



# **ROPE AND STRAND** FOR ENGINEERING APPLICATIONS







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### NEXT GENERATION OF STEEL WIRE ROPE & STRAND Engineering products



The history of Brunton Shaw UK can be traced back to specialised rope and strand making for 200 years priding ourselves in developing and manufacturing innovative solutions for the complexities encountered in today's challenging conditions.

We have undertaken a major expansion program to develop the next generation of products, giving a uniquely diverse range which when coupled with our rigging and testing capability ensures best in class performance.



Our rope and strand are designed and manufactured to the very strict technical specifications demanded by our customers leading to a reputation for high quality and reliability.

This catalogue shows a variety of products for the most common applications:

Mast Cable Stays - Railway Barriers - Dog Tracks Chicken Farming - Cannery Equipment - Car Park Top Deck Restraint Vehicle Restraint - Anti-Vehicle Perimeter Security - Emergency Stop Cables Hose Reinforcement - Cable Lay and Buoy Recovery - Farming



NORSELAY STRUCTURAL SUPPORTS Diameter Mass Wire rope Overall

wire tope	Overall		roice	LOdu
mm	mm	kg/100 m	kN	tons
3	3.85	3.98	6.38	0.650
4	4.95	7.08	10.8	1.10
4.7	6.1	9.77	14.7	1.50
5	6.1	11.1	17.7	1.80
6.5	7.8	18.7	29.4	3.00
7	8.75	21.7	35.3	3.60
8	9.65	28.3	46.6	4.75
10	11.5	44.3	68.7	7.00
12	14	63.7	98.1	10.0
13.5	16	80.7	137	14.0
16	19	113	177	18.0
17.5	21	136	216	22.0
19	23	159	255	26.0
22	27	214	343	35.0
25	31	278	441	45.0
28	34	343	536	54.6
32	39	443	656	66.9
34	41	500	741	75.5
36	44	560	830	84.6
40	48	686	1020	104
44	53	832	1240	126





BruntonShaw

If not otherwise specified, ropes are supplied in 7x7 construction up to 34 mm overall and 7x19 construction from 39 mm overall

- Designed for radio antenna towers, mast stays and flare stacks
- Herringbone 6 strand construction with opposite lay adjacent strands enabling plastic impregnation of the polypropylene

Minimum Breaking

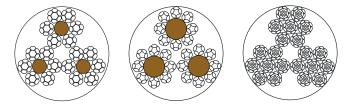
• Polypropylene covering locked in the rope interstices preventing creep corrosion should the coating be damaged



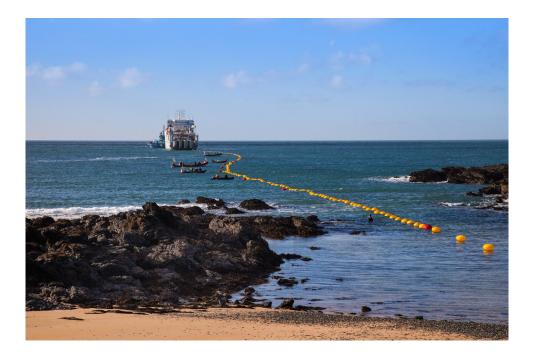


#### **GRAPNEL** CABLE LAY & BUOY RECOVERY

Diameter	Construction	Mass		Minimum	Breaking
		Air	Water	Force	Load
mm		kg/m	kg/m	kN	tons
32	3x4	1.05	0.410	139	14.2
41	3x4K	1.99	1.06	279	28.4
41	3x4K WC	2.37	1.36	319	32.5
41	3x6	1.68	0.720	209	21.3
41	3x8	1.99	0.640	249	25.4
50	3x7K	3.20	1.81	491	50.0
53	3x8	2.48	0.900	270	27.5
53	3x8s	3.89	2.10	448	45.7

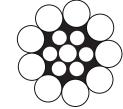


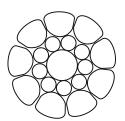
- PVC sheathed galvanized steel strand and manila fibre with high frictional grip without heat degradation
- High tensile compacted strands for added strength and flexibility and lower weight in water than steel ropes
- 3 unit rope construction for easy recoiling and superior torque stability in respect to 6 strand



