

Knight® Precision Wire...

Processing Facilities & Capabilities

Product Information

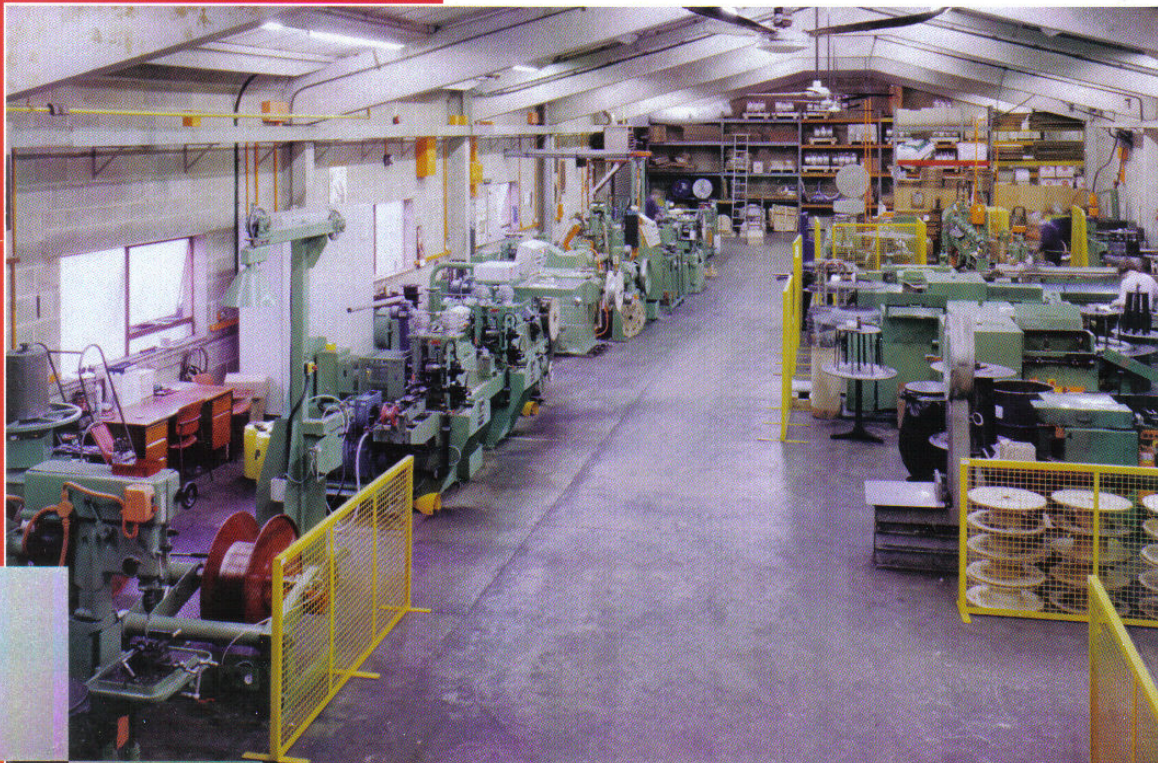
Product Range

- Stainless Steels
- Carbon & Mild Steels
- Nickel & Nickel Alloys
- Copper
- Brass
- Beryllium Copper
- Phosphor Bronze
- Titanium & Titanium Alloys

Supplied in high quality round, flat and shaped wire in the following forms:

- Coils
- Traverse Wound Spools
- Straightened Cut Lengths

Knight Precision Wire (KPW) has a number of partnership agreements with world class suppliers, whose products exhibit excellent dimensional accuracy, good surface finish and specific mechanical properties. Wire is available in a complete range of tempers from fully annealed to spring hard, in a variety of surface finishes, including high quality plated products.



Warehouse:

The Company is situated in its own premises, Hadley Works, a well equipped modern building of some 16,000 sq. ft, housing a range of wire stocks for immediate delivery or to be used for further processing to meet customers requirements.

Incoming materials are methodically checked and inspected against the purchase specification before being logged on to the computerised stock system. Careful control is maintained to enable complete batch traceability.

