

Nickel Alloys

Coil, Foil, Sheet & Wire

Commercially Pure
Nickel-Copper Alloys
Nickel-Chromium Alloys
Nickel-Chromium-Iron Alloys
Iron-Nickel-Chromium Alloys
Controlled Expansion Alloys

Fast Turnaround Processing



Low Width
Thickness Ratio
3:1 unique to the
industry (normal
minimum is 8:1)

Over 75 years Experience



Company Information

Quality & Approvals

03
Products

O4.
Processing

05
Stock Range



About Us

The Knight Group is a family owned business that has built a reputation for providing the highest quality products and solutions to global manufacturers since 1940. We are now one of the largest Precision Strip Stockholding and Processing facilities in Europe.

Comprised of Knight Strip Metals Ltd (KSM), with production facilities in the UK and Precision Metals EU (PM) in Belgium, the Knight Group is a multi-metal stockist and processor, providing coil, strip and wire across 6 continents.

Our reputation for quality, innovation and reliability, has led to us being the favoured supplier across a wide range of sectors and our continued growth. Whilst we have an impressive existing operation, our commitment to investing in further processing capabilities, expanding our product ranges and developing the expertise of our team, ensures the continued expansion of the Knight Group.

We offer a comprehensive range of precision strip and wire, stocking one of the biggest ranges in Europe, including: Stainless Steel, Nickel Alloys, Titanium Alloys, Aluminium Alloys, Copper Alloys, Mild Steel and Clad and Plated Metals. We have established exclusive agreements with a number of mills to offer specialist and bespoke materials.

Our Key Benefits

Our People

At the heart of any business is people. At the Knight Group we have developed a dedicated team of people with a valued wealth of knowledge and experience within the metals industry. No matter what your metal needs are, our team will provide you with individual customer support and the best customer experience in the industry.

Products

We offer a comprehensive range of precision strip and wire, stocking one of the biggest ranges in Europe. We maintain a stock 2500 individual items of the most popular materials, adapting to suit our customers production needs. With established exclusive agreements with a number of mills to offer specialist and bespoke material, we can source most materials including those outside of our standard range.

Quality

Being able to supply high quality materials, reliably and ethically sourced is key to our business and one of the reasons we are a favoured supplier of manufacturers across the globe. Our materials are fully traceable and Certificates of Conformity can be supplied on request or downloaded from our website.

Extensive Processing Capabilities

We provide bespoke processing services to help reduce our customers costs and manufacturing times. We can supply you with material cut and finished to your specifications and production ready delivered.

Competitive Pricing

We know two of the key factors in purchasing decisions are quality and cost. We have established partnerships with key mills across the globe, and as one of the largest suppliers in Europe, we can negotiate the best price for material, meaning you don't have to compromise quality for cost.

AVAILABLE AS
FOIL, COIL, SHEET AND WIRE
STAINLESS STEEL ALLOYS
TITANIUM ALLOYS
NICKEL ALLOYS
ALUMINIUM ALLOYS
CLAD ALUMINIUM
COPPER ALLOYS
MILD STEEL
CLAD AND PLATED METALS

Global Sourcing and Distribution

Thanks to our global exports network of freight providers, you can choose from air, land or sea freight so you can have your material where you want, when you want. We deliver to over 61 countries around the globe and each year that number grows. We have preferred carriers who can offer short lead times on most products and custom packing solutions to ensure your materials arrive safely and on time, wherever in the world you need them.



"Expertise and Experience Combined"

Our ongoing successful partnerships can be attributed to the specialist knowledge and expertise and the ability to understand customers' materials problems and apply our resources to find the appropriate solution. We continually invest in our sales and purchasing teams, building upon their experience with ongoing training and product knowledge support.

Our focus on developing partnerships with both our customer and supplier base have led to reducing costs and maximising efficiency in both directions, without compromising on quality or lead times. Through working closely together, and using innovation, experience and expertise, allows us to tailor make solutions for your individual needs.

With a diverse global customer base, the Knight Group supply materials to manufacturers across multiple sectors including: Aerospace, Automotive, Construction, Cryogenic, Defence, Energy, Oil and Gas, Telecommunications, Photo and Laser Etching, Medical and Pharmaceutical, Chemical and Precision Engineering.

Our Key Sectors



Automotive



Chemical and Photo Etch



Renewable Energy





Petrochemical, Oil and Gas



Marine



Precision Stamping & Springs



Medical

Our History

ESTABLISHED

E.A. Knight & Sons, started as family metals business in North London, supplying manufactures across the UK.

1940

EXPANSION Adapting to the

1958

of an expanding customer base, the business is relocated to a larger, combined office, warehouse and processing facility in Potters Bar, Hertfordshire

RELOCATION

With new processing technologies and materials available, we expand our range of precision strip metal stock, and move to a purpose built combined warehouse processing and offices facility in

EXPANSION

1975

Precision Metals EU further support and

REDEVELOPMENT

The Potters Bar site is redeveloped to accommodate additional machinery and stock.