#### **WELL SERVICE STRAND** WELL MAINTENANCE ACTIVITIES

Diameter	Construction	Mass	Minimum Breaking	
			Force	Load
in		kg/100m	kN	tons
3/16"	1x16 LH	11.7	18.7	1.90
7/32"	1x16 LH	15.8	26.2	2.67
1/4"	1x16 LH	20.7	32.5	3.31
5/16"	1x16 LH	30.4	57.9	5.90
3/16"	1xK19 RH	12.7	27.5	2.80
7/32"	1xK19 RH	16.6	37.3	3.80
1/4"	1xK19 RH	22.1	49.8	5.08
9/32"	1xK19 RH	27.9	63.1	6.43
5/16"	1xK19 RH	34.6	78.1	7.96





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- Available in 1x16 conventional construction or 1x19 compacted for extra strength
- Manufactured in continuous lengths on specialised reels from 15,000 to 30,000 ft metric on request
- Strictly controlled and recorded maximum strand diameter, within API9A

#### **CANNERY CABLE FOOD INDUSTRY**

Dian	neter	Mass	Material	Minimum	Breaking
Wire rope	Overall			Force	Load
mm	mm	kg/100 m		kN	tons
6	9.5	21.1	Stainless	21.4	2.18
6	9.5	21.1	Galvanized	25.5	2.60



- 6x19 plasticized, nylon covered •
- Available in 316 stainless steel or galvanized B coated wire
- Supplied with WSC as standard, SFC on request

# **RED & GREEN SIGNAL PULL CABLES**

EMERGENCY STOP CONVEYORS

Diam	neter	Mass	Finishing	Construction	Grade
Strand	Overall				
mm	mm	kg/100 m			
2.74	4.76	5.20	Galvanized	7x7	2160
3	4.76	6.00	Galvanized	7x7	1960



- 7x7 construction
- Galvanized B wires
- Available either with red or green PVC coating

### PLASTIC IMPREGNATED & PLASTIC SHEATHED ROPES GRAB ROPES, DRAG LINES



Brunton Shaw UK have the facilities to cover ropes, strand & wire with a variety of plastics including PVC, polypropylene, nylon, urethane and polyethylene.

#### Plastic Impregnated Ropes (PIR)

- Recommended for coal & ore unloaders, piling operations, crane and hoisting applications in dusty environments, e.g. steel works
- Improved wear and fatigue resistance, reduced drum and sheave wear
- Diameter range: 13 mm to 70 mm
- Rope types: 6 and 8 strand, any grade and surface finishing
- Available in orange, other colours on request

#### **Plastic Sheathed Ropes**

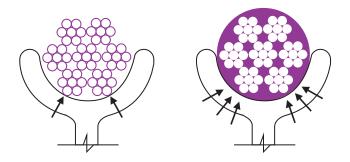
- Diameter range: 4 mm to 70 mm
- Coating thickness: 0.5 mm to 6 mm depending on rope diameter
- Rope types: 6 strand, 8 strand, non rotating, any grade and surface finishing
- Available in orange, other colours on request



### PLASTIC IMPREGNATED & PLASTIC SHEATHED ROPES GRAB ROPES, DRAG LINES

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The steel wire rope is impregnated by a special process whereby the individual strand gaps within the rope are filled with a sealing thermoplastic material forming a protective layer between the individual strands and around the core of the rope.



The end result is a balanced, sealed-lubricated wire rope that provides exceptional performance and extended service life when working under severe operating conditions, such as:

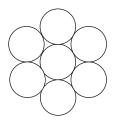
- Bulk unloader cranes
- Ship lift ropes
- Dredging, inhaul and outhaul ropes
- Open cast mining
- Rope shovels



# ENGINEERING STRAND



Diameter		Mass	Finishing	Construction	Grade
Strand	Overall				
mm	mm	kg/100 m			
4.8	NA	11.1	Galvanized	1x7 LH	415-540
8.8	NA	35.9	Galvanized	1x7 LH	415-540
12	NA	69.5	Galvanized	1x7 LH	415-540
8	NA	29.3	Bright	1x7 LH	1570
10	NA	49.0	Galvanized	1x7 LH	1570