Processing:

KPW has a comprehensive range of production machinery, including 14 straightening and cutting-to-length machines, 5 flat wire rolling mills and various spooling units to accommodate a range of spool sizes. Square or rectangular sections can be produced using turks head units either in line on a flat wire mill or on a block to give material in coil form.

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Wire Straightening and Cut-to-Length

Wire can be decoiled, straightened and cut-to-length with a high degree of accuracy and an excellent surface finish.

Size Range:

Soft materials: 0.1 mm - 10.0 mm diameter

High tensile materials: 0.1 mm - 8.0 mm diameter

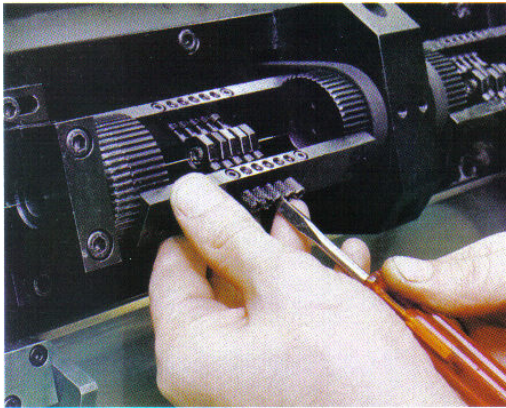
Most materials can be cut to lengths in the range:

1.0 mm - 3,000 mm

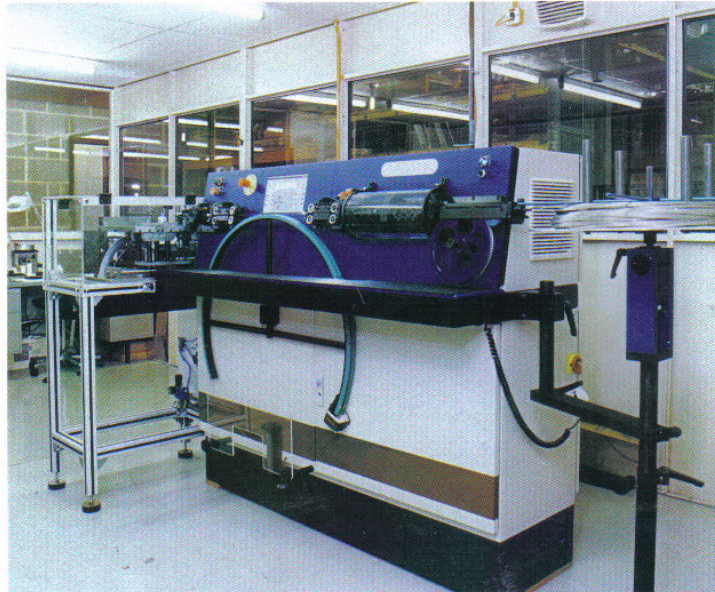
(subject to minimum ratio of diameter/length)

Lengths in excess of 3 metres can be supplied by special arrangement.

KPW is a specialist in the cutting to length of fine wires and has invested heavily in this field in recent years. The very latest high precision technology is employed to give fine wire lengths of superb accuracy and straightness.



Spinner head fine adjustment



Fine wire straightening machine and automatic cassette collection.

TOLERANCES (mm)			
LENGTH		Standard Tolerance (dia. > 1 mm)	Precision Tolerance (dia. < 1 mm)
Equal to and over	Up to		
5	100	+ 1.0 minus nil	+ 0.4 minus nil
100	500	+ 3.0 minus nil	+ 1.0 minus nil
500	1000	+ 5.0 minus nil	+ 1.5 minus nil
1000	3000	+ 7.0 minus nil	+ 3.0 minus nil

A tighter range of tolerances can be specified particularly for very fine wire sizes.



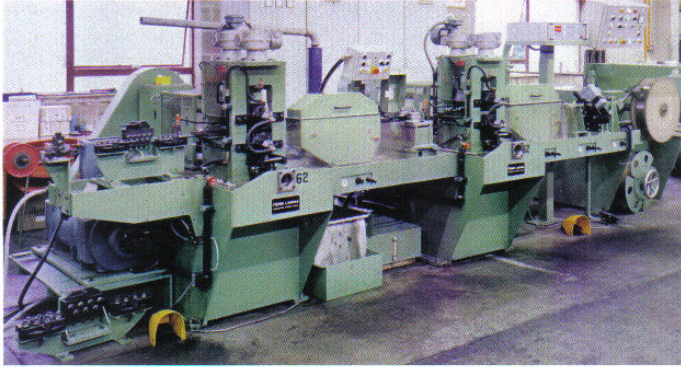
Dimensions - Metric/Imperial:

KPW can supply wire in either Metric or Imperial sizes.