ACQUISITION

1999

Knight Group acquired slitting machine manufacturer and metals processing company. Charles Harbage. The increase in capability makes the Knight Group one of the largest independent precision strip processors in Europe

EXPANSION

Our Processing and warehouse facility is relocated to Saltley, accommodating additional stock lines and machinery and our growing team.

2000

Today

EXPANSION

Today we supply over 61 countries. As one of the largest independent Precision Strip and Wire Stock holding and Processing suppliers in Europe, we continue to invest in the skills and expertise of our team, extending out stock range and our facilities.

Potters Bar. growing metal needs

was opened to provide stock holding facilities to

1985

our growing European customer base.



Approvals



Customers purchasing decisions are not driven solely by price, but factor in quality, reliability and increasingly, ethical and environmental concerns. With growing pressures for transparency of practices, the Knight Group are proud to hold multiple approvals and accreditations, granted by national and international authorities, sector manufacturers and agencies. We continue to expand our range of approvals and accreditations in line with the needs of customers.

Our memberships of a number of key institutions, including the British Stainless Steel Association (BSSA), offer further assurance of our commitment to promoting manufacturing, whilst working to the highest standards of quality and integrity. All of our approvals are available to view and download from our website www.knight-group.co.uk

We hold a number of Approvals Including:

British Standard Approvals

- BS EN ISO 9001, 9120 No. FM 02114
- BS EN ISO 9001 No. FM 611455

Customer Approvals

- · Rolls-Royce: Approval No. 01679
- Rolls-Royce Deutchland No. 118990 / 02
- Airbus UK: Approval No.20099 and 228990
- BAE Systems Regional Aircraft: Approval No. RALOA/00254/2
- BAE Systems: Approval No. BAE/AG/20384/MAA Airbus UK: Approval No.20099 and 228990
- Westland Helicopters: Approval No. SQA / V00246
- · Safran DK6000
- Hawker Beachcraft Approval HBIFSAS/PART2/0595
- UTC Aerospace Systems/ HS Marston Aerospace Limited Approval Certificate AS 132
- · Spirit Aero Approval Certificate No: SPIRIT1298
- Meggitt Certificate: MQAG/2012/MCSD/MCSC/D/115

Specialist Accreditations

- EcoVadis Silver Award
- Forestry Commission: Wood Packaging Certificate Number FC1051

For the most up to date list of our approvals and accreditations, please see our website for details.

Quality





Our key objective is to provide our customers complete assurance and satisfaction in the quality of our products and services. We are the favoured supplier of manufacturers across the globe, owing to the reliable quality of the products and services our customers receive and their continued confidence that our competitive cost does not compromise quality.

Our companies work to a Quality Management System, as defined in ISO 9001/9120, and approved by the BSI. We work in partnership with the BSI, who carry out regular audits to ensure compliance with these standards and that we are operating with efficiency and accountability at all times.

Working within the framework of ISO 9001 and ISO 9120, our quality system meets or exceeds the criteria. We review our processes regularly to ensure an efficient and robust process is in place at all times, with necessary support and resources available. All of the Knight Group employees receive regular training to maintain familiarity and adherence to our Quality Management System. The commitment from our employees ensures the supply and processing of all material, meets the standards set. As a result, we are consistently able to comply with customers' demands, delivering quality products and processing.

To facilitate fast turnaround times, we offer in-house tensile, hardness and chemical analysis testing. We can also supply fully traceable records for our materials by request and Certificates of Conformity are issued as standard when materials are supplied. For further assurance of our integrity and longevity, we are long standing members of a number of institutions including the British Stainless Steel Association (BSSA), Institute of Spring Technology (IST), Midlands Aerospace Association (MAA) and the Photo Chemical Machining Institute (PCMI).

The Knight Group at all times complies with statutory and regulatory requirements. Additionally, we conduct our business in strict compliance with all applicable domestic and international legal standards. We strive to ensure business ethics are practiced with particular emphasis on free competition and rejection of any form of corruption.





Nickel Alloys

Nickel is a very versatile metal, with ability to withstand a wide variety of severe operating conditions, including: corrosive environments, high temperatures, high stresses, and combinations of these factors. This has resulted in the extensive commercial use of both Nickel strip and Nickel-base alloy strip and although very useful in its commercially pure forms, it is its ability to alloy with a range of metals, which has brought it to the forefront of modern metallurgy. A range of highly alloyed materials has developed to provide high strength and excellent corrosion resistance, particularly at elevated temperatures, to meet specific requirements in many different types of environment.

Commercially Pure Nickels

Nickel-Copper Alloys

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Nickel-Chromium & Nickel-Chromium-Iron Alloys

Iron-Nickel-Chromium Alloys (800 Series)

Controlled Expansion Alloys

These materials are characterised by high density, offering low electrical resistivity, high thermal conductivity and high magnetic properties. In addition, commercially pure Nickel strip offers excellent corrosion resistance in many chemical media, especially some strong alkalis. Commercially pure Nickel strip cannot be hardened by heat treatment. However, metal strip can be produced by cold rolling to a range of strengths.

Nickel-Copper alloys have been found to possess excellent corrosion resistance reducing chemical environments and in seawater, i.e. marine environments, where they are commonly used. They have good ductility and can be readily fabricated.

