Standard 6 x 19 and 6 x 36 classification ropes

6 x 19 vs. 6 x 36

> It's a question of what your needs are. The 6 x 19 ropes emphasize abrasion resistance while the 6 x 36 ropes are important for their fatigue resistance.

The 6 x 19 classification of wire ropes includes standard 6 strand, round strand ropes with 16 through 26 wires per strand. The 6 x 36 classification of wire ropes includes standard 6 strand, round strand ropes with 27 through 49 wires per strand. Although their operating properties vary, all have the same weight per foot and the same minimum breaking force, size for size.

While the 6 x 19 ropes give primary emphasis to abrasion resistance in varying degrees, the 6 x 36 ropes are important for their fatigue resistance. This fatigue resistance is made possible by the greater number of small wires per strand.

Although there are exceptions for special applications, the constructions in 6 x 36 classification are primarily designed to be the most efficient for each rope diameter. As the rope size increases, for instance, a large number of wires can be used to achieve required fatigue resistance, and still those wires will be large enough to offer adequate resistance to abrasion.

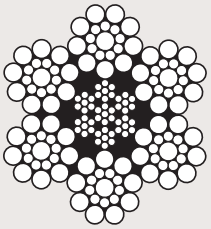
PROPERTIES OF STANDARD 6 X 19 AND 6 X 36 WIRE ROPES

6 x 19 CLASS ROPES

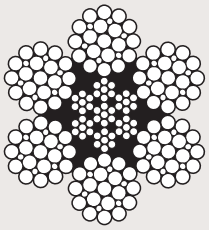
6 x 19S (SEALE) This is a good rope to withstand abrasion or crushing on the drum but its fatigue resistance is decreased.

6 x 25F (FILLER WIRE) To most wire rope users, 6 x 19 means 6 x 25 filler wire. It is a common rope in the 6 x 19 classification.

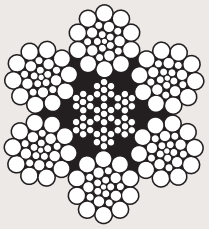
6 X 26WS (WARRINGTON SEALE) A standard 6 x 26WS design provides the best rope for a wide range of applications. In general, we recommend the use of a 6 x 26WS in any application where a 6 x 25F is used.



6 x 19S



6 x 25F

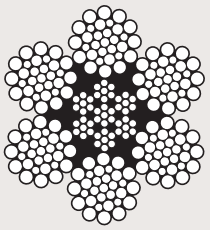


6 x 26WS

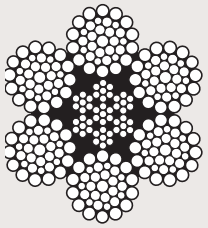
6 x 36 CLASS ROPES

In most rope sizes, only one 6 x 36 classification rope is made. These constructions were selected to provide fatigue resistance without having wires that are too small.

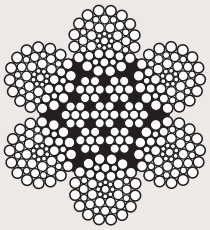
The greater number of wires in the 6 x 36 classification makes these ropes more susceptible to crushing. This can be minimized, however, by specifying an Independent Wire Rope Core (IWRC) and by using well-designed sheaves, grooved drums and proper operating techniques.



6 x 31WS



6 x 36WS



6 x 49SWS

MINIMUM BREAKING FORCE AND WEIGHTS FOR STANDARD 6 X 19 AND 6 X 36 CLASSIFICATION ROPES

Diameter (in.)	FIBER CORE Approx. wt./ft. (lb.)	FIBER CORE Minimum breaking force (tons of 2,000 lb.) IPS	FIBER CORE Minimum breaking force (tons of 2,000 lb.) XIP®	IWRC Approx. wt./ft. (lb.)	IWRC Minimum breaking force (tons of 2,000 lb.) IPS	IWRC Minimum breaking force (tons of 2,000 lb.) XIP®	IWRC Minimum breaking force (tons of 2,000 lb.) XXIP®
3/16	0.059	1.55	1.71				
1/4	0.105	2.74	3.02	0.116	2.94	3.40	
5/16	0.164	4.26	4.69	0.18	4.58	5.27	
3/8	0.236	6.10	6.72	0.26	6.56	7.55	8.30
7/16	0.32	8.27	9.10	0.35	8.89	10.2	11.2
1/2	0.42	10.7	11.8	0.46	11.5	13.3	14.6
9/16	0.53	13.5	14.9	0.59	14.5	16.8	18.5
5/8	0.66	16.7	18.3	0.72	17.9	20.6	22.7
3/4	0.95	23.8	26.2	1.04	25.6	29.4	32.4
7/8	1.29	32.2	35.4	1.42	34.6	39.8	43.8
1	1.68	41.8	46.0	1.85	44.9	51.7	56.9
1 1/8	2.13	52.6	57.8	2.34	56.5	65.0	71.5
1 1/4	2.63	64.6	71.1	2.89	69.4	79.9	87.9
1 3/8	3.18	77.7	85.5	3.50	83.5	96.0	106
1 1/2	3.78	92.0	101	4.16	98.9	114	125
1 5/8	4.44	107	118	4.88	115	132	146
1 3/4	5.15	124	137	5.67	133	153	169
1 7/8	5.91	141	156	6.50	152	174	192
2	6.72	160	176	7.39	172	198	217
2 1/8	7.59	179	197	8.35	192	221	244
2 1/4	8.51	200	220	9.36	215	247	272
2 3/8				10.4	239	274	
2 1/2				11.6	262	302	
2 5/8				12.8	288	331	
2 3/4				14.0	314	361	
2 7/8				15.3	341	392	
3				16.6	370	425	
3 1/8				18.0	399	458	
3 1/4				19.5	429	492	
3 3/8				21.0	459	529	
3 1/2				22.7	491	564	
3 5/8				24.3	523	602	
3 3/4				26.0	557	641	
3 7/8				27.7	591	680	
4				29.6	627	720	
4 1/8				31.7	658	757	
4 1/4				33.3	694	799	
4 3/8				35.4	734	844	

Available galvanized at 10% lower strengths, or in equivalent strengths on special request.

Should not be used with a swivel.