Flat Wire Rolling

Knight Precision Wire has extensive rolling facilities producing round and square edge flat wire for a diverse range of markets including automotive, aerospace, electrical, medical, telecommunications and general engineering.

Five flat wire rolling mills, some equipped with edge rolling and laser gauging facilities, ensure production of high quality flat wire.



Two stand flat wire rolling mill

Size Range:

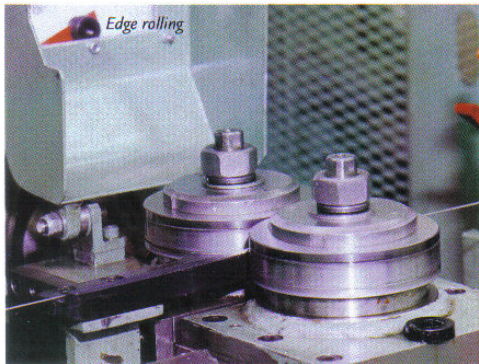
	Width (mm)	Thickness (mm)
FLAT WIRES (round edge) from	0.25	0.08
to	6.00	2.60
<i>All thicknesses above 0.5 mm can be supplied with a square edge.</i>		
SQUARE SECTIONS	Up to 3.00 mm square in hard materials	
	Up to 4.00 mm square in soft materials	

The Company has been producing flat wire for many years, rolling predominantly thin narrow sections with width to thickness ratios of less than 8:1, which perfectly complements Knight Strip Metals' usual slitting capabilities of 8:1 and above.

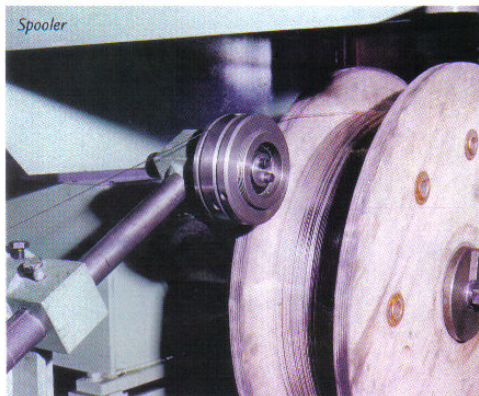
A recent acquisition has been a 2-stand flat wire rolling mill, incorporating an edging unit (for tight width tolerances), a vacuum cleaning system and automatic laser gauging for complete control.

STANDARD ROLLING TOLERANCES (mm)

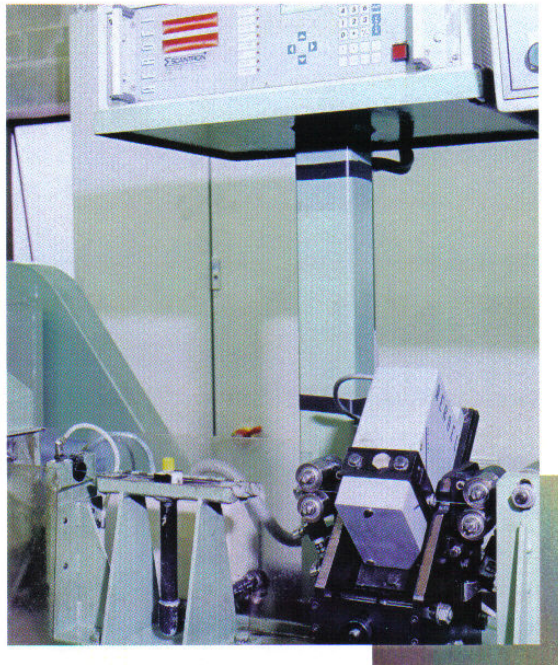
WIDTH		Square & Rectangular Sections	Round Edge Flat Wire
Equal to and over	Up to		
0.25	1.0	± 0.03	± 0.07
1.0	2.0	± 0.04	± 0.08
2.0	3.0	± 0.05	± 0.09
3.0	4.0	± 0.06	± 0.10
4.0	5.0	-	± 0.11
5.0	6.0	-	± 0.12
THICKNESS			
Equal to and over	Up to		
0.08	1.0	± 0.03	± 0.02
1.0	2.0	± 0.04	± 0.025
2.0	3.0	± 0.05	± 0.03
3.0	4.0	± 0.06	-
<i>A tighter range of tolerances for width and thickness can be agreed at the time of order.</i>			