This group of alloys led the way to higher strength and resistance to elevated temperatures. Initially developed for use in the chemical processing industry where carburising environments and elevated temperatures were too severe for Stainless Steels.

Offering good oxidation resistance, these alloys have found extensive use in the petrochemical processing industry. The 800 series offer excellent strength at high temperature.

A range of alloys developed for use in conjunction with the lighting industry where glass to metal seals are very important, they exhibit good thermal conductivity.



AVAILABLE GRADES

Commercially Pure Nickels 200, 201

Nickel-Copper Alloys

Nickel-Chromium & Nickel-Chromium-Iron Alloys

alloy K500, alloy X, C22, alloy C2000, alloy 600, alloy 601, alloy 625, alloy C 276, alloy 718, alloy X750

Iron-Nickel-Chromium Alloys (800 Series) alloy 800, alloy 825

Controlled Expansion Alloys 29/18

Types



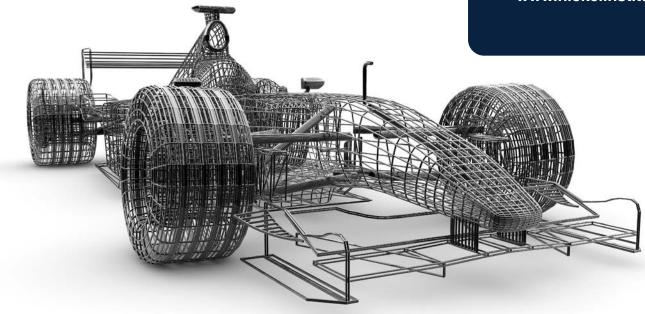
NICKEL ALLOYS STOCK RANGE												
COIL STO	CK RANGE	WIRE STOCK RANGE										
Thickness (mm)	Width (mm)	Round	Shaped									
COMMERCIALLY PURE NICKELS												
0.025 - 2.5	2 - 1000	0.1 – 10.00 mm dia	Upto 45 mm2 area									
NICKEL-COPPER ALLOYS												
0.025 - 2.5	2 - 1000	0.1 – 10.00 mm dia	Upto 45 mm2 area									
NICKE	NICKEL-CHROMIUM & NICKEL-CHROMIUM-IRON ALLOYS											
0.025 - 2.5	2 - 1000	0.1 – 10.00 mm dia	Upto 45 mm2 area									
IF	RON-NICKEL-CHROMIU	IM ALLOYS (800 SERIE	S)									
0.025 - 2.5	2 - 1000	0.1 – 10.00 mm dia	Upto 45 mm2 area									
	CONTROLLED EX	PANSION ALLOYS										
0.025 - 2.5	3 - 610	0.1 – 10.00 mm dia Upto 45 mm2 area										
(Other specifications can be Please contact us wit	ne supplied upon request th your requirements.	i.									





"Nickel is widely used in over 300,000 products for consumer, industrial, military, transport, aerospace, marine and architectural applications"

www.nickelinstitute.org





Nickel Alloys Features

_	NICKEL ALLOYS FEATURES												
_						NICK	EL ALLOYS FEATURES						
_	MMON IAME	TRADE MARKED METALS	EURO. NAME	ASTM	ASTM NAME AISI UNS		Key Features	Key Markets	Applications				
					(СОММ	ERCIALLY PURE NICKEL						
all	loy 200	-	NA 11	B 162	N02200		Commercially pure Nickel with excellent mechanical properties and excellent corrosion resistance, particularly to caustic alkalis and de-aerated acid. High thermal and electrical conductivity. Can be shaped through all hot and cold working practices.	Aerospace, Defence, Food and Beverage, Automotive, Chemical	Bursting Discs, Explosion Panels, Battery Contacts, Food Processing, Chemical Containers, Aerospace and Defence Components				
all	loy 201	-	NA12	B 162	N02201	5553	Low carbon version of commercially pure alloy 200. Generally specified for temperature above 315°C. It does not suffer embrittlement due to the low carbon content. It is particularly suited for spinning and cold forming.	pure alloy 200. Generally specified for temperature above 315°C. It does not suffer embrittlement due to the low carbon content. It is particularly suited for spinning and					
						NIC	KEL-COPPER ALLOY						
all	loy 400	MONEL® alloy 400*	NA13	B 127	N04400	4544	A solid-solution alloy only hardenable through cold-working. High strength and toughness over a large temperature range. Excellent corrosion resistance, particularly in sea water.	Aerospace, Oil & Gas, Marine, Chemical	Bellows, Heat Exchangers, Propellers, Shafts, Fasteners, Pumps, Valves				
				NICKE	L-CHR	MUIMC	& NICKEL-CHROMIUM-IF	RON ALLOYS					
allo	y K-500	MONEL® alloy K500*	NA18	-	N05500	4676	Precipitation hardened non- magnetic alloy. Greater strength and hardness than Monel 400, whilst maintaining excellent corrosion resistance. High fatigue strength in seawater.	Oil & Gas, Chemical, Power Generation, Marine, Medical, Electronics	Propellers, Fasteners, Gyroscopes, Medical blades, Pump Shafts, Drill Collars				
а	ılloy X	-	-	B 435	N06002	5536	Additional amounts of chromium and iron provide strength and resistance to corrosion and oxidisation up to 1170°C	Aerospace, Automotive, Chemical,	Aerospace components, Honeycomb Seals, Combustion Liners, Turbine Engine Components				
44	C22	HASTELLOY® C22®**	-	B 575	N06022	-	A versatile Nickel Alloy with superior corrosion resistance and weldability	Chemical, Nuclear, Environment & Energy Engineering, Oil & Gas, Waste Management	Expansion Bellows, Industrial equipment, Chemical Processing.				
	-	NIMONIC® alloy 75*	-	-	N06075	-	Medium strength at high operating temperatures. Good Weldability. Due to good ductility and malleability in the annealed condition it can be used in cold deformation, large reductions can be made without rupture.	Aerospace, Thermal Engineering	Turbine blades, Furnace Components, Heat treatment equipment				
allo	y C2000	HASTELLOY® alloy C 2000**	-	B 575	N06200	-	The addition of Copper enables resistance to an extensive range of corrosive chemicals, including many acids. Easy to form and weld. Excellent resistance to stress corrosion cracking.	Chemical	Heat Exchangers, Reactors				
all	loy 600	INCONEL® alloy 600*	NA14	B 168	N06600	5540	Resists oxidation up to 1200°C, good corrosion resistance. High Nickel content makes it highly resistant to chloride-ion stress corrosion cracking. It is not Precipitation Hardenable. Can be hardened and strengthened through cold work. Can operate from cryogenic temperatures to above 1095°C. Readily weldable by conventional processes.	Chemical, Nuclear, Aerospace, Heat Treating, Automotive, Oil & Gas, Environment & Energy Engineering	Flexible Tubing, Furnace equipment, Insulation blankets, Chemical and Food Processing, Seals				

