Large Braits

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Yale is pleased to announce its acquisition and installation of equipment necessary to produce large-diameter plaited ropes. Our capability in these styles of ropes, widely accepted in smaller diameters, now continues through 5″ diameter, or 15″ circumference. This page provides our preliminary data for these styles of ropes. The first, Nylon Brait, in sizes 6″ through 15″ circumference, is based on Nylon 6-6 and is a four-stage rope, laid firm and easily spliced.

The second, Polyester Brait, is also a 4-stage rope based on PET high-tenacity yarn, offering exceptional tension fatigue, especially wet. The third rope is a plaited Ultra High Molecular Weight Polyethylene. UHMWPE is one of the strongest fibers known and is very low elongating. The geometry of the plaited UHMWPE fiber allows more substantial dynamic loads to be imparted on the rope without compromising its longevity.

Specifications

Larger Nylon Brait

Diameter		Average Spliced Break Strength*		Minimum Spliced Break Strength*		Maximum** Working Load 5:1		Weight	
Inches	(mm)	Lbs	Kg	Lbs	Kg	Lbs	Kg	Lbs/100ft	Kg/100m
2	(51)	101,000	45,850	90,900	41,265	20,200	9,170	100	149
2-1/4	(57)	136,000	61,740	122,400	55,566	27,200	12,348	132	197
2-5/8	(67)	173,000	78,540	155,700	70,686	34,600	15,708	170	253
3	(76)	215,000	97,610	193,500	87,849	43,000	19,522	220	328
3-1/4	(83)	271,000	123,030	243,900	110,727	54,200	24,606	282	420
4	(102)	383,000	173,880	344,700	156,492	76,600	34,776	402	599
5	(127)	603,000	273,760	542,700	246,384	120,600	54,752	604	899

Larger Polyester Brait

Diameter		Average Spliced Break Strength*		Minimum Spliced Break Strength*		Maximum** Working Load 5:1		Weight	
Inches	(mm)	Lbs	Kg	Lbs	Kg	Lbs	Kg	Lbs/100ft	Kg/100m
2	(51)	101,000	45,850	90,900	41,265	20,200	9,170	121	180
2-1/4	(57)	136,000	61,740	122,400	55,566	27,200	12,348	160	238
2-5/8	(67)	173,000	78,540	155,700	70,686	34,600	15,708	206	307
3	(76)	215,000	97,610	193,500	87,849	43,000	19,522	266	396
3-1/4	(83)	271,000	123,030	243,900	110,727	54,200	24,606	341	508
4	(102)	383,000	173,880	344,700	156,492	76,600	34,776	486	724
5	(127)	603,000	273,760	542,700	246,384	120,600	54,752	731	1,089

Larger UHMWPE Brait

Diameter		Average Spliced Break Strength*		Minimum Spliced Break Strength*		Maximum** Working Load 5:1		Weight	
Inches	(mm)	Lbs	Kg	Lbs	Kg	Lbs	Kg	Lbs/100ft	Kg/100m
2	(51)	339,000	153,905	305,100	138,515	67,800	30,781	75	112
2-1/4	(57)	480,000	217,920	432,000	196,128	96,000	43,584	101	150
2-5/8	(67)	627,000	284,655	564,300	256,190	125,400	56,931	146	217
3-1/8	(79)	768,000	348,670	691,200	313,803	153,600	69,734	176	262
3-1/2	(89)	950,000	431,300	855,000	388,170	190,000	86,260	250	372
4	(102)	1,200,000	544,800	1,080,000	490,320	240,000	108,960	346	515

* Knots and abrupt bends significantly reduce the strength of all ropes and lower the maximum working load.

** Working load is based on static or moderately dynamic lifting/pulling operations. Instantaneous changes in load, up or down, in excess of 10% of the rope's rated working load constitute hazardous shock load and would void the normal working-load recommendation. Consult Yale Cordage for guidelines for working loads and the safe use of rope.