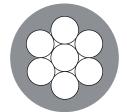


- 1x7 general purpose strand •
- Supplied as standard with galvanization A giving excellent corrosion protection •
- Available in 4.8 to 10 mm diameter range •



### **BARRIER STRAND VEHICLE RESTRAINT, PERIMETER SECURITY**

Diameter		Mass	Finishing	Construction	Grade
Strand	Overall				
mm	mm	kg/100 m			
15.7	19	130	Galvanized	1x7 RH	1860/1770
19	22	187	Galvanized	1x19 RH	1770





- 1x7 or 1x19 construction •
- Covered in high density black polyethylene •
- Available in 15.7 and 19 mm diameter •



### SPACELAY Chicken Farming, dog tracks

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Dian	neter	Mass	Minimum Breaking	
Wire rope	Overall		Force	Load
mm	mm	kg/100 m	kN	tons
3	3.85	3.57	6.20	0.632
4	4.95	5.83	9.70	0.989
5	6.1	9.06	15.0	1.53
6.5	7.8	14.8	22.0	2.24



- Enhanced design with extra large spacer wires
- Protection of individual strands for low internal friction and wear
- Complete bond between inner plastic and outer coating



### COATED WIRE HOSE REINFORCEMENT

Diameter		Mass	Grade
Wire	Overall		
mm	mm	kg/100 m	
1.13	1.46	0.89	1980-2180
1.5	3	1.87	450-950
1.63	213	1.77	1980-2180
2	3.7	3.16	450-950
2.5	4	4.55	450-950
4	5.2	10.5	450-950
5	6.2	16.4	450-950
6	7	23.1	450-950



- Wire tensile to customer specification
- Coating in either PVC or polypropylene
- Coating colour at customer request

# **RIGGING PRODUCTS & SERVICES**



Brunton Shaw UK Rigging Department supplies lifting products and services to a number of markets including construction, offshore, ports & shipping, steel industry, mining & car lifts.

#### Capabilities and services offered include:

- Flemish eyes up to 56 mm
- Aluminium ferrules from 1.5 mm through to 54 mm diameter
- Swaged fittings up to 76 mm
- Swaged endstops (button stops) up to 64 mm
- Hand splicing up to 64 mm
- Wire rope socketing up to 160 mm
- Swaging machines from 50ton to 1500ton
- NDT inspection, including MRT
- Wide range of services through our worldwide sister companies, e.g. rope inspection, installation, equipment hiring



Brunton Shaw UK Rigging Department has the capacity for cutting and coiling ropes from 1 mm through to 90 mm diameter. This facility is used for a number of applications including standard coil lengths of fishing ropes for the European market.





## **ROPE TESTING**

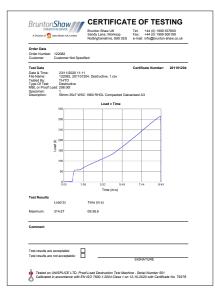


Every rope manufactured at Brunton Shaw UK undergoes a break test; destruction test of rope samples up to 600T can be also provided.

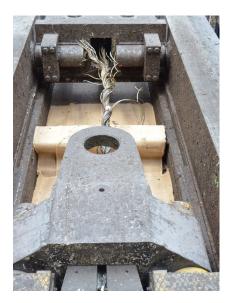
# Our complete, fast and efficient service is offered with samples coned and tested to give a turn around to suit all customer needs.

#### Capabilities and services offered include:

- Test beds calibrated to Class 1 level
- Certificates issued by Brunton Shaw with optional 3rd party witness (e.g. Lloyds, DNV, ABS)
- 600T test bed, computer controlled: 28-100 mm rope diameter, minimum sample length 3700 mm, maximum stroke 1500 mm
- 75T test bed: 8-42 mm rope diameter, minimum sample length 2700 mm, maximum stroke 900 mm. Also available for sling testing, minimum sample length 2000 mm
- 50T test bed: 6-39 mm rope diameter, minimum sample length 850 mm, maximum stroke 1045 mm. Also available for sling testing, minimum sample length 1450 mm







