

CORDAGE 3 - STRAND										
COMPARATIVE WEIGHT STRENGTH AND WORKING LOAD CHART										
Nominal Size		Manila			Nylon			Polypropylene		
Diameter	Circumference	Linear Density (Lbs/100ft)	MBS (in Lbs)	WLL (Lbs) Design Factor 12	Linear Density (Lbs/100ft)	MBS (in Lbs)	WLL (Lbs) Design Factor 12	Linear Density (Lbs/100ft)	MBS (in Lbs)	WLL (Lbs) Design Factor 12
3/16	5/8	1.37	405	33.8	0.89	880	73	0.65	730	61
1/4	3/4	1.82	540	45	1.57	1,490	124	1.15	1,260	105
5/16	1	2.64	900	75	2.45	2,300	192	1.80	1,915	160
3/8	1 1/8	3.79	1,215	101	3.55	3,240	270	2.60	2,720	227
7/16	1 1/4	4.87	1,575	131	4.80	4,320	360	3.50	3,525	294
1/2	1 1/2	6.96	2,385	199	6.30	5,670	473	4.60	4,235	353
9/16	1 3/4	9.63	3,105	259	8.00	7,200	600	5.90	5,140	428
5/8	2	12.7	3,960	330	9.90	8,910	743	7.20	6,250	521
3/4	2 1/4	15.9	4,860	405	14.3	12,800	1,070	10.4	8,570	714
7/8	2 3/4	21.4	6,930	578	19.5	17,300	1,440	14.2	11,600	967
1	3	25.7	8,100	675	25.3	22,200	1,850	18.0	14,400	1,200
1 1/16	3 1/4	29.8	9,450	788	28.7	25,200	2,100	20.4	16,100	1,342
1 1/8	3 1/2	34.3	10,800	900	32.2	28,300	2,360	22.8	17,900	1,492
1 1/4	3 3/4	39.7	12,150	1,013	39.7	34,800	2,900	27.6	21,700	1,808
1 5/16	4	45.6	13,500	1,125	43.7	38,300	3,190	30.4	23,700	1,975
1 1/2	4 1/2	57.0	16,650	1,388	57.0	48,600	4,050	39.4	30,600	2,550
1 5/8	5	71.1	20,250	1,688	67.3	57,400	4,780	46.0	35,800	2,983
1 3/4	5 1/2	85.0	23,850	1,988	78.0	66,100	5,510	53.0	41,300	3,442
2	6	102	27,900	2,325	100	84,600	7,050	69.0	52,400	4,367
2 1/8	6 1/2	120	32,400	2,700	113	95,400	7,950	78.0	59,000	4,917
2 1/4	7	139	36,900	3,075	127	107,000	8,920	88.0	66,500	5,542
2 1/2	7 1/2	164	42,300	3,525	157	131,000	10,900	107	80,600	6,717
2 5/8	8	182	46,800	3,900	173	144,000	12,000	120	90,200	7,517
2 3/4	8 1/2	215	54,900	4,575	208	171,000	14,300	141	105,800	8,817
3	9	230	57,500	4,792	226	185,000	15,400	153	114,900	9,575
3 1/4	10	284	69,500	5,792	275	224,000	18,700	186	136,000	11,333
3 1/2	11	349	81,900	6,825	329	267,000	22,300	223	161,300	13,442
4	12	414	94,500	7,875	400	324,000	27,000	272	192,500	16,042
4 1/4	13	-	-	-	460	369,000	30,800	315	221,800	18,483
4 1/2	14	-	-	-	525	419,000	34,900	360	250,000	20,833
5	15	-	-	-	610	481,000	40,100	420	287,300	23,942
5 5/16	16	-	-	-	685	533,000	44,400	474	321,600	26,800
5 5/8	17	-	-	-	767	590,000	49,200	531	357,800	29,817
6	18	-	-	-	870	661,000	55,100	603	401,200	33,133

- Diameters are approximate. The reference for rope size is its linear density or weight per unit length.
- Linear Density is considered standard. Tolerances are ± 10% for diameters below 8 mm inclusive; ± 8% for diameters 10-14 mm inclusive; ± 5% for 16 mm diameter and larger.
- Minimum Breaking Strength (MBS) values in individual rope standards are based on data from a number of rope manufacturers and the result of computation by regression analysis.
- The MBS values are based on ropes tested with Eye Splices, making the values approximately 10 % lower than ropes tested without splices.
- Working Load Limit (WLL) is determined by dividing the new rope MBS by a selected Design Factor.

CAUTION

- Working loads are recommended guidelines only.
- Specs are based on test of new and unused ropes of current manufacturers.
- Once rope is put into service it is continuously deteriorating.
- Manila rope will deteriorate in storage even under ideal conditions.

WARNING

Do not exceed rated capacities. Sling capacity decreases as the angle decreases. Do not use at an angle less than 30° from horizontal.