



Blanco Group

HYDRAULIC & ENGINEERING PRODUCTS



NATIONAL TUBE STOCKHOLDERS LTD (NTS)

Welcome to NTS Hydraulic & Engineering Products brochure, we are one of the UK's leading stockholders of these products.

Operating for more than 30 years from a single site in North Yorkshire, we have in excess of 9,000 tonnes of hydraulic products and mechanical tubes in stock. As part of the Bianco Group, we have access to over 350,000 tonnes of group stocks. This combined strength enables us to develop excellent relationships and source the highest quality material from many of the world's leading manufactures.

We offer a large range of in-house processing utilising our eight saws including a fully automatic, high-speed circular saw capable of cutting in seconds. In 2018, we further extended our capabilities by installing a robotic saw, you can find out more on page 43.

We have a highly experienced and knowledgeable sales team who are dedicated to providing an outstanding level of personalised customer service and fulfilling every order in a way that reflects the professionalism of the company. They are on hand to offer help and advice where needed and pride themselves on their industry knowledge.

NTS operates a fleet of more than 20 vehicles including rigids, artics and extenders that are privately owned and employee driven. This allows us the flexibility to meet your individual delivery requirements. With our continual commitment to health and safety, quality and the environment, NTS is proud to be certified by LR to ISO 45001, ISO 9001 and ISO 14001.



HYDRAULIC PRODUCTS

CYLINDER TUBE

- Cold Drawn Hydraulic Cylinder Tube Specification (Honed, Skived and Suitable For)
- Hot Finished Seamless Specification (Bored and Honed)
- Smooth Bore (Ready to Use) Tube Specification
- Cold Drawn Hydraulic & Pneumatic Line Pipe Specification
- Hydraulic Cylinder Tube Metric Size Range
- Hydraulic Cylinder Tube Imperial Size Range

CHROME PLATED BAR

- Chrome Plated Bar Specification
- Chrome Plated Stainless Steel Bar Specification
- Chrome Plated Bar Size Range
- Corrosion Resistance Chart

CAST IRON BAR

- Cast Iron Bar Specification

QUICK REFERENCE GUIDE FOR TUBE AND BAR USEFUL FORMULAE AND CONVERSION FACTOR GUIDE

ENGINEERING PRODUCTS

HOT FINISHED SEAMLESS TUBE

- Hot Finished Seamless Mechanical Tube Specification
- Hollow Bar Tube Specification
- Size Range, Tolerances and Masses

COLD DRAWN SEAMLESS MECHANICAL TUBE

- Cold Drawn Seamless Mechanical Tube Specification

NTS PROCESSING

OTHER PRODUCTS

- Core6 GRP Solutions
- Pipes, Fittings & Flanges
- Hollow Sections
- Offshore Structural Products

UK GROUP

- Meet The Team
- Other UK Bianco Group Companies

GROUP PRODUCTION FACILITIES

- Sidergamma, Italy - Chrome Plating
- Tubifal S.R.L, Italy - Boring and Honing

THE GROUP

- The Bianco Group Of Companies

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CYLINDER TUBE SPECIFICATIONS AND SIZES



Cold Drawn Hydraulic Cylinder Tube

Seamless EN10305-1 E355 +SR

Welded EN10305-2 E355 +SR / DOM ASTM A513 ST52.3 SRA

Chemical Composition % max

C	Si	Mn	P	S
0.22	0.55	1.60	0.025	0.025

Mechanical Properties

Yield Strength (R _{eH})	Tensile Strength (R _m)	Elongation (A)	Impact Toughness
520 N/mm ² min*	580 N/mm ² min	14% min	27J min @ -20°C (based on standard 10 x 10 specimen)

Tolerances

Outside Diameter	Inside Diameter		Straightness	Eccentricity
	Suitable for Honing/ Skiving	Honed/Skived		
According to Specification	With honing/skiving & roller burnishing allowance (see size chart)	H8 bore tolerance with surface roughness Ra max 0.4µm	1:1000mm or better	Cold drawn seamless tube: 10% max Cold drawn welded tube: 7.5% max According to the formula (T _{max} - T _{min} / T _{max} + T _{min}) x 100

Size Range

Metric	Imperial
20 - 250mm Bore	1" - 10" Bore

* For tubes with OD > 230mm & WT > 16mm R_{eH} ≥ 490 N/mm²

We are also able to supply

- Stainless steel honed tube in grades 304, 304L, 316, 316L and 316Ti
- Honed tube suitable for centreless grinding
- Chrome plated honed tube
- Tube suitable for centreless grinding
- Chrome plated tube



Hot Finished Seamless Cylinder Tube
Bored and Honed
EN10297-1 E355 / EN10210-1 S355J2H

Chemical Composition % max				
C	Si	Mn	P	S
0.22	0.55	1.60	0.030	0.03

Mechanical Properties					
Thickness (mm)	≤ 16	>16 ≤ 40	>40 ≤ 65	>65 ≤ 80	>80 ≤ 100
Yield Strength (R _{eH})	355 N/mm ²	345 N/mm ²	335 N/mm ²	315 N/mm ²	295 N/mm ²
Tensile Strength (R _m)	470 min N/mm ²				
Elongation (A)	18% min				
Impact Toughness	*27J min @ -20°C (based on standard 10 x 10 specimen)				

Tolerances	
Outside Diameter	Inside Diameter
According to Specification	H8 to H11 bore tolerance with surface roughness Ra max 0.4µm

Size Range	
Metric	Imperial
Up to 700mm Bore	Up to 27" Bore

Note

Where tolerances are critical it is recommended that material is cut before honing takes place. It is inherent in the nature of this product that ovalisation occurs after cutting and can affect up to 150mm from each end of the tube causing the material to go out of tolerance in the Bore. The Bore tolerance is significantly affected when the wall thickness is thinner but can occur for any size. If tolerances are critical please speak to a member of our sales team to discuss your requirements and the best way to achieve these in more detail.

* Impact Tested to 34J min @ - 40°C - available on request.

Smooth Bore (Ready To Use) Tube
Cold Drawn Welded
EN10305-2 E355 +C

Chemical Composition % max				
C	Si	Mn	P	S
0.22	0.55	1.60	0.025	0.025

Mechanical Properties		
Yield Strength (R _{eH})	Tensile Strength (R _m)	Elongation (A)
510 N/mm ² min	640 N/mm ² min	4% min

Tolerances			
Outside Diameter	Inside Diameter	Straightness	Eccentricity
According to Specification	H9/H10 bore tolerance with surface roughness Ra max 0.8µm	1:1000mm or better	Cold drawn welded tube: 7.5% max According to the formula (T _{max} - T _{min} / T _{max} + T _{min}) x 100

Size Range	
Metric	Imperial
20 - 125mm Bore	1" - 4.25" Bore

- We are also able to supply
- Smooth bore tube suitable for centreless grinding
 - Chrome plated smooth bore tube

Cold Drawn Hydraulic and Pneumatic Line Pipe

Seamless

EN10305- 4 E235+N

Chemical Composition % max

C	Si	Mn	P	S
0.17	0.35	1.20	0.025	0.015

Mechanical Properties

Yield Strength (R_{eH})	Tensile Strength (R_m)	Elongation (A)
235 N/mm ² min*	340 N/mm ² min	25% min

Size Range

Size Range	Surface Protection	
4mm-80mm OD x 1.5mm-12.5mm WT Supplied in 6m random lengths.	Internal and External oiling. All tube ends are capped.	Zinc layer with passivation (Cr-VI free) etc.

* For tubes with outside diameter (OD) \leq 30mm and wall thickness (T) \leq 3mm, the R_{eH} minimum values are 10 MPa lower than the values given in this table.

Note

- For tolerances on OD & ID please refer to the product specification.
- This material is sold for use as Hydraulic Line pipe, NTS accept no liability if the material is used for other applications for which it is not intended.





Hydraulic Cylinder Tube Metric Size Range

Bore mm	Outside Diameter (OD) mm	Wall Thickness (T) mm	Weight kg/m	Bore Tolerances mm		
				Honed	Smooth Bore	Suitable For Honing
20	30.00	5.00	3.08	-0 / +0.033	-0 / +0.084	
25	35.00	5.00	3.70	-0 / +0.033	-0 / +0.084	
	40.00	7.50	6.01	-0 / +0.033		-0.20 / -0.35
30	40.00	5.00	4.32	-0 / +0.033	-0 / +0.084	
	45.00	7.50	6.94	-0 / +0.033		
	50.00	10.00	9.86	-0 / +0.033		
32	38.00	3.00	2.59		-0 / +0.100	
	40.00	4.00	3.55		-0 / +0.100	
	42.00	5.00	4.56	-0 / +0.039	-0 / +0.100	
35	45.00	5.00	4.93	-0 / +0.039	-0 / +0.100	
	50.00	7.50	7.86	-0 / +0.039		
	55.00	10.00	11.10	-0 / +0.039		-0.20 / -0.35
40	45.00	2.50	2.62		-0 / +0.100	
	50.00	5.00	5.55	-0 / +0.039	-0 / +0.100	-0.20 / -0.35
	52.00	6.00	6.81	-0 / +0.039		-0.20 / -0.35
	55.00	7.50	8.79	-0 / +0.039		-0.20 / -0.35
45	60.00	10.00	12.33	-0 / +0.039		-0.20 / -0.35
	55.00	5.00	6.17	-0 / +0.039	-0 / +0.100	-0.20 / -0.35
	57.00	6.00	7.55	-0 / +0.039		-0.20 / -0.35
	60.00	7.50	9.71	-0 / +0.039		-0.20 / -0.35
50	65.00	10.00	13.56	-0 / +0.039		-0.20 / -0.35
	55.00	2.50	3.24		-0 / +0.100	
	60.00	5.00	6.78	-0 / +0.039	-0 / +0.100	-0.20 / -0.40
	62.00	6.00	8.29	-0 / +0.039		-0.20 / -0.40
	65.00	7.50	10.64	-0 / +0.039		-0.20 / -0.40
55	70.00	10.00	14.80	-0 / +0.039		-0.20 / -0.40
	75.00	12.50	19.27	-0 / +0.039		-0.20 / -0.40
	65.00	5.00	7.40	-0 / +0.046	-0 / +0.120	-0.20 / -0.40
	70.00	7.50	11.56	-0 / +0.046		-0.20 / -0.40
60	75.00	10.00	16.03	-0 / +0.046		-0.20 / -0.40
	70.00	5.00	8.01	-0 / +0.046	-0 / +0.120	-0.20 / -0.45
	72.00	6.00	9.77	-0 / +0.046	-0 / +0.120	-0.20 / -0.45
	75.00	7.50	12.48	-0 / +0.046	-0 / +0.120	-0.20 / -0.45
	80.00	10.00	17.26	-0 / +0.046		-0.20 / -0.45
63	85.00	12.50	22.35	-0 / +0.046		-0.20 / -0.45
	73.00	5.00	8.38	-0 / +0.046	-0 / +0.120	-0.20 / -0.45
	75.00	6.00	10.21	-0 / +0.046	-0 / +0.120	-0.20 / -0.45
	78.00	7.50	13.04	-0 / +0.046		-0.20 / -0.45
	83.00	10.00	18.00	-0 / +0.046		-0.20 / -0.45

