

DZ-TUG COMPOSITE DOUBLE BRAID

DZ-Tug ropes provide high strength, low stretch and superior abrasion resistance in a round jacketed construction. The ropes are constructed with a braided HMPE core. This core is encased in a braided jacket of polyester fiber that offers excellent abrasion resistance and durability.

DZ-Tug ropes can be used in a multitude of applications where a high strength, and round torque free rope is desired. DZ-Tug can be used in towing applications, harbor assist main lines, crane extension pendants, and general marine working lines. These ropes are available with a polyurethane finish in clear or any of six colors and are designed to offer a versatile high strength jacketed rope.

Features & Benefits

- High strength
- Lowest stretch
- Low creep
- Firm hand
- Torque free

Applications

- Harbor assist main lines
- Towing lines
- Vessel mooring lines

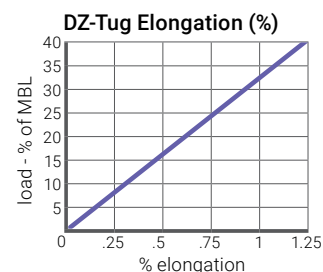
Nominal Diameter		Size (circ in.)	Approximate Weight		Minimum Tensile Strength Spliced Rope		Minimum Tensile Strength ISO Unspliced Rope	
inch	mm		lbs/ 100ft	kg/ 100m	lbs	MT (tonnes)	lbs	MT (tonnes)
ABS and DNV Type Approved Sizes								
3/4	18	2-1/4	20.9	31.0	47,800	21.7	54,000	24.5
7/8	22	2-3/4	23.1	34.4	61,800	28.0	69,000	31.3
1	24	3	32.7	48.7	74,000	33.6	83,000	37.6
1-1/8	28	3-1/2	34.1	50.8	84,300	38.2	94,000	42.6
1-1/4	30	3-3/4	38.4	57.1	105,000	47.6	117,000	53.1
1-5/16	32	4	50.0	74.5	137,000	62.1	153,000	69.4
1-1/2	36	4-1/2	63.1	93.9	157,000	71.2	175,000	79.4
1-5/8	40	5	71.7	106.7	176,000	79.8	196,000	88.9
1-3/4	44	5-1/2	88.4	131.6	215,000	97.5	239,000	108
2	48	6	98.5	146.6	221,400	100	246,000	112
2-1/8	52	6-1/2	110.9	165.1	245,000	111	272,000	123
2-1/4	56	7	127.9	190.3	284,300	129	316,000	143
2-1/2	60	7-1/2	152.8	227.4	423,900	192	471,000	214
2-5/8	64	8	170.3	253.4	470,100	213	522,000	237
2-7/8	70	8-5/8	207.8	309.1	569,400	258	633,000	287
3	72	9	229.8	342.0	630,300	286	700,000	317

Tensile Strengths are determined in accordance with Cordage Institute CI-1500, Test Methods for Fiber Rope and ISO 2307. Published Minimum Tensile Strength (MTS) assumes spliced eye terminations at each end of the rope. Weights actually calculated at linear density under stated preload (200d²) plus 4%. Diameter and circumference size published are nominal and reflect rope size after loading (10 cycles) to 50% of MTS. See reverse side for application and safety information.

Technical Information

Specific gravity	1.13*
Melting point	284°F (140°C)
Critical temp.	150°F (65°C)
Coefficient of friction	0.12–0.15*
Elongation at break	3%–4%
Fiber water absorption	0–1%
UV resistance	excellent
Wet abrasion	excellent
Dry abrasion	excellent

* value based on data supplied by the fiber manufacturer for new, dry fiber



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Rope Specifications

Minimum Tensile Strength Minimum tensile strengths shown are for new (unused) rope and will decrease after use. All tests are performed in accordance with Cordage Institute Standard CI 1500-02. The rope strength will be reduced after use due to heat, abrasion, ultraviolet or chemical exposure. The tensile strengths may be further reduced by up to 50% as a result of knots or kinks. Minimum tensile strengths are defined as two standard deviations (typical about 10%) below the average.

Maximum Working Loads Maximum working loads are determined by dividing the tensile strength by the safety factor. The safety factor is a function of the physical properties of the rope, the age and history of the rope, the type of service it will be subjected to and the risks involved if failure occurs. For a rope manufacturer to give blanket working load recommendations would be like a car manufacturer giving the "safe driving speed" of their cars. Obviously the conditions of use far outweigh the design characteristics of the rope. Typically safety factors vary from 3:1 (for new rope used in applications with uniform loading and where failure would cause little or no risk to equipment or personnel) to 20:1 (for conditions involving moderate shock loading, possibility of snags or kinks or where failure could cause severe risk to equipment or personnel).

Rope Weights Rope weights shown are average and may vary plus or minus 5%.

Working Elongation Working elongation is shown from a preload tension of 200 times the diameter squared per the Cordage Institute Standard.

Special Requirements

Factory Splicing Various types are available for all of our ropes. Splices can be provided with various types of chafe protection or coatings.

Custom Lengths Special constructions are available on request.

Rope Terminations Cortland International can provide custom terminations such as thimbles, links, rings and custom hardware. Terminations are available in plastic, bronze, stainless steel and galvanized steel. Please call, or email your requirements to contact@cortlandinternational.com for a quotation.

Special Coatings Coatings such as polyurethane, polyethylene and vinylesters may be applied to any of the synthetic ropes to improve snag resistance, sunlight resistance or for color coding. Cortland can provide ropes with a variety of finishes to meet your needs.

Commercial and Military Specifications Certificates of compliance are supplied at no charge if requested when placing the order. Certified test reports can be provided at an additional charge when requested at the time of the order.