranular attack. It is highly suitable where required properties include good resistance to stress corrosion cracking, pitting, and crevice corrosion.	We supply round bar to the full range of the following specifications: ASTM B425, UNS N008825, BS ISO 3076 NA16, NACE MR0175/ISO 15156-3, Werkstoffe 2.4858 We can supply material in the hot worked annealed and peeled or annealed and cold drawn.
17/4 PH	A precipitation hardening martensitic stainless steel. The Copper and Niobium/Columbium content gives this grade high strength, good hardness and modest corrosion resistance properties. Requires an age hardening to achieve the mechanical properties required by ASTM A564 without danger of cracking or distortion.	We stock material to meet the following specifications: ASTM A564 type 630, AMS 5604, UNS S17400, EURONORM 1_4542 X5CrNiCuNb 16-4, AFNOR Z5 CNU 17-4PH, DIN 1 4542, ASTM A484. We also offer 17-4 PH to 1150D double aged to provide higher tensile strengths.
HTS	High Tensile Stainless - cold drawn stainless grades 304 and 316 to meet the requirements of bolting specifications: A2-70, A2-80, and B8) (304) and A4-70. A4-80 and B8M Class 2 (316). Provides higher strength than unworked stainless	Material is produced to meet EN ISO 3506-1 (and associated AKER & FMC specifications) and ASTM A193 bolting specifications.
BroderNab 22 (C63200 to TQ-50)	A copper-nickel-aluminium bronze material providing high strength and hardness, good anti-friction and corrosion resistance. It resists scaling and oxidation at elevated temperatures and is used extensively for fasteners, and marine components — bearing cages, vales and valve stems, shafts, cams and sea water components.	Material is offered to meet ASTM B150: C63200 TQ-50 (Quench hardened & temper annealed)



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BMG-HSCN	Our special high strength copper nickel that gives outstanding corrosion resistance in marine environments (better than 90/10 Cu-Ni) and stress corrosion in ammonia / sulphide environments.	Complies with specifications DTD900/4805, C72400, 2.1504, CuNi14A13.
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We also carry lower volume stocks of stainless (316, 400), duplex, super duplex (F44, F51, F53, F65), alloy 600, alloy 20, LF2, C63000, C70600, CA104, NES833, Nimonic 80a, Nimonic 90, Nitronic 50, and Titanium (grade 2 & 5).

For further enquiries, please don't hesitate to call.

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