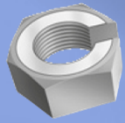


CLARKWOOD ENGINEERING LIMITED



Your Special is Our Standard

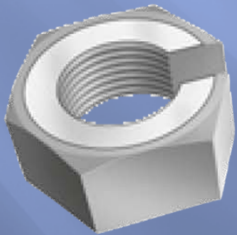
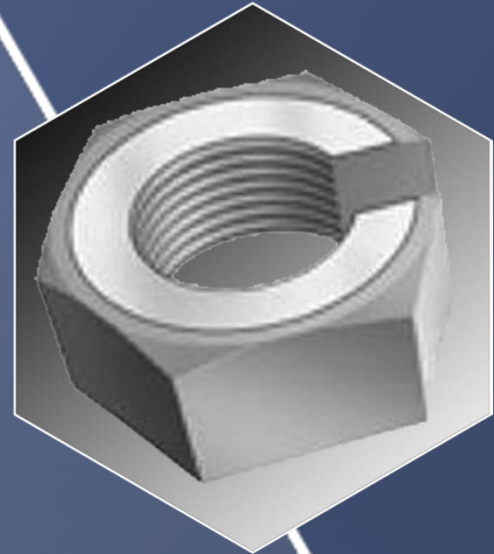
High-integrity fastener solutions



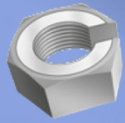
Clarkwood Group



Rolevet

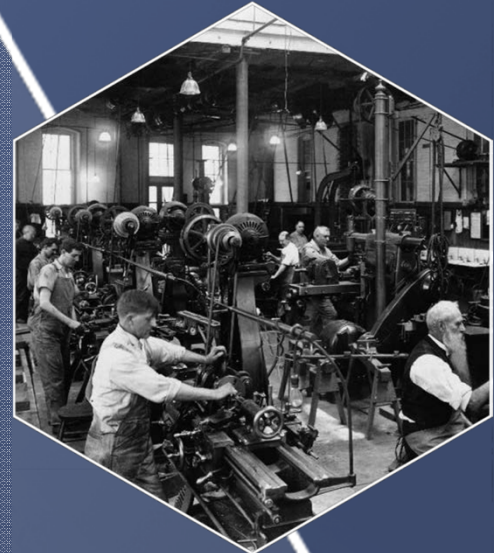


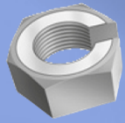
CLARKWOOD ENGINEERING
LIMITED



History

- 1974 Established in Wolverhampton and family-owned ever since
- 1979 Rapid growth required the move from Pendeford to the Blakenhall Industrial Estate
- 1999 ISO 2770 / ISO 9001 Approval
- 2000 Expansion of the business and moving from 200m² to a 3000m² premises as a result of fast transition from a subcontracting job-shop to a direct supplier to the oil and gas industry.
- 2009 Award "Best Supplier Delivery Performance" by Wärtsilä UK
- 2012 Express & Star Business Awards
- 2010 Start of the development of a bespoke range of load monitoring and tensioning systems (TenScon, TenFi, TenMec)
- 2015 API Approval
- 2017 Acquisition of Rolevet Ltd.
- 2018 Launch of the TenCon product range