### **ROPE TERMINATIONS**

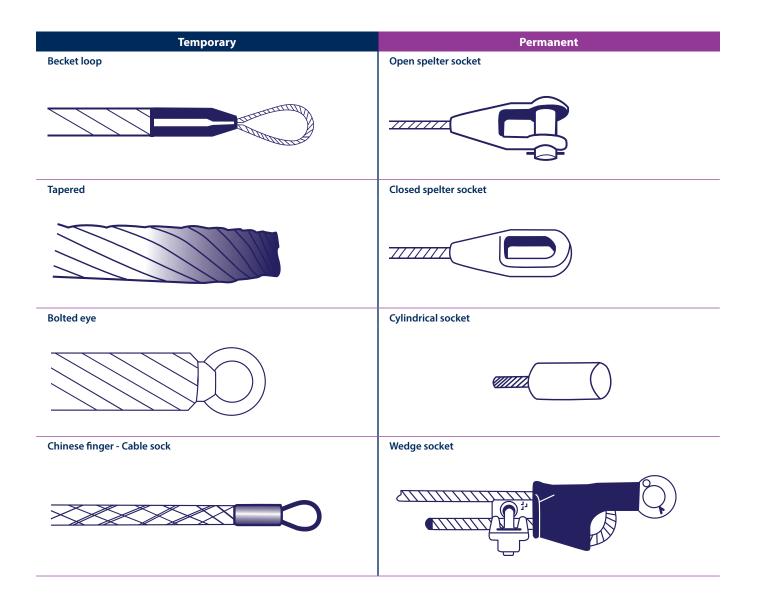


Temporary end connections must be used only for rewinding or installation, while permanent end connections can also be used for actual operations.

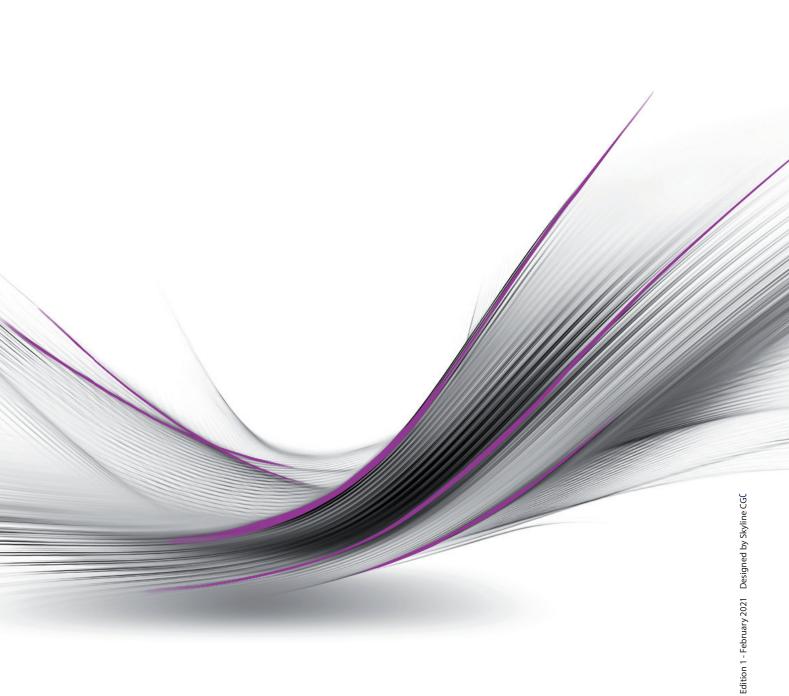
Permanent connections allow the Safe Working Load to be maintained and are characterized by a specific efficiency depending on the connection type, which varies from 100% for resin sockets to 80% for wedge sockets.

Temporary end connections must not be used as lifting devices, as they are not designed to ensure Safe Working Load but only to allow the rope to be moved from the storage reel to another reel or to the winch drum. During lifting, swivels can be used for non rotating ropes in case of special crane applications but must be avoided where rotation resistant ropes are not used, as they will have the tendency to unlay under load.

Some examples of end connections are shown in the following table. Special sockets or connections can be provided on demand.







#### **BRUNTON SHAW**

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