ISLAND ROPES & RIGGING LTD

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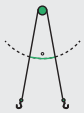
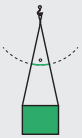
FIBRE ROPE SLINGS

Island Ropes fibre lifting slings are manufactured from ropes produced with HMPE (High Modulus Polyethylene) fibre. These slings are the lightweight, efficient and easy to handle option compared to a wire rope sling. The slings work out at about a seventh of the weight of the wire rope option and diameter for diameter the breaking loads are comparable.

A HMPE fibre rope sling is much safer to use than a wire rope sling as they are so much lighter, with little or no recoil.

Our fibre Rope slings are manufactured under ISO 2307 and EN1492 standard. The information below is based on using our approved splicing procedures and the figures shown represent new slings.

SAFE WORKING LOAD FACTORS UNDER GENERAL USAGE OF SYNTHETIC FIBRE ROPE SLINGS DIRECT LOADED OR HITCHED ARE:

	Single Leg		Double Leg					Basket Hitched							
	Choke Hitched		Direct Loaded			Choke Hitched									
	Round Load	Rect Load				Round Load	Rect Load	Round Load				Rect Load			
															
Angle/ Factor			0-60°	90°	120°			0°	60°	90°	120°	0°	60°	90°	120°
Load	0.75	0.5	1.73	1.41	1.0	1.3	0.87	2.0	1.73	1.41	1.0	1.0	0.87	0.71	0.05

NOTES

1. Minimum BF ratings of the rope ratings are stated in ISO 2307 or as evidenced by the manufacturer's certificate by the manufacturer's certificate in the case of UHMwPE fibres and plaited construction.
2. SWL formula = (Minimum Breaking Force) x L/(9.81 65 x 8) and the exact (i.e. non-rounded) values for L.

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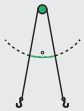
KEY CONSIDERATIONS IN SELECTING CORRECTLY SPECIFIED PRODUCT FOR THE APPLICATION:

- Rope selection must consider all the fibre characteristics as per the manufacturers load specification and mode/factors as per the EN1492 and ISO 2307 standards
- Ropes should not be subject to Dynamic (shock) Loading i.e. sudden application of 10- 15% of the BF rating
- All mechanical hardware must be free from defect prior to use
- Ropes should not be subjected to excessive heat abrasion or chemical exposure
- Strength loss factors must be applied to splicing (10 – 20% dependent on type) and are up to 50% for basic knotting used for joining or termination
- Always consult the manufacturer for technical information or assistance as required

BREAK LOADS:

Safe Working Load (Tonnes)													
Diameter	MBL (T)	Direct Load				Choke Hitch		Basket Hitch				Grommets	
		Single	Multileg			Single Round Load	Single Square Load	Single Round Load				Single	Double
			0-60°	90°	120°			0°	60°	90°	120°	0°	45°
													
12mm	12.5	2.5	4.3	3.5	2.5	1.9	1.3	5.0	4.3	3.5	2.5	3.8	6.5
16mm	21.2	4.2	7.3	6.0	4.2	3.2	2.1	8.5	7.3	6.0	4.2	6.4	11.0
18mm	30.0	6.0	10.4	8.5	6.0	4.5	3.0	12.0	10.4	8.5	6.0	9.0	15.5
22mm	47.0	9.4	16.3	13.3	9.4	7.1	4.7	18.8	16.3	13.3	9.4	14.1	24.3
24mm	55.0	11.0	19.0	15.5	11.0	8.3	5.5	22.0	19.0	15.5	11.0	16.5	28.5
28mm	73.5	14.7	25.4	20.7	14.7	11.0	7.4	29.4	25.4	20.7	14.7	22.1	38.1
30mm	82.5	16.5	28.5	23.3	16.5	12.4	8.3	33.0	28.5	23.3	16.5	24.8	42.7
32mm	84.6	16.9	29.3	23.9	16.9	12.7	8.5	33.8	29.3	23.9	16.9	25.4	43.8
36mm	106.8	21.4	37.0	30.1	21.4	16.0	10.7	42.7	37.0	30.1	21.4	32.0	55.3
44mm	131.0	26.2	45.3	36.9	26.2	19.7	13.1	52.4	45.3	36.9	26.2	39.3	67.9
56mm	230.0	46.0	79.6	64.9	46.0	34.5	23.0	92.0	79.6	64.9	46.0	69.0	119.1
64mm	320.0	64.0	110.7	90.2	64.0	48.0	32.0	128.0	110.7	90.2	64.0	96.0	165.8
80mm	500.0	100.0	173.0	141.0	100.0	75.0	50.0	200.0	173.0	141.0	100.0	150.0	259.0
84mm	518.0	103.5	179.1	146.1	103.5	77.9	52.0	207.2	179.1	146.1	103.5	155.7	268.3
88mm	570.0	113.9	197.1	160.8	113.9	85.7	57.2	228.0	197.1	160.8	113.9	171.3	295.3
92mm	625.5	125.0	216.3	176.5	125.0	94.1	62.8	250.2	216.3	176.5	125.0	188.0	324.0
96mm	683.5	136.6	236.3	192.8	136.6	102.8	68.6	273.4	236.3	192.8	136.6	205.4	354.1
100mm	744.5	148.8	257.4	210.0	148.8	112.0	74.7	297.8	257.4	210.0	148.8	223.7	385.7
104mm	809.0	161.7	279.7	228.2	161.7	121.7	81.2	323.6	279.7	228.2	161.7	243.1	419.1
108mm	876.5	175.2	303.1	247.3	175.2	131.8	88.0	350.6	303.1	247.3	175.2	263.4	454.1
112mm	950.0	189.9	328.5	268.0	189.9	142.9	95.4	380.0	328.5	268.0	189.9	285.5	492.1