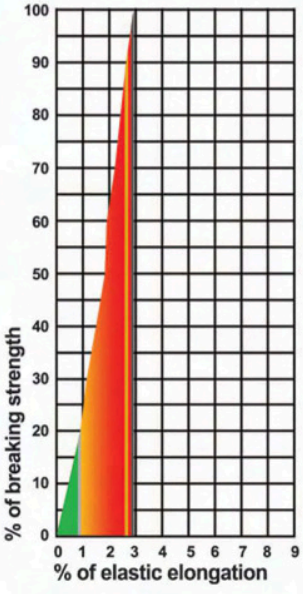
ULTREX™

Ultrex is a 12-strand single braid of 100% Ultra High Molecular Weight Polyethylene (UHMPE) fiber enhanced with Yale's Maxi-jacket HP coating supplying superior abrasion resistance. Ultrex's braid angles and twist level are designed to optimize break strength and keep stretch low. UHMPE is the most forgiving high modulus fiber giving better sheave cycling capabilities than other high tech fibers. Ultrex has zero water absorption and maintains its flexibility even in freezing conditions. As is the case for all Yale ropes the strengths shown in the charts are for spliced ropes, and the splice technique for Ultrex is very easily mastered.

Diameter Inches (mm)		Average Spliced Break Strength*		Minimum Spliced Break Strength*		Maximum** Work Load 5:1		Weight	
		Lbs	Kg	Lbs	Kg	Lbs	Kg	Lbs/ 100ft	Kg/ 100m
1/16	(2.0)	800	360	720	325	160	70	0.1	0.2
1/8	**(3.0)**	**1,900**	**860**	**1,710**	**775**	**380**	**170**	**0.3**	**0.5**
5/32	(4.0)	3,150	1,430	2,835	1,285	630	285	0.5	0.7
3/16	**(5.0)**	**5,250**	**2,380**	**4,725**	**2,145**	**1,050**	**475**	**1.0**	**1.5**
1/4	(7.0)	9,600	4,355	8,640	3,920	1,920	870	1.7	2.5
5/16	**(8.0)**	**13,500**	**6,125**	**12,150**	**5,515**	**2,700**	**1,225**	**2.4**	**3.6**
3/8	(9.0)	20,000	9,080	18,000	8,170	4,000	1,815	3.5	5.2
7/16	**(11.0)**	**25,700**	**11,665**	**23,130**	**10,500**	**5,140**	**2,330**	**4.6**	**6.8**
1/2	(12.0)	37,400	16,975	33,660	15,280	7,480	3,395	6.2	9.2
9/16	**(14.0)**	**45,000**	**20,430**	**40,500**	**18,385**	**9,000**	**4,085**	**7.5**	**11.2**
5/8	(16.0)	53,000	24,060	47,700	21,655	10,600	4,810	9.5	14.1
3/4	**(18.0)**	**75,000**	**34,050**	**67,500**	**30,645**	**15,000**	**6,810**	**13.5**	**20.1**
7/8	(22.0)	98,000	44,490	88,200	40,040	19,600	8,895	19.5	29.0
1	**(24.0)**	**120,000**	**54,480**	**108,000**	**49,030**	**24,000**	**10,895**	**23.5**	**35.0**
1-1/8	(27.0)	148,000	67,190	133,200	60,470	29,600	13,435	32.0	47.7
1-1/4	**(30.0)**	**172,000**	**78,085**	**154,800**	**70,275**	**34,400**	**15,615**	**38.0**	**56.6**
1-5/16	(32.0)	184,000	83,535	165,600	75,180	36,800	16,705	44.0	65.5
1-1/2	**(36.0)**	**230,000**	**104,420**	**207,000**	**93,975**	**46,000**	**20,880**	**57.0**	**84.9**
1-5/8	(40.0)	285,000	129,390	256,500	116,450	57,000	25,875	65.0	96.8
1-3/4	**(42.0)**	**330,000**	**149,820**	**297,000**	**134,835**	**66,000**	**29,960**	**78.0**	**116.2**
2	(48.0)	390,000	177,060	351,000	159,350	78,000	35,410	92.0	137.0

* **Knots** and abrupt bends significantly reduce the strength of all ropes and lowers 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 percent of the rope's rated working load constitutes hazardous shock load and would void normal working load recommendation. Consult Yale Cordage for guidelines for working loads and safe use of rope.



Energy Absorption
The colored area under the curve represents the rope's ability to do "work" and is expressed in foot-pounds per pound of rope in tension.
- Green working 317 ft. lbs./lb.
- Red ultimate 8,300 ft. lbs./lb.

Dielectric Strength: The maximum allowable leakage for clean, dry Ultrex is 75 Micro Amperes when tested at 90KV per ASTM 1701-05 "Routine Production Test". Absorbed and entrained moisture or impurities will increase ropes conductivity dramatically.

Splice using Yale's splicing technique document **#10015109** (all sizes), or technique document **#10018009** (video) for 3/4" and larger.

Maximum Working Load
Minimum Break Strength
Average Break Strength

Specific Gravity: 0.98