Markets & Industries



Defence



Oil & Gas



Marine



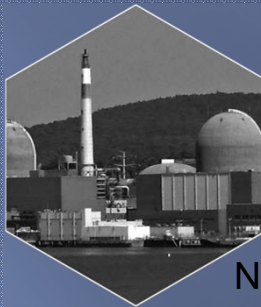
Chemical



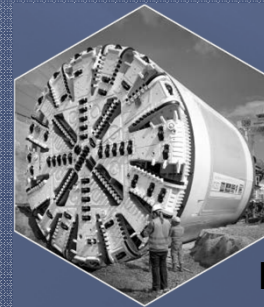
Power Generation



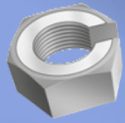
Offshore



Nuclear



Heavy Engineering



Manufacturing

Centreless
Grinding



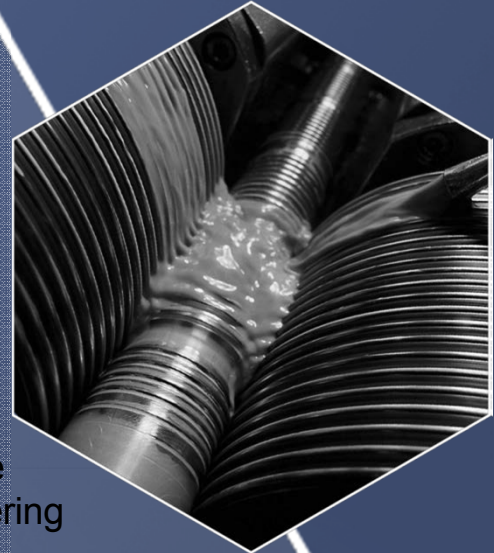
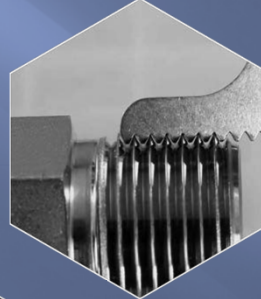
Machining &
CNC milling



Heat
Treatment



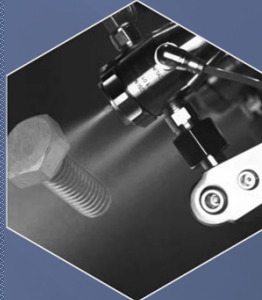
Reverse
Engineering



Hot Forging



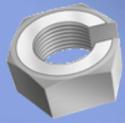
Thread Rolling



Coating / Plating



Failure Investigation



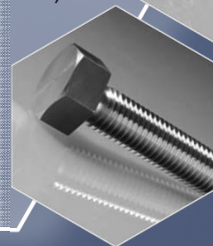
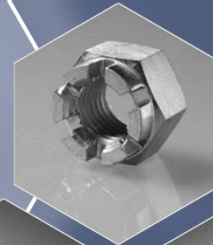
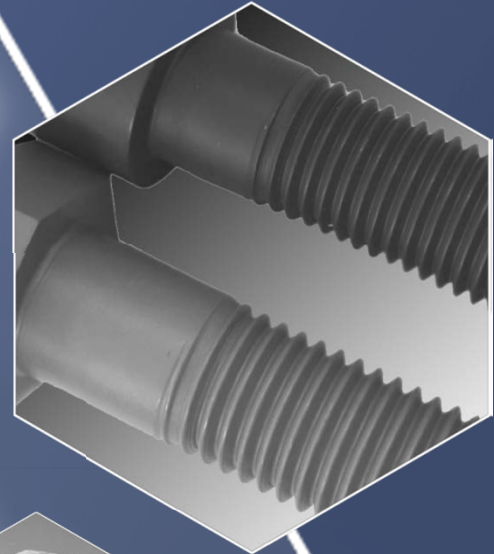
Products

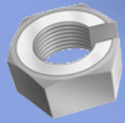
Thread forms

UNC	Metric course	BSW	Acme / Trapezoidal
UNF	Metric fine	BSF	
UN8			
UNS			

Products

Hexagon headed bolts	Setscrews
Socket head cap screws	Shoulder screws
Flanged 12-point bolts	Hexagon flange bolts
Countersunk screws	Socket and slotted grub screws
Stud bolts	Tap-end studs
Square heads carriage bolts	
Different types of nuts (hexagon, dome, castle, thin, Nyloc, cap, etc)	
Washers (flat, spring, etc)	
Other fastener types on request	
Bespoke turned parts / assemblies	





Ancillary Processes & Testing

Heat treatment

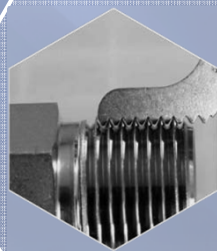
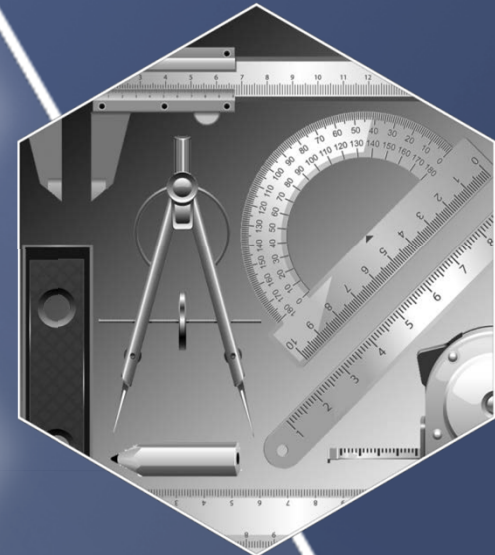
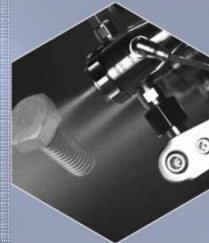
Quenching and tempering
Normalising
Case Hardening
Nitriding