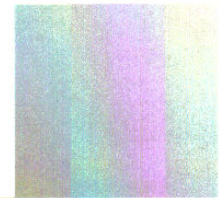
Edge rolling



Spooler



Non-contact gauge control



Processing Facilities & Capabilities

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Spooling

If wire is required in a continuous length and not in coil form, it is generally supplied on spools, selected to meet your process requirements. The following spools are readily available and should be specified when ordering. Spools are manufactured from strong thermoplastic materials to afford a high degree of protection...

SPOOL/REEL	TOTAL LENGTH (mm)	TRAVERSE LENGTH (mm)	FLANGE DIAMETER (mm)	BARREL DIAMETER (mm)	BORE DIAMETER (mm)	NOMINAL WEIGHT (kg)
DIN 80	80	64	80	50	16	0.7
DIN 100	100	80	100	63	16	1.4
DIN 125	125	100	125	80	16	3.0
DIN 160	160	128	160	100	22	6.7
DIN 200	200	160	200	125	22	13.0
DIN 250	200	160	250	160	22	22.0
DIN 250/36	200	160	250	160	36	22.0
DIN 355	200	160	355	224	36	40.0
DIN 500	250	180	500	315	36	100.0
DIN 610	410	350	610	310	42	360.0
C24	81	70	152	76	16	3.5
WELDING WIRE SPOOLS						
* Mk4 Argonaut	100	90	300	208	50.5	15.0
* Mk5 Argonaut	100	85	300	180	51.5	15.0

* Trade Name of Industrial Reels Ltd.

Bespoke wooden spools are also available in larger sizes and are a sound robust alternative, particularly suitable for heavier weights.

Quality

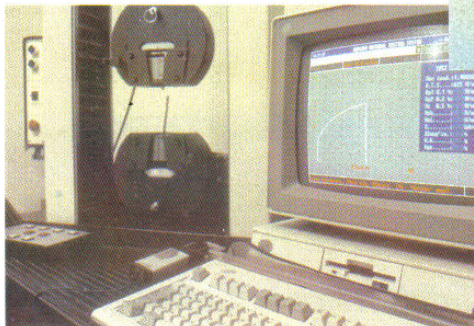
KPW has an extensive range of testing equipment which includes a computer-controlled tensile testing machine, including WINDOWS™-based software to give a thoroughly professional presentation of test results. Repeatability and consistent quality of all products is thus ensured.

The demand for improved end product cleanliness has been met by investment in the latest cleaning technology.

Fully traceable records are available on all our materials and Certificates of Conformity can be supplied on request.

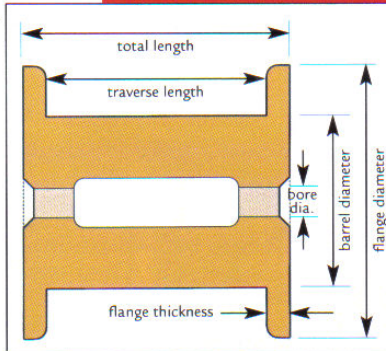
The overall objective of the Company is to provide only the best quality service. To this end we work to a Quality Management System as defined by BS EN ISO 9002 and carry BSI Approval.

The Company places great emphasis on the importance of training and improvement of all employees to meet the ultimate goal of complete customer satisfaction.



Tensile testing

The data printed in the above sections is based on information from our own and other organisations; although every effort has been made to ensure its accuracy, no guarantee or warranty is given or implied as to fitness for specific applications. Those suggested are for the purpose of illustration only and it is the responsibility of the user to decide on the most suitable product for any use or purpose whatsoever.



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