Items marked * are Hot Finished Bored and Honed

Bore mm	Outside Diameter (OD) mm	Wall Thickness (T) mm	Weight kg/m	Bore Tolerances mm		
				Honed	Smooth Bore	Suitable For Honing
65	75.00	5.00	8.63	-0 / +0.046	-0 / +0.120	-0.20 / -0.45
	80.00	7.50	13.41	-0 / +0.046	-0 / +0.120	-0.20 / -0.45
	85.00	10.00	18.50	-0 / +0.046		-0.20 / -0.45
70	80.00	5.00	9.25	-0 / +0.046	-0 / +0.120	-0.20 / -0.45
	82.00	6.00	11.25	-0 / +0.046	-0 / +0.120	-0.20 / -0.45
	85.00	7.50	14.33	-0 / +0.046	-0 / +0.120	-0.20 / -0.45
	90.00	10.00	19.73	-0 / +0.046		-0.20 / -0.45
	95.00	12.50	25.43	-0 / +0.046		-0.20 / -0.45
	100.00	15.00	31.44	-0 / +0.046		-0.20 / -0.45
75	108.00*	19.00	41.71	-0/+0.120		
	85.00	5.00	9.86	-0 / +0.046	-0 / +0.120	-0.25 / -0.55
	90.00	7.50	15.26	-0 / +0.046	-0 / +0.120	-0.25 / -0.55
	95.00	10.00	20.96	-0 / +0.046		-0.25 / -0.55
80	100.00	12.50	26.97	-0 / +0.046		-0.25 / -0.55
	90.00	5.00	10.48	-0 / +0.046	-0 / +0.120	-0.25 / -0.55
	92.00	6.00	12.73	-0 / +0.046	-0 / +0.120	-0.25 / -0.55
	95.00	7.50	16.18	-0 / +0.046	-0 / +0.120	-0.25 / -0.55
	100.00	10.00	22.20	-0 / +0.046		-0.25 / -0.55
	105.00	12.50	28.51	-0 / +0.046		-0.25 / -0.55
85	110.00	15.00	35.14	-0 / +0.046		-0.25 / -0.55
	95.00	5.00	11.10	-0 / +0.054	-0 / +0.140	-0.25 / -0.55
	100.00	7.50	17.11	-0 / +0.054		-0.25 / -0.55
	105.00	10.00	23.43	-0 / +0.054		-0.25 / -0.55
90	110.00	12.50	30.06	-0 / +0.054		-0.25 / -0.55
	115.00	15.00	36.99	-0 / +0.054		-0.25 / -0.55
	100.00	5.00	11.71	-0 / +0.054	-0 / +0.140	-0.25 / -0.55
	102.00	6.00	14.21	-0 / +0.054	-0 / +0.140	-0.25 / -0.55
95	105.00	7.50	18.03	-0 / +0.054	-0 / +0.140	-0.25 / -0.55
	110.00	10.00	24.66	-0 / +0.054		-0.25 / -0.55
	115.00	12.50	31.60	-0 / +0.054		-0.25 / -0.55
	120.00	15.00	38.84	-0 / +0.054		-0.25 / -0.55
	105.00	5.00	12.33	-0 / +0.054	-0 / +0.140	-0.25 / -0.55
100	107.00	6.00	14.94	-0 / +0.054		-0.25 / -0.55
	110.00	7.50	18.96	-0 / +0.054		-0.25 / -0.55
	115.00	10.00	25.89	-0 / +0.054		-0.25 / -0.55
	120.00	12.50	33.14	-0 / +0.054		-0.25 / -0.55
	127.00*	16.00	43.36	-0/+0.140		
	110.00	5.00	12.95	-0 / +0.054	-0 / +0.140	-0.25 / -0.55
	112.00	6.00	15.68	-0 / +0.054	-0 / +0.140	-0.25 / -0.55
	115.00	7.50	19.88	-0 / +0.054	-0 / +0.140	-0.25 / -0.55
	120.00	10.00	27.13	-0 / +0.054		-0.25 / -0.55
	125.00	12.50	34.68	-0 / +0.054		-0.25 / -0.55
	130.00	15.00	42.54	-0 / +0.054		-0.25 / -0.55

Items marked * are Hot Finished Bored and Honed



Bore mm	Outside Diameter (OD) mm	Wall Thickness (T) mm	Weight kg/m	Bore Tolerances mm		
				Honed	Smooth Bore	Suitable For Honing
105	115.00	5.00	13.56	-0 / +0.054		-0.25 / -0.65
	120.00	7.50	20.81	-0 / +0.054		-0.25 / -0.65
	125.00	10.00	28.36	-0 / +0.054		-0.25 / -0.65
	130.00	12.50	36.22	-0 / +0.054		-0.25 / -0.65
110	120.00	5.00	14.18	-0 / +0.087a	-0 / +0.140	-0.25 / -0.65
	125.00	7.50	21.73	-0 / +0.054	-0 / +0.140	-0.25 / -0.65
	130.00	10.00	29.59	-0 / +0.054		-0.25 / -0.65
	135.00	12.50	37.76	-0 / +0.054		-0.25 / -0.65
115	125.00	5.00	14.80	-0 / +0.087a		-0.25 / -0.65
	130.00	7.50	22.66	-0 / +0.054		-0.25 / -0.65
	133.00	9.00	27.52	-0 / +0.054		-0.25 / -0.65
	135.00	10.00	30.83	-0 / +0.054		-0.25 / -0.65
120	140.00	12.50	39.30	-0 / +0.054		-0.25 / -0.65
	130.00	5.00	15.41	-0 / +0.087a		-0.25 / -0.65
	135.00	7.50	23.58	-0 / +0.054		-0.25 / -0.65
	140.00	10.00	32.06	-0 / +0.054		-0.25 / -0.65
125	145.00	12.50	40.85	-0 / +0.054		-0.25 / -0.65
	150.00	15.00	49.94	-0 / +0.054		-0.25 / -0.65
	135.00	5.00	16.03	-0 / +0.100a		-0.25 / -0.65
	140.00	7.50	24.51	-0 / +0.063		-0.25 / -0.65
130	145.00	10.00	33.29	-0 / +0.063		-0.25 / -0.65
	150.00	12.50	42.39	-0 / +0.063		-0.25 / -0.65
	155.00	15.00	51.79	-0 / +0.063		-0.25 / -0.65
	140.00	5.00	16.65	-0 / +0.100a		-0.25 / -0.65
135	145.00	7.50	25.43	-0 / +0.063		-0.25 / -0.65
	150.00	10.00	34.53	-0 / +0.063		-0.25 / -0.65
	155.00	12.50	43.93	-0 / +0.063		-0.25 / -0.65
	160.00	15.00	53.64	-0 / +0.063		-0.25 / -0.65
140	150.00	5.00	17.88	-0 / +0.100a		-0.25 / -0.65
	155.00	7.50	27.28	-0 / +0.063		-0.25 / -0.65
	160.00	10.00	36.99	-0 / +0.063		-0.25 / -0.65
	165.00	12.50	47.01	-0 / +0.063		-0.25 / -0.65
	170.00	15.00	57.34	-0 / +0.063		-0.25 / -0.65
	175.00	17.50	67.97	-0 / +0.063		-0.25 / -0.65
145	180.00	20.00	78.92	-0 / +0.063		-0.25 / -0.65
	150.00	5.00	18.50	-0 / +0.100a		-0.25 / -0.65
	155.00	7.50	28.21	-0 / +0.063		-0.25 / -0.65
	160.00	10.00	38.23	-0 / +0.063		-0.25 / -0.65
150	165.00	12.50	48.55	-0 / +0.063		-0.25 / -0.65
	170.00	15.00	59.09	-0 / +0.063		-0.25 / -0.65
	175.00	17.50	69.81	-0 / +0.063		-0.25 / -0.65
	180.00	20.00	80.64	-0 / +0.063		-0.25 / -0.65
155	185.00	22.50	91.66	-0 / +0.063		-0.25 / -0.65
	170.00	7.50	30.06	-0 / +0.063		-0.25 / -0.65
	175.00	10.00	40.69	-0 / +0.063		-0.25 / -0.65
	180.00	12.50	51.64	-0 / +0.063		-0.25 / -0.65
160	185.00	15.00	62.94	-0 / +0.063		-0.25 / -0.65
	190.00	17.50	74.60	-0 / +0.063		-0.25 / -0.65
	195.00	20.00	86.66	-0 / +0.063		-0.25 / -0.65
	200.00	22.50	99.11	-0 / +0.063		-0.25 / -0.65
	170.00	5.00	20.35	-0 / +0.100a		-0.25 / -0.65
	175.00	7.50	30.98	-0 / +0.063		-0.25 / -0.65
165	180.00	10.00	41.92	-0 / +0.063		-0.25 / -0.65
	185.00	12.50	53.18	-0 / +0.063		-0.25 / -0.65
	190.00	15.00	64.74	-0 / +0.063		-0.25 / -0.65
	195.00	17.50	76.60	-0 / +0.063		-0.25 / -0.65
170	200.00	20.00	88.78	-0 / +0.063		-0.25 / -0.65
	203.00*	21.50	96.23	-0/+0.160		-0.25 / -0.65
	219.10*	29.55	138.13	-0/+0.160		-0.25 / -0.65
	180.00	7.50	31.91	-0 / +0.063		-0.25 / -0.65
175	185.00	10.00	43.16	-0 / +0.063		-0.25 / -0.65
	190.00	12.50	54.72	-0 / +0.063		-0.25 / -0.65
	195.00	15.00	66.59	-0 / +0.063		-0.25 / -0.65
	200.00	17.50	78.76	-0 / +0.063		-0.25 / -0.65
180	205.00	20.00	90.92	-0 / +0.063		-0.25 / -0.65
	180.00	5.00	21.58	-0 / +0.100a		-0.70 / -1.20
	185.00	7.50	32.83	-0 / +0.063		-0.70 / -1.20
	190.00	10.00	44.39	-0 / +0.063		-0.70 / -1.20
	195.00	12.50	56.26	-0 / +0.063		-0.70 / -1.20
	200.00	15.00	68.44	-0 / +0.063		-0.70 / -1.20
185	205.00	17.50	80.92	-0 / +0.063		-0.70 / -1.20
	190.00	7.50	33.76	-0 / +0.063		-0.70 / -1.20
	195.00	10.00	45.62	-0 / +0.063		-0.70 / -1.20
	200.00	12.50	57.80	-0 / +0.063		-0.70 / -1.20
	200.00	10.00	46.86	-0 / +0.063		-0.70 / -1.20
	205.00	12.50	59.34	-0 / +0.063		-0.70 / -1.20
190	210.00	15.00	72.13	-0 / +0.063		-0.70 / -1.20
	215.00	17.50	85.24	-0 / +0.063		-0.70 / -1.20
	219.10*	19.55	96.21	-0/+0.160		-0.70 / -1.20
	220.00	20.00	98.65	-0/+0.160		-0.70 / -1.20
	229.00*	24.50	123.56	-0 / +0.063		-0.70 / -1.20
	244.50*	32.25	168.81	-0/+0.160		-0.70 / -1.20