Solution Annealing
Thru Hardening
Precipitation Hardening

Coating

Zinc
Hot Dip Galv
Sherardizing
Xylar
Cadmium

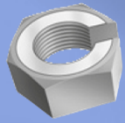
Zinc Nickel
Phosphate
PTFE / Xylan / Teflon
Molycote
Black Oxide



Testing

Mechanical Properties
Charpy Notch Tests
Dye Penetration Test
Ultrasonic Test
Impact Test

Tensile Tests (Elevated)
PMI Positive Material Identification
MPI Magnetic Particle Test
Chemical Analysis
Micro, Macrostructure & corrosion



Capabilities

Production Capabilities

Hot forging presses

2 centreless grinding machines

5 sliding head machine centres

4 CNC machining centres

8 CNC lathes

4 thread rolling centres

2 vertical milling centres

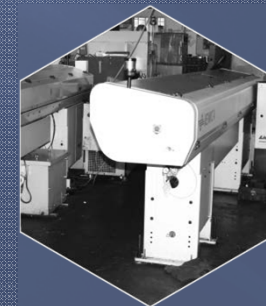
Broaching press

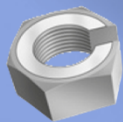
Manual capstans

Inspection Capabilities

Faro co-ordinate measurement machine

Keyence image measurement system





Materials

Carbon & Alloy Steel

BS 970 230M07	(EN1A)	BS 970 080M40	(EN8)
BS 970 605M36	(EN16)	BS 970 709M40	(EN19)
BS 970 817M40	(EN24)	BS 970 826M40	(EN22)
BS 970 655M13	(EN36)		

Stainless Steel

303	304	310
316	316L	317
321	347	410
420	431	904L (UranusB6)*
A2	A4	
A4-70	A4-80	AISI 660

Non-Ferrous

Aluminium Bronze	Nibron*
Manganese Bronze	Copper
Phosphor Bronze	Marinel*
Cupro-Nickel	Hiduron*
Aluminium	



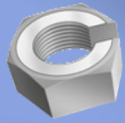
Exotics and High Nickel

Inconel 625*	Hastelloy C22*	Monel40*
Inconel 718*	Hastelloy C276*	MonelK500*
Inconel 825*	Nitronic 50, 60*	
Inconel 925*	Titanium Grade 2, 5*	

Duplex / Super-Duplex

32760 (Zeron100*)
32750 (SAF 2507*)
32550 (Ferralium*)
31803 (1.4462)

*Trade Marked raw material



Materials

Heat Resisting Grades

Durehete 900*	Nimonic 80A*	Jethete*
Durehete 950*	Nimonic 90*	Essehete*
Durehete 1055*		

Precipitation Hardened Stainless Steels

17/4ph (630)	FV520B
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ASTM Bolt Grades

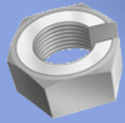
A193 / A320	
B6	B8
B7	B8M
B7M	B8T
L7	B16
L7M	L43

ASTM Nut Grades

A194	
2H	8
2HM	8A
4	8C
6	8M
7	8MA
7M	8T



*Trade Marked raw material



Quality

High-Integrity Products and Services

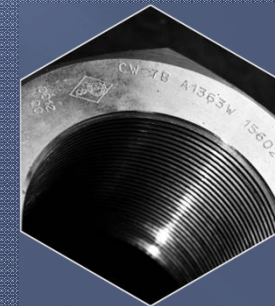
Clarkwood Engineering is approved to BS EN ISO 9001,

Clarkwood's quality system coupled with its high level of engineering expertise guarantees that the highest standards of quality control are maintained throughout all production stages.



Certifications

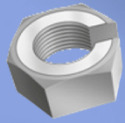
Certificate of conformity
Certificates to BS EN 10204 2.1, 2.2, 3.1
Independent inspection to BS EN 10204 3.2
Inspection bodies LRQA, BV, TUV, DNV, ABS





Bespoke OEM vendor approvals





Development

Tensioning systems

In addition to the manufacture of fasteners, Clarkwood Engineering specialises in the design and manufacture of controlled advanced tightening and bolt load controlling devices.



TenScon



Mechanical tension control

TenFi

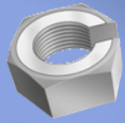


Wi-Fi data transmission device

TenScon + TenFi



TenScon application with TenFi continuous tension monitoring

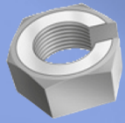


References

olivervalves

SIEMENS





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www.clarkwood.co.uk

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