					100	(M)		
		NICKE	L-CHR	OMIUM	& NIC	KEL-CHROMIUM-IRON A	LLOYS CONTINUED	
alloy 601	INCONEL® alloy 601*	-	B 168	N06601	5870	Lower Nickel content than alloy 600, with Aluminium and silicon additions for exceptional resistance to oxidation at high temperatures. Good mechanical strength, easily formed, machined and welded. It has high tensile strength at room temperature, and retains much of it at elevated temperatures. Alloy 601 is not embrittled by long exposures to elevated temperatures, retaining good impact strength. Good creeprupture strength.	Chemical, Thermal Engineering, Aerospace, Power Generation, Petrochemical, Automotive	Petrochemical Processing Equipment, Furnace Equipment, Gas Turbine Components, Gaskets, Condenser Tubes, Insulating Cans
alloy 625	INCONEL® alloy 625*	NA21	B 443	N06625	5599	High temperature, high strength alloy, tougher than alloy 600 due to increased Molybdenum and Niobium content. Good Creep and Rupture strength. Higher oxidisation resistance and excellent resistance to aqueous corrosion, chloride pitting and crevice corrosion cracking. It is resistant to caustics and seawater as well as being immune to chloride ion stress corrosion cracking. Excellent weldability.	alloy, tougher than alloy 600 due to increased Molybdenum and Niobium content. Good Creep and Rupture strength. Higher kidisation resistance and excellent resistance to aqueous corrosion, chloride pitting and crevice corrosion cracking. It is resistant to caustics and seawater as well as being immune to chloride ion ress corrosion cracking. Excellent	
-	HAYNES® 214®**	-	-	N07214	-	Excellent corrosion and oxidisation resistance at high temperatures. Ideally suited to high temperature, low stress oxidizing environments.	Aerospace, Automotive, Industrial Heating	Honeycomb, Seals, Catalytic Converters, Flame Hoods, Rotary Calciners
alloy C 276	HASTELLOY® C 276®**	-	-	N10276	-	Outstanding universal corrosion resistance. High Chromium and Molybdenum contents protect against oxidising and nonoxidising acids.	Chemical, Marine, Aerospace, Oil & Gas, Environment & Energy Engineering, Pharmaceutical	Diaphragms, Marine Engineering, Chemical Processing, Pulp and Paper Production, Ducts, Heat Exchangers
alloy 718	INCONEL® alloy 718*	-	B 670	N07718	5596	Precipitation hardened, age hardenable, high strength alloy. Good corrosion resistance and highly resistant to chloride and sulfur stress corrosion cracking. Titanium and niobium additions overcome strain age cracking problems in welding to provide good weldability.	Oil & Gas, Nuclear, Aerospace, Defense, Automotive	High Temperature Springs, Bellows, Seals, Valves, Fasteners, Mandrels, Gaskets, Clamps
alloy X750	INCONEL® alloy X750*	-	B 637	N07750	5598	Precipitation hardenable, excellent strength and corrosion resistance up to 704°C and useful strength up to 982°C and excellent relaxation resistance. Ideal for springs operating at high temperatures.	Oil & Gas, Nuclear, Aerospace, Power Generation, Automotive	High Temperature Springs, Diaphragms, Gas Turbines, Jet Engines
				IR	ON-NI	CKEL-CHROMIUM ALLOY	'S	
-	INCOLOY® alloy 800*	NA15	B 409	N08800	5871	Excellent corrosion resistance, heat resistance, strength and stability at high temperatures. Resists stress corrosion cracking and oxidisation at high temperatures. Used in applications in which resistance to Stress Corrosion Cracking is required. 800H and 800HT alloys are available with a greater resistance to stress rupture and creep.	Chemical, Thermal Engineering, Food and Beverage, Nuclear, Petrochemical	Electrical heating elements, Heat Exchangers, Furnace Equipment, Petrochemical Process Tubing, domestic appliances
-	INCOLOY® alloy 825*	NA16	-	N08825	-	Additional molybdenum for increased corrosion resistance over alloy 800. Resistant to oxidisation and reducing acids, particularly sulphuric, stress corrosion cracking and pitting.	Chemical, Petrochemical, Oil & Gas, Nuclear, Pollution Control	Tubing, Pipework in Petrochemical, Industry, Seals, Gaskets, Heat Exchangers
			GLAS	SS SE	LING	ALLOY (CONTROLLED E	XPANSION)	
29/18	-	-	-	K94610	- -	Controlled expansion alloy whose co-efficient of expansion decreases with rising temperature and matches the expansion rate of glass	Aerospace, Automotive, Electronics	Microwave Tubes, Transistors, Diodes, Hermetic Seals
Other spec	ifications supplie	d upon reque	st nlease	contact us	with your	requirements		