Items marked * are Hot Finished Bored and Honed

Bore mm	Outside Diameter (OD) mm	Wall Thickness (T) mm	Weight kg/m	Bore Tolerances mm		
				Honed	Smooth Bore	Suitable For Honing
145	155.00	5.00	18.50	-0 / +0.100a		-0.25 / -0.65
	160.00	7.50	28.21	-0 / +0.063		-0.25 / -0.65
	165.00	10.00	38.23	-0 / +0.063		-0.25 / -0.65
	170.00	12.50	48.55	-0 / +0.063		-0.25 / -0.65
150	160.00	5.00	19.11	-0 / +0.100a		-0.25 / -0.65
	165.00	7.50	29.13	-0 / +0.063		-0.25 / -0.65
	170.00	10.00	39.46	-0 / +0.063		-0.25 / -0.65
	175.00	12.50	50.09	-0 / +0.063		-0.25 / -0.65
	180.00	15.00	61.04	-0 / +0.063		-0.25 / -0.65
	190.00	20.00	83.85	-0 / +0.063		-0.25 / -0.65
155	170.00	7.50	30.06	-0 / +0.063		-0.25 / -0.65
	175.00	10.00	40.69	-0 / +0.063		-0.25 / -0.65
	180.00	12.50	51.64	-0 / +0.063		-0.25 / -0.65
160	170.00	5.00	20.35	-0 / +0.100a		-0.25 / -0.65
	175.00	7.50	30.98	-0 / +0.063		-0.25 / -0.65
	180.00	10.00	41.92	-0 / +0.063		-0.25 / -0.65
	185.00	12.50	53.18	-0 / +0.063		-0.25 / -0.65
	190.00	15.00	64.74	-0 / +0.063		-0.25 / -0.65
	195.00	17.50	76.60	-0 / +0.063		-0.25 / -0.65
	200.00	20.00	88.78	-0 / +0.063		-0.25 / -0.65
165	203.00*	21.50	96.23	-0/+0.160		-0.25 / -0.65
	219.10*	29.55	138.13	-0/+0.160		-0.25 / -0.65
	180.00	7.50	31.91	-0 / +0.063		-0.25 / -0.65
	185.00	10.00	43.16	-0 / +0.063		-0.25 / -0.65
170	190.00	12.50	54.72	-0 / +0.063		-0.25 / -0.65
	195.00	15.00	66.59	-0 / +0.063		-0.25 / -0.65
	200.00	17.50	78.76	-0 / +0.063		-0.25 / -0.65
	205.00	20.00	90.92	-0 / +0.063		-0.25 / -0.65
175	180.00	5.00	21.58	-0 / +0.100a		-0.70 / -1.20
	185.00	7.50	32.83	-0 / +0.063		-0.70 / -1.20
	190.00	10.00	44.39	-0 / +0.063		-0.70 / -1.20
	195.00	12.50	56.26	-0 / +0.063		-0.70 / -1.20
	200.00	15.00	68.44	-0 / +0.063		-0.70 / -1.20
180	205.00	17.50	80.92	-0 / +0.063		-0.70 / -1.20
	190.00	7.50	33.76	-0 / +0.063		-0.70 / -1.20
	195.00	10.00	45.62	-0 / +0.063		-0.70 / -1.20
	200.00	12.50	57.80	-0 / +0.063		-0.70 / -1.20
	200.00	10.00	46.86	-0 / +0.063		-0.70 / -1.20
	205.00	12.50	59.34	-0 / +0.063		-0.70 / -1.20
185	210.00	15.00	72.13	-0 / +0.063		-0.70 / -1.20
	215.00	17.50	85.24	-0 / +0.063		-0.70 / -1.20
	219.10*	19.55	96.21	-0/+0.160		-0.70 / -1.20
	220.00	20.00	98.65	-0/+0.160		-0.70 / -1.20
	229.00*	24.50	123.56	-0 / +0.063		-0.70 / -1.20
	244.50*	32.25	168.81	-0/+0.160		-0.70 / -1.20



Bore mm	Outside Diameter (OD) mm	Wall Thickness (T) mm	Weight kg/m	Bore Tolerances mm		
				Honed	Smooth Bore	Suitable For Honing
185	200.00	7.50	35.61	-0 / +0.072		-0.70 / -1.20
	205.00	10.00	48.09	-0 / +0.072		-0.70 / -1.20
	210.00	12.50	60.88	-0 / +0.072		-0.70 / -1.20
	215.00	15.00	73.98	-0 / +0.072		-0.70 / -1.20
	220.00	17.50	87.39	-0 / +0.072		-0.70 / -1.20
190	210.00	10.00	49.32	-0 / +0.072		-0.70 / -1.20
	215.00	12.50	62.42	-0 / +0.072		-0.70 / -1.20
	220.00	15.00	75.83	-0 / +0.072		-0.70 / -1.20
	225.00	17.50	89.55	-0 / +0.072		-0.70 / -1.20
	230.00	20.00	103.58	-0 / +0.072		-0.70 / -1.20
	244.50*	27.25	145.99	-0/+0.185		
195	220.00	12.50	63.97	-0 / +0.072		-0.70 / -1.20
	225.00	15.00	77.68	-0 / +0.072		-0.70 / -1.20
	230.00	17.50	91.82	-0 / +0.072		-0.70 / -1.20
200	215.00	7.50	38.38	-0 / +0.185b		-0.70 / -1.20
	220.00	10.00	51.79	-0 / +0.072		-0.70 / -1.20
	225.00	12.50	65.51	-0 / +0.072		-0.70 / -1.20
	230.00	15.00	79.53	-0 / +0.072		-0.70 / -1.20
	235.00	17.50	93.87	-0 / +0.072		-0.70 / -1.20
	240.00	20.00	108.51	-0 / +0.072		-0.70 / -1.20
	244.50*	22.25	121.98	-0/+0.185		
	245.00	22.50	123.46	-0 / +0.072		-0.70 / -1.20
	250.00	25.00	138.72	-0 / +0.072		-0.70 / -1.20
	254.00*	27.00	151.15	-0/+0.185		
	267.00*	33.50	192.91	-0 / +0.072		
	273.00*	36.50	212.90	-0/+0.185		
210	230.00	10.00	54.26	-0 / +0.072		-0.70 / -1.20
	240.00	15.00	83.23	-0 / +0.072		-0.70 / -1.20
	245.00	17.50	98.18	-0 / +0.072		-0.70 / -1.20
220	240.00	10.00	56.72	-0 / +0.072		-0.70 / -1.20
	245.00	12.50	71.67	-0 / +0.072		-0.70 / -1.20
	250.00	15.00	86.93	-0 / +0.072		-0.70 / -1.20
	255.00	17.50	102.50	-0 / +0.072		-0.70 / -1.20
	260.00	20.00	118.38	-0 / +0.072		-0.70 / -1.20
	270.00	25.00	151.08	-0 / +0.072		-0.70 / -1.20
	273.00*	26.50	161.10	-0/+0.185		
225	245.00	10.00	57.95	-0 / +0.072		-0.80 / -1.30
	250.00	12.50	73.21	-0 / +0.072		-0.80 / -1.30

Items marked * are Hot Finished Bored and Honed

Bore mm	Outside Diameter (OD) mm	Wall Thickness (T) mm	Weight kg/m	Bore Tolerances mm		
				Honed	Smooth Bore	Suitable For Honing
230	250.00	10.00	59.18	-0 / +0.072		-0.80 / -1.30
	260.00	15.00	90.63	-0 / +0.072		-0.80 / -1.30
	305.00*	37.50	247.38	-0/+0.185		
235	254.00	9.50	57.28	-0 / +0.072		-0.80 / -1.30
240	267.00	13.50	84.40	-0 / +0.072		
	270.00	15.00	94.33	-0 / +0.072		-0.80 / -1.30
	298.50*	29.25	194.22	-0/+0.185		
250	267.00	8.50	54.19	-0 / +0.115a		
	280.00	15.00	98.03	-0 / +0.072		-0.80 / -1.30
	298.50*	24.25	164.01	-0/+0.185		
	300.00	25.00	169.60	-0 / +0.072		-0.80 / -1.30
260	323.90*	36.95	261.54	-0 / +0.072		
	323.90*	31.95	230.08	-0/+0.210		
270	300.00	20.00	138.10	-0 / +0.081		
	300.00	15.00	105.50	-0 / +0.081		
280	305.00	17.50	124.07	-0 / +0.081		
	323.90*	21.95	163.48	-0/+0.210		
	343.00*	31.50	241.98	-0 / +0.081		
	355.60*	37.80	296.32	-0 / +0.081		
300	368.00*	44.00	351.57	-0 / +0.081		
	323.90*	11.95	91.95	-0/+0.210		
	355.60*	27.80	224.73	-0 / +0.081		
	368.00*	34.00	280.11	-0 / +0.081		
320	406.40*	53.20	463.38	-0 / +0.081		
	368.00*	24.00	203.61	-0/+0.230		
360	406.40*	43.20	386.94	-0 / +0.089		
	419.00*	29.50	283.36	-0/+0.230		
400	445.00*	42.50	421.86	-0 / +0.089		
	470.00*	35.00	375.47	-0/+0.230		
420	508.00*	54.00	604.60	-0 / +0.089		
	508.00*	44.00	503.49	-0/+0.250		
450	521.00*	35.50	425.05	-0/+0.250		

Items marked * are Hot Finished Bored and Honed

- Please note that the honed tolerances shown are: Items marked * and b = H10, items marked a = H9, all other items are H8
- The weights shown are applicable for Honed and Smooth Bore sizes
- Suitable to Skive / Hone sizes would be heavier due to the stock in the Bore
- Larger sizes are available subject to a minimum mill rolling quantity



Hydraulic Cylinder Tube Imperial Size Range

Bore inch	Outside Diameter (OD) inch	Wall Thickness (T) inch	Weight kg/m	Bore Tolerances mm		
				Honed	Smooth Bore	Suitable for Honing
Please note all tolerances are given in mm						
1.000	1.313	0.1563	2.28		-0 / +0.100	
1.250	1.625	0.1875	4.29		-0 / +0.100	
1.500	1.875	0.1875	5.03		-0 / +0.100	
1.750	2.125	0.1875	5.78		-0 / +0.100	
	2.250	0.2500	7.95	-0 / +0.039		-0.20 / -0.35
2.000	2.375	0.1875	6.52		-0 / +0.120	
	2.500	0.2500	8.95	-0 / +0.046		-0.20 / -0.40
2.125	2.500	0.1875	6.90		-0 / +0.120	
2.250	2.625	0.1875	7.27		-0 / +0.120	
	2.750	0.2500	9.95	-0 / +0.046		-0.20 / -0.45
2.375	2.750	0.1875	7.64		-0 / +0.120	
2.500	2.875	0.1875	8.02		-0 / +0.120	
	3.000	0.2500	10.94	-0 / +0.046	-0 / +0.120	-0.20 / -0.45
	3.250	0.3750	17.17	-0 / +0.046		-0.20 / -0.45
2.625	3.000	0.1875	8.39		-0 / +0.120	
	3.125	0.2500	11.44	-0 / +0.046		-0.20 / -0.45
2.750	3.125	0.1875	8.76		-0 / +0.120	
	3.250	0.2500	11.94	-0 / +0.046		-0.20 / -0.45
3.000	3.375	0.1875	9.51		-0 / +0.120	
	3.500	0.2500	12.93	-0 / +0.046	-0 / +0.120	-0.20 / -0.55
	3.750	0.3750	20.15	-0 / +0.046		-0.20 / -0.55
3.250	3.625	0.1875	10.25		-0 / +0.140	
	3.750	0.2500	13.92	-0 / +0.054		-0.20 / -0.55
	4.000	0.3750	21.64	-0 / +0.054		-0.20 / -0.55
3.500	3.875	0.1875	11.00		-0 / +0.140	
	4.000	0.2500	14.92	-0 / +0.054	-0 / +0.140	-0.20 / -0.55
	4.500	0.5000	31.80	-0 / +0.054		-0.20 / -0.55
3.750	4.125	0.1875	11.74		-0 / +0.140	
	4.250	0.2500	15.91	-0 / +0.054		-0.25 / -0.55

Bore inch	Outside Diameter (OD) inch	Wall Thickness (T) inch	Weight kg/m	Bore Tolerances mm		
				Honed	Smooth Bore	Suitable For Honing
Please note all tolerances are given in mm						
4.000	4.500	0.2500	16.91	-0 / +0.054	-0 / +0.140	-0.25 / -0.55
	4.625	0.3125	21.45	-0 / +0.054		-0.25 / -0.55
	4.750	0.3750	26.12	-0 / +0.054		-0.25 / -0.55
	5.000	0.5000	35.80	-0 / +0.054		-0.25 / -0.55
4.250	4.625	0.1875	13.23		-0 / +0.140	
	4.750	0.2500	17.90	-0 / +0.054		-0.25 / -0.65
4.500	5.000	0.2500	18.90	-0 / +0.054		-0.25 / -0.65
	5.250	0.3750	29.11	-0 / +0.054		-0.25 / -0.65
	5.500	0.5000	39.78	-0 / +0.054		-0.25 / -0.65
5.000	5.500	0.2500	20.89	-0 / +0.063		-0.25 / -0.65
	5.625	0.3125	26.43	-0 / +0.063		-0.25 / -0.65
	5.750	0.3750	32.09	-0 / +0.063		-0.25 / -0.65
	6.000	0.5000	43.76	-0 / +0.063		-0.25 / -0.65
5.500	6.000	0.2500	22.88	-0 / +0.063		-0.25 / -0.65
	6.500	0.5000	47.74	-0 / +0.063		-0.25 / -0.65
6.000	6.500	0.2500	24.84	-0 / +0.063		-0.25 / -0.65
	6.625	0.3125	31.39	-0 / +0.063		-0.25 / -0.65
	6.750	0.3750	38.06	-0 / +0.063		-0.25 / -0.65
	7.000	0.5000	51.72	-0 / +0.063		-0.25 / -0.65
6.500	7.500	0.5000	55.70	-0 / +0.063		-0.25 / -0.65
7.000	7.750	0.3750	44.03	-0 / +0.063		-0.70 / -1.20
	8.000	0.5000	59.69	-0 / +0.063		-0.70 / -1.20
8.000	9.000	0.5000	67.63	-0 / +0.072		-0.70 / -1.20
9.000	10.000	0.5000	75.59	-0 / +0.115a		-0.70 / -1.20
12.000	14.000*	1.0000	206.88	-0 / +0.81		

Items marked * are Hot Finished Bored and Honed

- Please note that the honed tolerances shown are: Items marked * and b = H10, items marked a = H9, all other items are H8
- The weights shown are applicable for Honed and Smooth Bore sizes
- Suitable to Skive / Hone sizes would be heavier due to the stock in the Bore

CHROME PLATED BAR SPECIFICATIONS AND SIZES



CHROME PLATED BAR SPECIFICATION

Chrome Plated Bar ISO 683 -1 CK45 20MnV6 NTS Specification

Chemical Composition %

	C	Si	Mn	P	S	Cr	Mo	Ni	V
CK45	0.42-0.50	0.40 max	0.50-0.80	0.030 max	0.035 max	0.40 max	0.10 max	0.40 max	-
20MnV6	0.16-0.22	0.10-0.50	1.3-1.70	0.035 max	0.040 max	0.50 max	0.15 max	0.30 max	0.08-0.20

Mechanical Properties

	Diameter mm	Yield Strength (R _{eH}) min	Tensile Strength (R _m) min
CK45	≤ 16 Ø	340 N/mm ²	490 N/mm ²
	> 16 ≤ 100 Ø	305 N/mm ²	440 N/mm ²
	> 100 ≤ 250 Ø	275 N/mm ²	400 N/mm ²
20MnV6	≥ 6 ≤ 25 Ø	450 N/mm ²	580 N/mm ²
	> 25 ≤ 80 Ø	420 N/mm ²	550 N/mm ²
	> 80 ≤ 160 Ø	380 N/mm ²	530 N/mm ²

All material conforms to the specification and values detailed above.

In accordance with the specification for steel bar, the testing of the mechanical properties can be performed on a sample of any finished condition.

Test certificates report the results of the sample tested and therefore may not be a true reflection of the properties received.