Other specifications supplied upon request, please contact us with your requirements.

* Trademark of Special Metals

** Trademark of Haynes International, Inc

Nickel Alloys Chemical Properties

ľ		_	_			NIC	KEL		VS CH	IEMIC	AL COI	MPOS	NOITI			-		_	
ı			ASTM	I NAME		Mo		LLO	10 01		CAL CH				ON %				
ı	COMMON NAME	EURO. NAME		UNS	AMS	Al	С	Со	Cr	Cu	Fe	Mn	Mo	Ni	P P	Si	S	Ti	Others
ł			Aloi	UNS		Al					JRE NI			INI		OI	3		Others
ı	alloy 200	NA 11	B 162	N02200		-	0.15	-	-	0.25	0.4	0.35	-	99.0 min	-	0.35	0.01	-	Mg 0.2
	alloy 201	NA12	B 162	N02201	5553	-	0.02	-	-	0.25	0.4	0.35	-	99.0 min	-	0.35	0.01	-	max -
ľ								NICK	EL-C	OPPER	RALLO	Υ							
	alloy 400	NA13	B 127	N04400	4544	-	0.3	-	-	28.0 - 34.0	2.5	2.0	-	63.0 min	-	0.50	0.024	-	Pb 0.005 max
ľ					NICK	EL-CI	HRON	IIUM 8	& NICI	(EL-C	HROM	IUM-II	RON A	LLOYS	6				
	alloy K500	NA18		N05500	4676	2.30 - 3.15	0.18	-	-	27.0 - 33.0	2.0	1.50	-	63.0 min	-	0.50	0.01	0.35 - 0.85	-
	alloy X		B 435	N06002	5536	-	0.05 - 0.15	0.5 - 2.5	20.5 - 23.0	0.5	17.0 - 20.0	1.00	8.0 - 10.0	Balance	0.04	1.00	0.03	0.15	W 0.2 - 1.0
	C22		B 575	N06022		-	0.015	2.5	20.0 - 22.5	-	2.0 - 6.0	0.50	12.5 - 14.5	Balance	0.02	0.08	0.02	-	W 2.5- 3.5 V 0.35 max
	alloy C2000		B 575	N06200		0.50	0.01	2.0	22.0 - 24.0	1.30 - 1.90	3.0	0.50	15.0 - 17.0	Balance	0.025	0.08	0.01	-	
	alloy 600	NA14	B 168	N06600	5540	-	0.15	-	14.0 - 17.0	0.50	6.0 - 10.0	1.00	-	72.0 min	-	0.50	0.015	-	-
	alloy 601	-	B 168	N06601	5870	1.0 - 1.70	0.10	-	21.0 - 25.0	1.00 max	Balance	1.00	-	58.0 - 63.0		0.50	0.015	-	-
	alloy 625	NA21	B 443	N06625	5599	0.40	0.10	1.00 max	20.0 - 23.0	-	5.0	0.50	8.0 - 10.0	58.0 min	0.015	0.50	0.015	0.40	Nb + Ta 3.15 - 4.15
á	alloy C 276			N10276		-	0.01	2.5	14.5 - 16.5	-	4.0 - 7.0	1.00	15.0 - 17.0	Balance	0.04	0.08	0.03	-	V 0.35 max W 3.0 - 4.5
	alloy 718		B 670	N07718	5596	0.20 - 0.80	0.08	1.0	17.0 - 21.0	0.30 max	Balance	0.35	2.80 - 3.30	50.0 - 55.0	0.015	0.35	0.015	0.65 - 1.15	Nb + Ta 4.75 - 5.50; B 0.006
	alloy X750	-	B 637	N07750	5598	0.40 - 1.00	0.08	1.00 max	14.0 - 17.0	0.50	5.0 - 9.0	1.00 max	-	70.0 min	-	0.50 max	0.01	2.25 - 2.75	Nb + Ta 0.70 - 1.20
							IRON	N-NIC	KEL-C	HRON	IIUM A	LLOY	'S						
	alloy 800	NA15	B 409	N08800	5871	0.15 - 0.60	0.10	-	19.0 - 23.0	0.75	Balance	1.50	-	30.0 - 35.0	0.035	1.00	0.015	0.1 - 0.60	AI + Ti 0.30-1.20
	alloy 825	NA16		N08825		0.20	0.05	-	19.5 - 23.5	1.50 - 3.00	Balance	1.00	2.5 - 3.5	38.0 - 46.0	-	0.50	0.03	0.60 - 1.20	-
					GL	ASS S	SEALI	NG A	LLOY	(CON	TROLL	ED E	XPANS	SION)					
į	29/18			K94610		0.1	0.02	17.0	0.2	0.2	Balance	0.5	0.2	29.0	-	0.2	-	0.10	Zr 0.10 max