Tolerances

Outside Diameter	Surface Finish	Surface Hardness	Straightness
Ø ≤ 20mm f8. Ø > 20mm f7. Roundness within ½ of tolerance.	0.2 µm Ra or better	850 HV (0.1) minimum	0.3mm/m on the total length of bar

Corrosion Resistance

		Size Range	
CK45	200 Hours in Neutral Salt Spray Rating 9 minimum	Metric	Stock sizes up to 250mm Ø
20MnV6		Imperial	Stock sizes upto 6" Ø

Neutral Salt Spray (NSS) test according to ISO 9227 with results evaluated according to ISO 10289

We are also able to supply

- Various grades with a higher corrosion resistance available upon request
- Other steel grades include 42CrMo4, 20MnV6 500 Hour and Nickel Chrome
- Induction hardened chrome plated bar in CK45 and 42CrMo4
- Larger sizes and long lengths available upon request

Chrome Plated Stainless Steel Bar

EN10088-3 Grade X17CrNi16-2 / 1.4057
(previously BS970 Grade 431S29T)

Chemical Composition %

C	Si	Mn	P	S	Cr	Ni
0.12-0.22	1.00 max	1.50 max	0.04 max	0.03 max	15.0-17.0	1.50-2.50

Mechanical Properties

Yield Strength (R _{p0.2})	Tensile Strength (R _m)	Elongation (A)
600 N/mm ² min	800 N/mm ² min	*12% min

* For Dia ≤ 60mm Elongation 14% Min

Tolerances

Outside Diameter	Surface Finish	Surface Hardness	Straightness
Ø ≤ 20mm f8. Ø > 20mm f7. Roundness within ½ of tolerance	0.2 µm Ra or better	850 HV (0.1) minimum	0.3mm/m on the total length of bar

Corrosion Resistance

Corrosion Resistance	Size Range	
	Metric	Imperial
600 Hours in Neutral Salt Spray Rating 10	Stock sizes upto 200mm Ø	Stock sizes upto 4" Ø

Neutral Salt Spray (NSS) test according to ISO 9227 with results evaluated according to ISO 10289

We are also able to supply

- Other specialist stainless steel grades, including:
Austenitic 304/304L and 316/316L
Precipitation Hardened 17/4PH
Duplex F51
- Also available in an un-chromed condition
- Larger sizes and long lengths available upon request



Chrome Plated Bar Size Range

Diameter mm	Diameter inch	Weight Kg/m	Tolerance mm	Diameter mm	Diameter inch	Weight Kg/m	Tolerance mm
4.00		0.099	-0.013 / -0.035 f8	50.00		15.410	-0.030 / -0.060 f7
6.00		0.223		50.80	2	15.900	
8.00		0.397		55.00		18.640	
9.53	3/8	0.563		56.00		19.320	
10.00		0.620		57.15	2 1/4	20.130	
				60.00		22.180	
12.00		0.097	-0.016 / -0.043 f8	63.00		24.460	
12.70	1/2	1.000		63.50	2 1/2	24.850	
14.00		1.220		65.00		26.040	
15.88	5/8	1.550		69.85	2 3/4	30.070	
16.00		1.580		70.00		30.200	
18.00		2.000		75.00		44.660	
				76.20	3	35.780	
19.05	3/4	2.240	-0.020 / -0.053 f8	80.00		39.440	-0.036 / -0.071 f7
20.00		2.460		82.55	3 1/4	41.990	
22.00		2.980	-0.020 / -0.041 f7	85.00		44.520	
22.22	7/8	3.040		88.90	3 1/2	49.000	
25.00		3.850		90.00		49.910	
25.40	1	3.980		95.00		55.600	
28.00		4.830		100.00		61.620	
28.57	1 1/8	5.030		101.60	4	63.610	
				105.00		67.930	
30.00		5.550	-0.025 / -0.050 f7	110.00		74.560	
31.75	1 1/4	6.210		114.30	4 1/2	80.490	
32.00		6.310		115.00		81.480	
33.00		6.720		120.00		88.740	-0.043 / -0.083 f7
34.92	1 3/8	7.510		125.00		96.290	
35.00		7.550		127.00	5	99.370	
36.00		7.990		130.00		104.330	
38.10	1 1/2	8.950		140.00		120.760	
40.00		9.860		150.00		138.620	
42.00		10.940		152.40	6	149.090	
44.45	1 3/4	12.180		160.00		157.720	
45.00		12.480		180.00		199.620	
47.62	1 7/8	14.060		200.00		246.440	
				220.00		300.080	
				250.00		387.500	

Corrosion Resistance Chart

Our standard product offers corrosion resistance up to 200 hours with a rating of 9 minimum. For high grade applications we are able to offer bars with a double layer of chrome. The corrosion resistance of this product in a neutral salt spray test is 500 hours with a rating of 9 minimum.

The impermeability of the chrome layers is checked by means of unified tests in a saline cloud and the results are valued with protection factors. The tests are accelerated and therefore the life prospects can only be based on personal experience.

Tests are continuously carried out on specimens, the results shown below are based on tests at our mill and at independent laboratories after an accelerated test in a saline cloud according to ISO 9227, with results evaluated according to ISO 10289.

TEST Hours	Neutral Salt Spray (NSS) Test	
	Standard 200 Hour	500 Hour Bar
24	10	10
48		
72		
96		
120		
144		
168		
192	9	
216		
240		
264		9
288		
404		
528		

For exceptional uses under extreme conditions we are able to offer material with a corrosion resistance of 1000 hours in NSS test.

CAST IRON BAR SPECIFICATIONS AND SIZES

Cast Iron Bar (Continuously Cast Flake and Spheroidal Graphite Iron)

EN16482 GJL 250

EN16482 GJS 400-15 / 500-7

Chemical Composition %

Typical ranges for information purposes only				
C	Si	Mn	P	S
2.90-3.70	2.10-3.00	0.10-0.80	0.3 max	0.1 max

Mechanical Properties

Tensile properties as taken from the mid-radius of the cast bar, not from a separately cast test piece

	Dia.	Anticipated Values			Hardness
		Yield (R _{p0.2})	Tensile (R _m)	Elongation	
GJL 250	20 - 40 mm	-	225	-	160 - 230 HB
	40 - 80 mm	-	195	-	
	80 - 150 mm	-	170	-	
	150 - 300 mm	-	155	-	
GJS 400-15	25 - 50 mm	250	400	15%	130 - 180 HB
	55 - 100 mm	250	390	14%	
	105 - 200 mm	240	370	11%	
	205 - 600 mm +	240	370	11%	
GJS 500-7	25 - 50 mm	320	500	7%	170 - 230 HB
	55 - 100 mm	300	450	7%	
	105 - 200 mm	290	420	5%	
	205 - 600 mm +	290	420	5%	

Size Range

GJL 250	GJS 400-15 & 500-7
Sizes up to 280mm Ø available from stock. Larger sizes upto 500mm Ø available upon request	Sizes upto 500mm Ø available upon request

We are also able to supply

- Engineering steel bar (black) in grades CK45 and S355J2 from Group stock.



Quick Reference Guide For Tube

	Suitable for Honing	Honed / Skived	HFS Bored & Honed	Smooth Bore	Hydraulic Linepipe
Specification	EN10305-1/2	EN10305-1/2	EN10297-1 EN10210-1	EN10305-2	EN10305-4
Steel Grade ¹	E355	E355	E355 S355J2H	E355	E235
Condition	+SR	+SR	-	+C	+N
Min Yield ²	520 MPa 490MPa for OD > 230mm & WT > 16mm	520 MPa	Varies based on T (see specs)	510 MPa	235 MPa
Min Tensile ²	580 MPa	580 MPa		640 MPa	340 MPa
Min Elongation	14%	14%	18%	4%	25%
Impacts ³	27J min average @ -20°C				
HFS Bored & Honed	Honing Allowance	H8	H8-H11	H9-H10	According to specification
Bore Surface Roughness	-	Ra max 0.4 µm	Ra max 0.4 µm	Ra max 0.8 µm	According to specification

Outside Diameter Tolerance Cold Drawn Tube +C	
Diameter mm	Tolerance mm

25 - 30	+/- 0.08
30.01 - 40	+/- 0.15
40.01 - 50	+/- 0.20
50.01 - 60	+/- 0.25
60.01 - 70	+/- 0.30
70.01 - 80	+/- 0.35
80.01 - 90	+/- 0.40
90.01 - 100	+/- 0.45
100.01 - 120	+/- 0.50
120.01 - 140	+/- 0.70
140.01 - 160	+/- 0.80
160.01 - 180	+/- 0.90
180.01 - 200	+/- 1.00
200.01 - 220	+/- 1.10
220.01 - 240	+/- 1.20
240.01 - 260	+/- 1.30
260.01 - 280	+/- 1.40
280.01 - 300	+/- 1.50
300.01 - 320	+/- 1.60
320.01 - 340	+/- 1.70
340.01 - 360	+/- 1.80
360.01 - 380	+/- 1.90

HFS Bored & Honed (All tolerances are -0.00 / + figures shown)				
Bore mm	H8 mm	H9 mm	H10 mm	H11 mm

> 20 - 30	0.033	0.052	0.084	0.130
> 32 - 45	0.039	0.062	0.100	0.160
> 50 - 80	0.046	0.074	0.120	0.190
> 80 - 120	0.054	0.087	0.140	0.220
> 125 - 180	0.063	0.100	0.160	0.250
> 185 - 250	0.072	0.115	0.185	0.290
> 260 - 300	0.081	0.130	0.210	0.320
> 320 - 400	0.089	0.140	0.230	0.360
> 420 - 500	0.097	0.155	0.250	0.400
> 520 - 630	0.110	0.175	0.280	0.440
> 640 - 660	0.125	0.200	0.320	0.500

¹ E355 is still often referred to as ST52 acc. to DIN 2391/2393/2448
² MPa = N/mm²
³ On a 10 x 10 specimen

Note
OD tolerances are for +C condition material, for other finish conditions please refer to the product specification.

Quick Reference Guide For Chrome Plated Bar

Steel Grade	20MnV6	CK45	Stainless 431/1.4057
Min Yield ²	380 MPa	275 MPa	600 MPa
Min Tensile ²	530 MPa	400MPa	800 MPa
Outside Diameter Tolerance	f8/f7	f8/f7	f8/f7
Surface Finish	0.2µm Ra or better	0.2µm Ra or better	0.2µm Ra or better
Chrome Deposit*	20µm min.	20µm min.	20µm min.
Corrosion Resistance in Neutral Salt Spray (NSS)	200 Hours Rating 9 minimum	200 Hours Rating 9 minimum	600 Hours Rating 10

* For items ≤ 20mm Dia, chrome deposit shall be 14µm Min.

Useful Formulae and Conversion Factors

From	Multiply by
Millimetres to inches	0.03937
Inches to millimetres	25.4
Metres to feet	3.281
Feet to metres	0.3048
Kg to Lbs	2.2046
Lbs to Kg	0.454
Kg/mm ² to N/mm ²	9.807
N/mm ² to Kg/mm ²	0.102
N/mm ² to PSI	145.45
PSI to N/mm ²	0.00688
Kg/m to Lbs/ft	0.672
Lbs/ft to Kg/m	1.4882
Bar to PSI	14.5
PSI to Bar	0.06895

Where
P = Internal Pressure in Bar
T = Wall Thickness in mm
OD = Outside Diameter in mm
S = Ultimate Tensile Strength in N/mm ²

Weight Calculation for	
Round Carbon Steel Tube (Metric)	(OD – T) × T × 0.0246615 = Kg/m
Round Carbon Steel Tube (Imperial)	(OD – T) × T × 10.68142 = Lbs/ft
Chromed Bar	Dia × Dia × 0.006161 = Kg/m
Cast Bar	Dia × Dia × 0.005845 = Kg/m

To determine Internal Bursting Pressure of a Round Steel Tube
$P = \frac{20 \times T \times S}{OD}$

To determine Wall Thickness based on Bore and required Working Pressure
$T = \frac{0.05 \times \text{Bore} \times \text{Pressure (Bar)} \times \text{Safety Factor}}{\text{N/mm}^2 \text{ (Yield) (Barlows formula)}}$

HOT FINISHED SEAMLESS TUBE SPECIFICATIONS AND SIZES



HOT FINISHED
SEAMLESS TUBE

Hot Finished Seamless Tube

EN10297-1 E355 / E470

Non-Alloy Quality Tube

Size Range				
STEEL GRADE	OD mm		WT mm	
	From	To	From	To
EN10297-1 E355 / EN10210 S355J2H*	26.9	812	2.9	120
EN10297-1 E470*	48.3	355.6	8	40

Chemical Composition % on mass								
STEEL GRADE	Typical ranges for information purposes only							
	C		Si		Mn		P	S
	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Max.
EN10297-1 E355 / EN10210 S355J2H	-	0.22	-	0.55	-	1.60	0.030	0.035
EN10297-1 E470	0.16	0.22	0.1	0.50	1.30	1.70	0.030	0.035

Mechanical Properties											
STEEL GRADE	Finished Condition	Yield Strength (R _{eH})					Tensile Strength (R _m)				Longitudinal Elongation % min
		For nominal wall thickness mm					For nominal wall thickness mm				
		≤ 16	> 16 ≤ 40	> 40 ≤ 65	> 65 ≤ 80	> 80 ≤ 100	≤ 16	> 16 ≤ 40	> 40 ≤ 65	> 65 ≤ 80	
EN10297-1 E355 / EN10210 S355J2H	+AR	355	345	335	315	295	490	490	490	470	20
EN10297-1 E470	+AR	470	430	-	-	-	650	600	-	-	17

* More sizes available within our group stock

Note

Some of our size range is available as triple certified to EN10297-1 E355 / EN10210 S355J2H & EN10216-3 P355N/TC1 and complies with the requirements of PED 2014/68/EU. Please ask our team for further information.



HOT FINISHED
SEAMLESS TUBE

Available from Group stocks

Hot Finished Seamless Tube

EN10297-1

Non-Alloy Quality Tube with Specified Impact Properties

Chemical Composition % on mass											
STEEL GRADE	Typical ranges for information purposes only										
	C		Si		Mn		P	S	Cr	Mo	
	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Max.	Min.	Min.	Max.
E235	-	0.17	-	0.35	-	1.20	0.030	0.035	-	-	-
E275K2	-	0.20	-	0.40	0.50	1.40	0.030	0.030	0.30	-	0.10
E355K2*	-	0.20	-	0.50	0.90	1.65	0.030	0.030	0.30	-	0.10
E420J2	0.16	0.22	0.10	0.50	1.30	1.70	0.030	0.035	0.30	-	0.08
E460K2	-	0.20	-	0.60	1.00	1.70	0.030	0.030	0.30	-	0.10
E590K2*	0.16	0.22	0.10	0.50	1.30	1.70	0.030	0.035	0.30	-	0.08
E730K2	-	0.20	-	0.50	1.40	1.70	0.025	0.025	0.30	0.30	0.45
	Ni		Al		Cu		N	Nb	Ti	V	
	Min.	Max.	Min.	Max.	Max.	Max.	Max.	Max.	Max.	Min.	Max.
E275K2	-	0.30	0.020		0.35		0.015	0.05	0.03	-	0.05
E355K2*	-	0.50	0.020		0.35		0.015	0.05	0.05	-	0.12
E420J2	-	0.40	0.010		0.30		0.020	0.07	0.05	0.08	0.15
E460K2	-	0.80	0.020		0.70		0.025	0.05	0.05	-	0.20
E590K2*	-	0.40	0.010		0.30		0.020	0.07	0.05	0.08	0.15
E730K2	0.30	0.70	0.020		0.20		0.020	0.05	0.05	-	0.12

Mechanical Properties												
STEEL GRADE	Finished Condition	Yield Strength (R _{eH})					Tensile Strength (R _m)				Longitudinal Elongation % min	Longitudinal Impact Value -20°C (J Min)
		For nominal wall thickness mm					For nominal wall thickness mm					
		≤ 16	> 16 ≤ 40	> 40 ≤ 65	> 65 ≤ 80	> 80 ≤ 100	≤ 16	> 16 ≤ 40	> 40 ≤ 65	> 65 ≤ 80		
E235	+AR	235	225	215	205	195	360	360	360	340	25	-
E275K2	+N	275	265	255	245	235	410	410	410	380	22	40
E355K2*	+N	355	345	335	315	295	490	490	470	470	20	40
E420J2	+N	420	400	390	370	360	600	560	530	500	19	27
E460K2	+N	460	440	430	410	390	550	550	550	520	19	40
E590K2*	+QT	590	540	480	455	420	700	650	570	520	16	40
E730K2	+QT	730	670	620	580	540	790	750	700	680	15	40

* Impact tested to Min 34J @ -40°C

Hollow Bars for Machining

EN10294-1 E470

Chemical Composition % on mass						
STEEL GRADE	Typical ranges for information purposes only					
	C	Si	Mn	P	S	V
EN10294-1 E470	0.16-0.22	0.10-0.50	1.30-1.70	0.030	0.015-0.05	0.08-0.15

Mechanical Properties				
STEEL GRADE	WT mm	Yield Strength (R _{eH}) min	Tensile Strength (R _m) min	Elongation
EN10294-1 E470	≤ 16	470 N/mm ²	650 N/mm ²	17
	> 16 ≤ 25	460 N/mm ²	620 N/mm ²	17
	> 25 ≤ 40	430 N/mm ²	600 N/mm ²	17
	> 40 ≤ 50	430 N/mm ²	550 N/mm ²	17

Note

- We carry a range of Carbon Hollow Bar in stock from 50mm OD to 200mm OD.
- We specialise in working with you and quality mills to develop sizes and specifications to meet your exact needs.





Size Range, Tolerances & Masses EN10297

	Wall Thickness mm																				Wall Thickness mm																			
D/S	2.9	3.2	4	4.5	5	5.6	6.3	7.1	8	8.8	10	11	12.5	14.2	16	17.5	20	22.2	25	28	30	32	35	40	42	45	50	55	60	65	70	75	80	85	90	95	100	120	D/S	
26.9			2.3	2.5	2.7	2.9	3.2																															26.9		
33.7			2.9	3.2	3.5	3.9	4.3	4.7	5.1	5.4	5.8																											33.7		
38.0			3.4	3.7	4.1	4.5	4.9	5.4	5.9	6.3	6.9	7.3																										38.0		
42.4	28	3.1	3.8	4.2	4.6	5.1	5.6	6.2	6.8	7.3	8.0	8.5	9.2																									42.4		
44.5			4.0	4.4	4.9	5.4	5.9	6.5	7.2	7.7	8.5	9.0	9.9																									44.5		
48.3					5.3	5.9	6.5	7.2	7.9	8.6	9.4	10.1	11.0																									48.3		
51.0	3.4	3.8	4.6	5.2	5.7	6.3	6.9	7.7	8.4	9.1	10.1	10.9	11.9	12.9																								51.0		
54.0			4.9	5.5	6.0	6.7	7.4	8.2	9.0	9.8	10.9	11.7	12.9	13.9	15.0																							54.0		
57.0			5.2	5.8	6.4	7.1	7.9	8.8	9.6	10.4	11.6	12.5	13.8	15.0	16.2																							57.0		
60.3			5.6	6.2	6.8	7.6	8.4	9.3	10.3	11.1	12.4	13.4	14.8	16.2	17.4	18.5																						60.3		
63.5			5.9	6.5	7.2	8.0	8.9	9.9	10.9	11.8	13.2	14.3	15.8	17.3	18.7	19.9																						63.5		
67.0					7.6	8.5	9.4	10.5	11.6	12.6	14.1	15.2	16.8	18.5	20.1	21.4	23.2																					67.0		
70.0			6.5	7.3	8.0	8.9	9.9	11.0	12.2	13.2	14.8	16.0	17.8	19.6	21.2	22.6	24.7																					70.0		
73.0					8.4	9.3	10.4	11.6	12.8	13.9	15.5	16.9	18.8	20.6	22.4	23.9	26.1																					73.0		
76.1			7.1	7.9	8.8	9.7	10.9	12.1	13.4	14.6	16.3	17.7	19.7	21.7	23.7	25.3	27.7	29.5																				76.1		
82.5			7.7	8.7	9.6	10.6	11.9	13.2	14.6	15.9	17.9	19.5	21.7	24.0	26.2	28.0	30.8	33.0	35.4																			82.5		
88.9			8.4	9.4	10.3	11.5	12.9	14.4	15.9	17.3	19.5	21.2	23.7	26.2	28.7	30.7	34.0	36.5	39.4																			88.9		
95.0					11.1	12.3	13.8	15.4	17.2	18.9	21.0	23.1	25.4	28.3	31.2	33.4	37.0	39.9	43.0	46.3	48.1																	95.0		
101.6			9.6	10.8	11.9	13.3	14.9	16.6	18.4	20.1	22.6	24.7	27.6	30.7	33.7	36.2	40.2	43.5	47.5	50.8	52.9																	101.6		
108.0			10.3	11.5	12.7	14.1	15.8	17.7	19.6	21.4	24.2	26.4	29.6	32.9	36.2	39.0	43.4	47.0	51.4	55.2	57.7	60.0																108.0		
114.3					13.5	15.0	16.8	18.8	20.9	22.8	25.7	28.1	31.6	35.1	38.6	41.7	46.5	50.4	55.3	59.3	62.3	64.9	68.5	73.3														114.3		
121.0					14.3	15.9	17.8	19.9	22.3	24.7	27.4	30.2	33.4	37.4	41.4	44.7	49.8	54.1	59.2	64.2	67.3	70.2	74.2	79.9														121.0		
127.0					15.0	16.8	18.8	21.0	23.4	25.5	28.9	31.6	35.5	39.6	43.6	47.2	52.8	57.4	63.2	68.3	71.7	75.0	79.3	85.8	88.0	91.0												127.0		
133.0			12.7	14.3	15.8	17.6	19.8	22.1	24.6	26.9	30.3	33.3	37.4	41.8	46.1	49.9	55.7	60.8	67.1	72.5	76.3	79.7	84.5	91.7	94.3	97.7												133.0		
139.7					16.6	18.5	20.8	23.3	25.9	28.3	32.0	35.1	39.5	44.0	48.6	52.7	59.0	64.3	71.1	77.0	81.1	85.0	90.3	98.3	101.2	105.0	110.6											139.7		
146.0							21.7	24.3	27.2	29.8	33.5	36.6	41.2	46.2	51.3	55.5	62.1	67.8	74.6	81.5	85.8	90.0	95.7	104.5	107.7	112.0	118.4											146.0		
152.4					18.2	20.3	22.8	25.5	28.4	31.0	35.1	38.5	43.4	48.5	53.6	58.1	65.3	71.3	79.0	85.8	90.5	95.01	101.0	112.0	114.3	119.2	126.3											152.4		
159.0							23.8	26.6	29.6	32.4	36.7	40.3	45.4	50.8	56.2	60.9	68.6	74.8	83.0	90.3	95.3	100.2	106.0	119.0	121.2	126.5	134.4	141.1	146.5									159.0		
165.1							24.7	27.7	31.0	33.9	38.2	41.8	47.0	52.8	58.8	63.7	71.6	78.2	86.4	94.7	100.0	105.0	112.3	123.4	127.5	133.3	141.9	149.3	155.5									165.1		
168.3							25.3	28.3	31.5	34.5	39.0	42.9	48.4	54.1	59.9	65.0	73.1	80.0	88.9	96.7	102.0	107.6	115.0	126.0	130.8	136.8	145.8	153.7	160.3									168.3		
171.0							25.6	28.7	32.2	35.2	39.7	43.4	48.9	54.9	61.2	66.2	74.5	81.5	90.0	98.7	104.3	109.7	117.4	129.2	133.6	139.8	149.2	157.3	164.2						</					