Other specifications supplied upon request, please contact us with your requirements.

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Nickel Alloys Mechanical Properties

								0 00				
		NICKEL A	LLOYS FE	ATURES TYPI	CAL MECHANI	CAL PROPER	TIES					
COMMON	EURO.	ASTM	NAME	AMS	Proof Strength	Tensile	Elong. % Min. (50mm	Hardness May (VPN)				
NAME	NAME	AISI	UNS		0.2% Min (N/ mm2)	Strength	Gauge Length)	Max (VPN)				
			C	OMMERCIALLY	PURE NICKE	L						
alloy 200	NA 11	B 162	N02200	-	105	380	40	125				
alloy 201	NA12	B 162	N02201	5553	85	350	30	125				
				NICKEL-COP	PER ALLOY							
alloy 400	NA13	B 127	N04400	4544	195	480	35	125				
NICKEL-CHROMIUM & NICKEL-CHROMIUM-IRON ALLOYS												
alloy K500	NA18	-	N05500		Mechanica	l Properties available	on request					
alloy X	-	B 435	N06002	5536	310	723	35	230				
alloy C22	-	B 575	N06022		Mechanica	l Properties available	on request					
NIMONIC® alloy 75*	-	-	N06075		Mechanica	l Properties available	on request					
alloy C2000	1	B 575	N06200		Mechanica	l Properties available	on request					
alloy 600	NA14	B 168	N06600	5540	241	552	30	230				
alloy 601	-	B 168	N06601	5870	230	790	40	230				
alloy 625	NA21	B 443	N06625	5599	414	827	30	250				
HAYNES® 214®**	-	-	N07214		Mechanica	l Properties available	on request					
C 276	-	-	N10276	5750	280	690	40	230				
alloy 718	-	B 670	N07718	5596	552	965	30	270				
alloy X750	-	B 637	N07750	5598	280	700	40	250				
			IRO	N-NICKEL-CHF	ROMIUM ALLO	YS						
alloy 800	NA15	B 409	N08800	5871	210	520	30	200				
alloy 825	NA16	-	N08825	-	240	550	30	200				
		GL	ASS SEAL	ING ALLOY (C	ONTROLLED E	XPANSION)						
29/18	-	-	K94610	-	300	500	25	200				
Other specifications	s supplied upor	request, plea	se contact us w	th your requirements.								

Other specifications supplied upon rec
* Trademark of Special Metals
** Trademark of Haynes International,





Processing

YOUR MATERIAL YOUR WAY

The Knight Group are industry leaders in the supply and processing of strip, coil and wire, consistently exceeding expectations of quality, service and performance. With a number of accreditations, including BS EN ISO 9001 and BS EN AS 9120, we are the supplier of choice for global manufacturers where quality, reliability and lean manufacturing at the heart of their priorities. Most manufacturers are facing increasing demands for goods to be delivered with tighter time frames and even tighter margins. By selecting the processing to meet your specific needs, your material can be prepared and delivered to the exact size, length and finish you need, saving valuable production time and costs. Our processing is offered at a comprehensive price and with a flexibility to select only the services you need and want, giving you maximum versatility and minimum cost.

We have invested heavily in our bespoke machinery and training our established team of operators, so that we can offer a truly comprehensive range of processing to complement our extensive range of stocked material



Reduced Machine Downtime

Longer Production Runs

Reduced Storage and Scrap

Safer Material Handling

Reduced Production Time and Costs

TRAVERSE WINDING LINES

5 EDGE FINISHING LINES

8 CUT TO LENGTH LINES

27 RECOILING LINES

26 SLITTING LINES



Low Width Thickness Ratio 3:1 unique to the industry (normal minimum is 8:1)

Ability to offer Ultrafine Width Tolerances down to +/- 0.025mm (0.001")

Thicknesses 0.013mm to 6.5mm (0.0005" to 0.26")

Widths 0.64mm to 1100mm (0.025" to 43")

Packaging



BESPOKE PACKAGING

If you need bespoke material sizes and processing, then you probably want bespoke packaging as well. Thanks to our in house packaging design team, we can offer bespoke packaging solutions to protect your materials in transit. Whatever processing and finishing options you have chosen, your products will packaged to arrive safely and ready to use

You can choose to have strip material as pancake coils, traverse wound coil, flat blanks and sheets. Wire can be supplied as cut lengths, coils, formers or spools to suit your needs.