COLD DRAWN SEAMLESS MECHANICAL TUBE SPECIFICATIONS AND SIZES

Cold Drawn Seamless Mechanical Tube

National Tube Stockholders Ltd have extended their reach into the mechanical market by offering a bespoke tailored service for the supply of Cold Drawn Seamless Tubes in accordance with EN10305-1 E235 / E355 in various finished conditions. We now service a range of customers by buying direct from our quality mill partners and holding in stock for our customers call offs. We can work with you to determine the right product for your needs and have technical support available if required.

Cold Drawn Seamless Mechanical Tube EN10305-1 E235 & E355 +C/+N/+SR

Chemical Composition % on mass						
STEEL GRADE	Typical ranges for information purposes only					
	C	Si	Mn	P	S (a)	Al (b)
	Max.	Max.	Max.	Max.	Max.	Min.
EN10305-1 E235	0.17	0.35	1.20	0.025	0.025	0.015
EN10305-1 E355	0.22	0.55	1.60	0.025	0.025	0.020

(a) = For the steel grades E235 and E355 a controlled sulphur content of 0.015% to 0.040% is specified to support machinability.

(b) = This requirement is not applicable provided the steel contains a sufficient amount of other nitrogen binding elements, such as Ti, Nb or V.

Mechanical Properties			
STEEL GRADE	Finished Condition	Yield Strength (R_{eH})	Tensile Strength (R_m)
EN10305-1 E235	+C	-	480
	+SR	350	420
	+N	235	340 to 480
EN10305-1 E355	+C	-	640
	+SR	450*	580
	+N	355	490 to 630

* = For Tubes with outside diameter > 160mm, $R_{eH} \geq 420$ Mpa

CUSTOMER SERVICE

NTS employs over one hundred people at our sites in the UK and Ireland offering a wide range of products and services. The quality of our workforce is something that we are extremely proud of. Whilst we are always seeking to increase our customer base, our philosophy first and foremost is to retain our existing customers through exemplary service.

FROM SALE TO CUSTOMER

NTS is committed to excellence in customer service - we work in partnership with our customers to achieve best results on every project. From the first enquiry, our experienced team can assist with detailed product and application knowledge. With experts who can talk the language of a customers industry, we ensure that every order is accompanied with the correct documentation.

GUARANTEED DELIVERY

Based in Thirsk, North Yorkshire, our stockholding facility is ideally placed for swift fulfilment and delivery of your orders. Our logistical expertise facilitates sourcing, storage, processing and delivery of our products exactly when they are needed. NTS also has the knowledge and experience required to handle exports, with excellent worldwide links as part of the Bianco Group.

CLIENT ENDORSEMENTS

Over the decades NTS customers have always been the principal focus of our business and we pride ourselves in continually providing outstanding customer service. It really does matter to us but don't take our word for it - here is what our customers have to say...

"All the sales people are extremely professional. They are all well informed with great product knowledge and the stock accuracy is a major plus. The warehouse team are also great, cutting materials and dispatching on the same day."

"Stock is always there - if not they find it and don't charge me extra for this service. They're flexible and go the extra mile - nothing is too much trouble."

"They give me confidence in what they are saying. I feel like I can rely on them. If there were a problem, they would be there to support us."

"The deliveries and scheduling are excellent - you get it when you want it. The drivers are superb and the fact that NTS have their own trucks gives a good impression."

ROBOTIC SAW

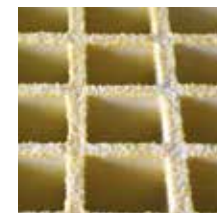
In 2018 we installed a fully automatic Robotic saw. This saw is designed for multiple cuts at an impressive speed which is approximately 6 times faster than a bandsaw. The Robotic saw, once programmed and loaded, automatically cuts and stacks the items, these can be deburred and etched during the process saving on handling. The saw has increased our capacity from around 20,000 cuts per week to 60,000!



CORE6 COMPOSITES

We offer quality Core6 GRP products ex stock, with our own fabrication facility we can offer bespoke design and fabrication of access solutions, handrail systems and much more. Core6 products are designed to offer fast, safe, effective and economic solutions.

MOULDED GRATING



Core6 Moulded Grating is an ideal flooring solution to walkway and access areas where slips, trips and falls are a potential hazard.

STRUCTURAL PROFILES



We supply a range of Core6 GRP structural profiles including Tube, I-Beam, Channel, Box and Angle.

These offer a unique combination of chemical resistance, size stability, high strength, thermal and electric non-conductivity.

PULTRUDED GRATING



Core6 Pultruded Grating is the best suited flooring solution to high load capacity access areas.

The manufacturing process produces the strongest composite gratings which are often specified in high-traffic areas.

TREAD COVERS & GRIT PLATES



Core6 GRP non-slip stair tread covers provide an effective solution to slippery, worn or uneven stair treads.

They can be installed to existing concrete, wood or steel stair treads and are highly visible, robust, durable and resistant to most chemicals.

HANDRAILS / LADDERS



We design and fabricate bespoke Core6 GRP handrail systems and ladders delivered to your exact requirements. Our products provide a virtually maintenance free alternative to conventional systems.

ACCESSORIES



We offer a full range of 316 grade stainless steel fixing clips, clamps, panel-to-panel joiners, pedestals and ramps available to secure all types of Core6 GRP panels.

VERTICAL SAW

We can cut to your exact specifications, ask us today.

CORE6 WORKSHOP

Our fully equipped workshop and extensive stocks enable us to fabricate Core6 products to your precise requirements on short lead-times.



OIL & GAS



CIVILS



PHARMACEUTICALS



PROCESSING



RAIL



UTILITIES



AUTOMOTIVE

PIPES, FITTINGS & FLANGES

PIPES, FITTINGS & FLANGES

We hold a comprehensive stock of Pipes, Fittings and Flanges for the Process and Petro-chemical sectors. Our size range covers ¼"NB to 24"NB in Seamless and from 6"NB to 48"NB in Welded API 5L Grade B. We can offer stock availability for immediate delivery and complete support for complex major global infrastructure projects.

PRODUCT	MANUFACTURE	TYPE	SPECIFICATION	SIZE RANGE
PIPE	SEAMLESS	CARBON STEEL	API 5L GRADE B API 5L X 52 API 5L X 65 ASTM A106 GRADE B ASTM A333 GRADE 6 ASTM A53	½" NB TO 24" NB ½" NB TO 12" NB 2"NB TO 8" NB ½" NB TO 24" ½"NB TO 12" ½"NB TO 24" NB
		ALLOY STEEL	ASTM A335 P11** ASTM A335 P22 ASTM A335 P5 ASTM A335 P9 ASTM A335 P91	½"NB TO 10" NB
		GALVANISED THREADED AND COUPLED	ASTM A106/A53 GRADE B	½"NB TO 4" NB
	WELDED	ELECTRIC (ERW) & HFI (HIGH FREQUENCY INDUCTION) (Multi Certified/ aligned or equivalent standards)	API 5L GRADE B/EN10217-2 P265GH TC1	6"NB TO 24" NB
		SUBMERGED ARC (SAW)	API 5L GRADE B	24"NB TO 48" NB
FITTINGS	SEAMLESS	BUTT WELD	ASME B16.9/ ASME SA234 WPB ASTM A420 WPL6* ASTM A350 LF2	1/2"NB TO 24" NB
FLANGES	PLATE	CARBON	BS4504 PN10 & PN16*	½"NB TO 24" NB
	FORGED	CARBON	ASTM A105 Normalised ASTM A350 LF2*	½"NB TO 24" NB

* Group Stock

NTS hold pipe in single and double random lengths as below:

Single random lengths ¼" - 12" pipe

Double random lengths 2" - 48" pipe

API 5L GR B PSL1. API 5L X42 PSL1 (≥OD 219.1mm). ISO 3183 L245. EN10208-10L245GA

Generally Equivalent to seamless ASTM A106 Grade B&C, ASTM A53 Grade B, EN10216-2 P265GH

** ASTM A335 P11 P22 P5 P9 P91 Mill Production.



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For product information ☎ 01845 577440 ✉ sales@nationaltube.co.uk

HOLLOW SECTIONS

HOLLOW SECTIONS

NTS are the UK market leaders in the supply of structural hollow sections into both on and offshore fabrications, and structures, with over 20,000 tonnes of material available ex stock.

Civil construction projects range from nuclear power plants, high rise London buildings including The Shard and Walkie Talkie, stadia and airports including Olympic venues, Wembley, Emirates, Wimbledon Centre Court and Heathrow and Gatwick developments.

Hot Finished Hollow Section to EN10210 S355J2H/NH

CHS	26.9mm OD x 3.2mm WT	to	660mm OD x 20mm WT
SHS	40mm x 40mm x 3mm WT	to	400mm x 400mm x 20mm WT
RHS	50mm x 30mm x 3.2mm WT	to	500mm x 300mm x 20mm WT

Cold Formed Hollow Section EN10219 S355J2H

CHS	33.7mm OD x 3.00mm WT	to	508mm OD x 16mm WT
SHS	30mm x 30mm x 3mm WT	to	500mm x 500mm x 20mm WT
RHS	50mm x 30mm x 2.5mm WT	to	600mm x 400mm x 20mm WT

All our hollow section stock is CE marked and from quality European mills.



OFFSHORE STRUCTURAL PRODUCTS

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In addition to the standard grades of structural hollow sections NTS has a specialist stock of high grade material for the offshore construction industry. Managed by an expert and dedicated team and working with the very best steel mills across the globe, NTS now offers this industry access to ex-stock, high quality material and the processing capabilities needed. Additional testing and third party inspections are a regular part of our service, as is the management of any third party processing you may require.

Weldable Structural Steels for Fixed Offshore Structures to EN10225 S355G13+N (steel no 1.1182+N)

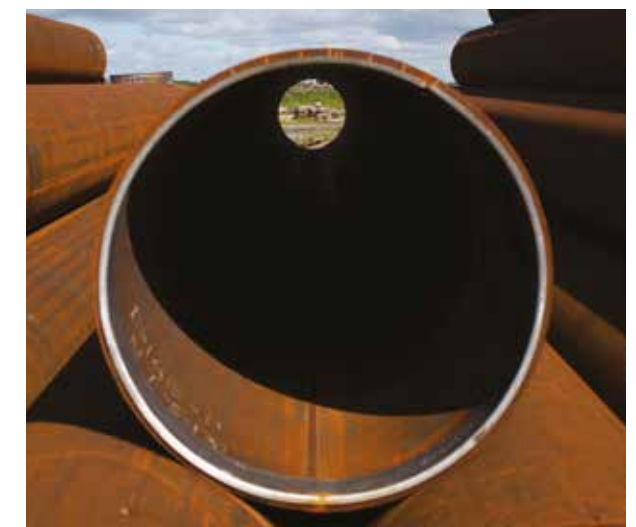
OD mm		WT mm	
273	610	12.5	25

Seamless pipe and hollow sections for Fixed Offshore Structures to EN10225 S355G15+N or Q&T and API 5L X52 PSL2 (MOD)

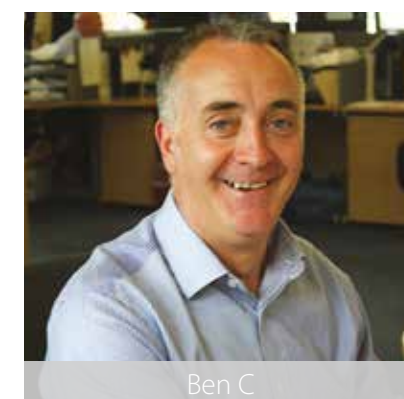
OD mm		WT mm	
219.1	660	12.5	32

SAW Longitudinally welded hollow section for Fixed Offshore Structures to EN10225 S355G8+N and API 5L X52N PSL2 (MOD)

OD mm		WT mm	
610	914	20.6	31.8



MEET THE TEAM



OTHER UK BIANCO GROUP COMPANIES

JOHN BELL PIPELINE EQUIPMENT COMPANY LTD

JBP is a market leading supplier of linepipe, fittings, flanges, valves, general steels and ancillary products. Initially focussed on supplying the high demands and exacting standards of the Aberdeen Oil and Gas industry, JBP now brings this wealth of knowledge, service and after sales care to multiple markets across the world and serves industry sectors as diverse as power and petrochemical to food and drink.

Today, with over 50 employees, JBP operates from two locations, Inverurie and Grangemouth, and is focussed on tailoring each and every offer to specific customer needs. With a core stock of over 8000 line items and a knowledge and ability to source and provide many more, JBP is committed to ensuring professionalism and integrity throughout.



JBP

BIANCO INTERNATIONAL LTD



Bianco International focuses on bringing the knowledge, expertise and product offering of our European Companies to new markets. In particular our sourcing capabilities, centred on relationships with the best producers in the world, and our proven Quality Assurance systems ensure quality and consistency of both product and service.

When dealing with Bianco International as a package and solutions provider you can be confident that we understand the pressures and demands of each job in detail and that our primary focus is supplying your project/order on time and in budget. We have our own employee in the Middle East and a representative in North Africa.



CLEVELAND STEEL & TUBES LTD

CST are proud to be founder members of the multi-national Bianco Group, with associate companies worldwide.

With an offering of over 70,000 tonnes of prime and surplus pipe available from our stock, and the ability to offer painting, cutting, welding and other bespoke fabrication work, we could be the solution you have been looking for.

Our experienced team can arrange additional testing and inspections, international shipping and our fabrication work comes fully CE Marked.

CST
CLEVELAND STEEL & TUBES LTD



SIDERGAMMA - ITALY

SIDERGAMMA
Cylindrical Tubes and Chromed Tubes



The Bianco Groups' own producer of Chrome Plated Bar and Tube

Adding strength to our stock

- Chrome Plated Bar from 8mm - 200mm dia
- Chrome Plated Tube from 12mm - 120mm dia
- Lengths from 3000mm to 8300mm
- Quality raw material primarily from European Steel mills
- Certified to UNI EN ISO 9001
- Own internal laboratory with Corrosion Test Chamber
- Procedures from Grinding to Polishing are all done in-house
- Annual production capacity is 20,000 tonnes



TUBIFAL S.R.L. - ITALY

The Bianco Groups' own Boring and Honing specialist

Offering bespoke sizes, long lengths and non-standard steel grades

- Honing of Cold Drawn Tube 25mm to 300mm ID
- Skiving & Roller Burnishing of Cold Drawn Tube from 70mm to 220mm ID
- Boring & Honing of Hot Finished Tube from 25mm to 660mm ID
- Drilling of Solid Bar from 20mm to 200mm ID
- Gross Turning from 40mm to 900mm OD
- Length Capacity 400mm to 12,000mm
- Maximum for Boring & Honing is 812mm OD





THE BIANCO GROUP

The Bianco Group consists of over 20 steel stockholding, distribution, processing and trading companies. Located at sites throughout the UK, Europe, the US and Canada and with over 1000 employees, we serve more than 80,000 customers worldwide. As an independent group we remain committed to our founding principles of developing long term relationships and ensuring excellence in service, unrivalled reliability and the highest quality, with the aim of always adding value for our customers.



The first company of the Bianco Group, F. G. Bianco, was founded in northern Italy in 1958. Today this company is still trading under the name of Tubindustria in Brescia. In the late 1960's and early 1970's SICAM in Italy, STAD in France and Cleveland Steel and Tubes in the UK were established, creating the foundations that would later allow the group to grow into our current international steel distribution network. The 1980's and 1990's saw rapid expansion across Europe and North America; in the main from organic growth but supported by strategic acquisitions, most recently with Sidergamma in Italy during 2015.

The Group specialises in providing seamless and welded tubes to the construction, process and energy industries as well as providing hot

finished and cold drawn seamless and welded tubes and solid bars to the mechanical and fluid power markets.

Today the Bianco Group is a large organisation but we continue to focus on the principles of efficiency, value and service. This can be seen both in the supply chain relationships we have, some of which date back to 1958, and through our ongoing financial investment in the businesses. We have in excess of 220,000m² of covered warehousing and stocks over 350,000 tonnes which allow us to meet and exceed the ever increasing demands of the customers and sectors we supply.

With a growing customer base, we welcome the opportunity to show you what we can do for your business.



UK AND IRELAND

- **National Tube Stockholders Ltd**
- Dalton, North Yorkshire, Thirsk
- Carlow, Ireland
- **John Bell Pipeline Equipment Co Ltd**
- Inverurie, Aberdeenshire
- Grangemouth, Stirlingshire
- **Cleveland Steel and Tubes Ltd**
- **Steel Beams and Columns Ltd**

NORTH AFRICA

- Algeria / Tunisia**
- **John Bell Pipeline Equipment Co Ltd**

EUROPE

Italy

- Sicam SpA
- Sicam Centro SpA
- Sidergamma
- Tubifal Srl
- Tubindustria Srl

Spain

- Proveedora de Tubos Occidental SL
- Madrid
- Vittoria
- Tarragona

Sweden

- SWEA Rör & Stål AB

France

- STAD S.A.
- Distritube S.A.
- Sottomet S.A.
- Sopramet

Germany

- Deurohr Handels GmbH
- RAMKO Rohrhandels GmbH

USA

- **National Tube Supply Co Inc.**
- Chicago, Illinois
- Houston, Texas
- Moreno Valley, California
- Beckley, West Virginia
- **Pipe and Tube Supplies Inc.**

CANADA

- **National Tube Supply Canada Inc.**
- **Interpipe Inc.**

UAE

- **Bianco International, Abu Dhabi**



Bianco Group

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