CHOOSE FROM OUR TRUSTED PARTNERS OR YOUR PREFERRED CARRIER

We firmly believe that all of our customers should be able to have your material, your way. Thanks to our global network of freight providers, you can choose from air, land or sea freight so you can have your material where you want, when you want.

There is also the option to arrange your own collection from our site in Birmingham, which can be organised through our sales team.



Standard Stock

WE ARE DRIVEN TO CONTINUE BUILDING A BETTER BUSINESS, BY WORKING CLOSELY WITH OUR CUSTOMERS TO GROW THEIRS.

Our materials and processing are carefully chosen to meet the exacting needs of manufacturers around the globe. We work alongside our suppliers to ensure we are at the forefront of material innovation, ensuring the availability of the highest quality material with the most competitive pricing. With over 2500 items in stock and sourcing of an extensive range or alloy grades, you can have your material, your way.

8 Cut To Length Lines
5 Edge Finishing Lines
27 Recoiling Lines
26 Slitting Lines
5 Traverse Winding Lines

	Standard Stock Range												
WE S	STOCK IN	I EXCESS	OF 2500	ITEMS, A	VAILABL	E AS CUT LENGTH	IS/ STRA	IGHTENE	o, coils,	FORMER	RS OR SPOOLS		
Mate	erial	Stainless Steel											
Tem	per			ANNE	ALED			HARD F	ROLLED		HARD ROLLED		
Euro _l No	pean orm			EN 1008	8-2:2005			EN 101	51:2002		EN 10139:1998		
Thick Tolera			ı	EN ISO 944	5-1:2010(P) (Thickness X* not w	vithin prec	ision range)		EN10140:2006 (precision) C		
NO	European Spec.	1.45 BS S		1.4- 1.4-		1.4307 1.4301		310 1300		301 1300	DC01 C590		
DESCRIPTION	AISI	32	21	316/	316L	304L/304	3	01	3	04	-		
ESCF	AMS	55	10	55	07	5511/5513	55	519	59)13	-		
듑	ASTM	A-2	240	A-240, A-266 A-240, A-266		A-240, A-266	A-666		Α-	666	-		
TUICKNE	SS (mm)					WIDTH	H (mm)						
THICKNE	.55 (MM)	610	980	305	610	610	305	610	305	610	610		
0.0	25						/ *		√	1			
0.0	05	/ *		✓	✓	✓	✓	✓	✓	✓	✓		
0.0	76	✓	✓		✓	✓	✓		✓	✓	✓		
0.0	08	/ *	√*	✓							✓		
0.	.1	✓	✓		✓	/ *		✓	✓	✓	✓		
0.1	27	✓	✓		✓	✓			✓	✓	✓		
0.1	15	✓	✓		✓	✓		✓	✓	✓	✓		
0.1	18		✓								✓		
0.	.2	✓			✓	✓		✓	✓	✓	✓		
0.2	25	✓	✓		√	✓			✓	✓	✓		
0.	.3	✓			✓	✓		✓	✓	✓	✓		
0.3	38	✓						√			✓		
0.3	39				✓	✓	✓	✓	✓	✓			
0.4	45	✓				✓							
0.	.5	✓			✓	✓	✓	✓	✓	✓	✓		
0.	.6							✓	✓	✓			
0.	.7						✓		✓	✓			
0.	.8						✓		✓	✓			
0.									✓	✓			
1	1						✓	✓	✓	✓	✓		
1.	.2						✓		✓				
1.	.5						✓	✓	✓				

Product Range



	RANGE CAN BE SUF	PPLIED AS CUT LENG	GTHS/ STRA	IGHTENED.	COILS. FO	RMERS OF	SPOOLS	
		SPECIFICATIONS AVAILAB						
			COIL S	TANDARD R	ANGE	ROUND AND PROFILE WIRE STANDARD RANGE		
	TYPE	GRADES AVAILABLE	Tempers Available	Thickness (mm)	Width (mm)	Tempers Available	Specifications and Forms	
		201, 301, 304L, 304, 305,	Annealed	0.01 - 2.5	3 - 1250		Round Wire 0.1 to 10.00mm dia*	
STAINLESS STEEL	AUSTENITIC	320, 321, 347, 316, 316L, 316Ti, 904L	All Other Tempers	0.01 - 2.0	3 - 1250		Profile Wire Upto 45mm2 area For cold worked condition,	
		4400 400 400L 400T	Annealed	0.05 - 2.0	3 - 650	i	please contact us with your requirements.	
SST	FERRITIC	410S, 430, 430L, 430Ti (439), 441, 444	All Other	0.05 - 1.6	3 - 450	Annealed Light Drawn	Coils from 1kg to 1000kgs	
LES	MARTENSITIC	410, 420, 431	Tempers Annealed	0.127 - 2.50	3 - 450	Hard Drawn Specified	Formers from 500kgs to 1000kgs Spools - Wide Range Available	
NIA.			Annealed	0.02 - 1.5	3 - 620	Tensile	Cut Lengths/ Straightened from 10mm to 4m *	
ST	PRECIPITATION HARDENING	17/4PH, 17/7PH	Condition 'C'	0.025 - 1.0	3 - 620	1	*Duplex Round Wire 0.8 – 8.00mm dia*	
	HEAT RESISTING STEELS	309, 310	All Tempers Available	0.025 - 3.0	3 - 1000		Cut Lengths/ Straightened from 10mm to 10m	
M	ALPHA	Grade 1, Grade 2, Grade 3, Grade 4				Annealed (soft) 1/8 Hard	Round Wire 0.1 to 10.00mm dia Profile Wire Upto 45mm2 area	
TITANIUM	ALPHA/BETA	Grade 5 (Ti 6Al-4V) Grade 9 (Ti 3Al 2.5V)	All Tempers Available	0.025 - 3.00	3 - 1000	1/4 Hard 1/2 Hard Hard	Coils from 1kg to 1000kgs Formers from 500kgs to 1000kgs Spools - Wide Range Available Cut Lengths from 10mm to 10m	
·	ВЕТА	21S				Spring Hard		
	COMMERCIALLY PURE NICKELS	200, 201		0.025 - 2.5	2 - 1000	Annealed Spring Hard		
УS	NICKEL-COPPER ALLOYS	400	All Tempers Available				Round Wire 0.1 to 10.00 mm dia Upto 45 mm2 area	
NICKEL ALLOYS	NICKEL-CHROMIUM & NICKEL-CHROMIUM-IRON ALLOYS	alloy K500, alloy X, C22, alloy C2000, alloy 600, alloy 601, alloy 625, alloy C 276, alloy 718, alloy X750					Coils from 0.5 kg to 1000kgs Formers from 500kgs to 1000kgs Spools - Wide Range Available Cut Lengths/ Straightened	
Ž	IRON-NICKEL-CHROMIUM ALLOYS	alloy 800, alloy 825					from 10mm to 10mm	
	CONTROLLED EXPANSION ALLOYS	29/18			3 - 610			
	PURE ALUMINIUM	1000 SERIES				Annealed	Round Wire 0.1 to 10.0 mm dia Upto 45mm2 area Coils from 1kg to 1000kgs Formers from 500kgs to 1000kgs	
_	ALUMINIUM COPPER ALLOY	2000 SERIES		0.01 - 3.0	3 - 1000	(soft) 1/8 Hard		
MINIOM	ALUMINIUM MANGANESE ALLOY	3000 SERIES	All Tempers Available		Sheet up to	1/4 Hard 1/2 Hard		
M	ALUMINIUM MAGNESIUM ALLOY	5000 SERIES		0.01 - 1.5	2000mm	Hard	Spools - Wide Range Available Cut Lengths/ Straightened	
ALU	ALUMINIUM MAGNESIUM + SILICON ALLOY	6000 SERIES		0.01 - 3.0		Spring Hard	from 10 mm to 10m	
	ALUMINIUM ZINC ALLOY	7000 SERIES			Please cor	ntact us with your requirements		
	CLAD ALUMINIUM	n/a			Please cor	ntact us with yo	ur requirements	
ಭ	COMMERCIALLY PURE HIGH CONDUCTIVITY COPPER	C101, C102, C103, C106				Annealed	Round Wire 0.1 to 10.00 mm dia	
₹AS	BRASS	CZ106, CZ107, CZ108				(soft)	Upto 45 mm2 area	
, BF ONZ	PHOSPHOR BRASS	PB102, PB103	All Tempers Available	0.01 - 3.0	3 - 1220	1/8 Hard 1/4 Hard	Coils from 1kg to 1000kgs Formers from 500kgs to 1000kgs	
COPPER, BRASS & BRONZE	NICKEL SILVERS CUPRONICKEL & HIGH COPPER CONTENT ALLOYS	NS103, NS104, NS106, NS107, C72500				1/2 Hard Hard Spring Hard	Spools - Wide Range Available Cut Lengths/ Straightened from 10mm to 4m	
ပ	COPPER BERYLLIUM ALLOYS	CB101						
BON	LOW CARBON STEEL	DC01, DC03, DC04, DC05, DC06	Annealed All Other Tempers	0.01 - 3.0 0.01 - 2.0	3 - 1220 3 - 1000	Annealed (soft)	Round Wire 0.1 to 10.00 mm dia Upto 45 mm2 area	
AR		C55S, C60S, C67S,	Annealed	0.05 - 3.0	3 - 650	1/8 Hard 1/4 Hard	Coils from 1kg to 1000kgs	
MILD & CARBON STEEL	HIGH CARBON STEEL	C75S, C85S, C90S, C100S, C125S, 48Si7,	All Other Tempers	0.05 - 1.6	3 - 610	1/2 Hard Hard	Formers from 500kgs to 1000kgs Spools - Wide Range Available Cut Lengths/ Straightened	
MIL		56Si7, 51CrV4, 80CrV2, 75Ni8, 125Cr2, 102Cr6	Hardened & Tempered	0.127 - 3.0	3-010	Spring Hard	from 10mm to 10m	

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