

# Wire rope weights and minimum breaking force



## FLEX-X AND INCREASED SURFACE AREA

> Flex-X ropes provide greater surface area and more steel per given diameter, increasing rope stability, strength – and service life.

The 6 x 19 classification of wire ropes includes standard six round strand ropes with 16 through 26 wires per strand. The 6 x 36 classification includes standard six round strand ropes with 27 to 49 wires per strand.

Although the physical characteristics of these two can vary widely, both have the same weight per foot and the same minimum breaking force, size for size. While 6 x 19 ropes have more abrasion resistance, the 6 x 36 ropes have more fatigue resistance because they have more wires per strand.

The Flex-X® process provides a smooth, extremely compact wire rope with greater surface area and more steel per given diameter, which increases strength, fatigue resistance and wear resistance.

When **Union's** Flex-X products are properly matched to the application, you'll get longer service life, lower operating costs and less wear to sheaves and drums.

## WIRE ROPE MINIMUM BREAKING FORCE AND WEIGHTS

Diameter (in)	6 X 19, 6 X 36 IWRC			TUF-FLEX® DL		FLEX-X® 9		FLEX-X® 19	
	Minimum Breaking Force XIP® (tons of 2000 lb)	Minimum Breaking Force XXIP® (tons of 2000 lb)	Approx. Weight (lb/ft)	Minimum Breaking Force (tons of 2000 lb)	Approx. Weight (lb/ft)	Minimum Breaking Force (tons of 2000 lb)	Approx. Weight (lb/ft)	Minimum Breaking Force (tons of 2000 lb)	Approx. Weight (lb/ft)
1/4	3.4	—	0.116	—	—	—	—	—	—
5/16	5.27	—	0.18	—	—	—	—	—	—
3/8	7.55	8.3	0.26	—	—	—	—	8.3	0.3
7/16	10.2	11.2	0.35	—	—	—	—	11.2	0.4
1/2	13.3	14.6	0.46	—	—	—	—	14.6	0.5
9/16	16.8	18.5	0.59	—	—	—	—	18.5	0.7
5/8	20.6	22.7	0.72	—	—	26.2	0.9	22.7	0.8
3/4	29.4	32.4	1.04	—	—	37.4	1.3	32.4	1.2
7/8	39.8	43.8	1.42	—	—	50.6	1.8	43.8	1.6
1	51.7	56.9	1.85	—	—	65.7	2.3	56.9	2.1
1-1/8	65	71.5	2.34	71.5	2.5	82.7	2.9	71.5	2.6
1-1/4	79.9	87.9	2.89	87.9	3.1	102	3.7	87.9	3.1
1-3/8	96	106	3.5	106	3.7	—	—	106	—
1-1/2	114	125	4.16	125	4.5	—	—	125	—
1-5/8	132	146	4.88	146	5.2	—	—	—	—
1-3/4	153	169	5.67	169	6.1	—	—	—	—
1-7/8	174	192	6.5	192	7.0	—	—	—	—
2	198	217	7.39	217	7.9	—	—	—	—
2-1/8	221	244	8.35	244	8.9	—	—	—	—
2-1/4	247	272	9.36	272	10.0	—	—	—	—
2-3/8	274	—	10.4	—	—	—	—	—	—
2-1/2	302	—	11.6	—	—	—	—	—	—
2-5/8	331	—	12.8	—	—	—	—	—	—
2-3/4	361	—	14	—	—	—	—	—	—
2-7/8	392	—	15.3	—	—	—	—	—	—
3	425	—	16.6	—	—	—	—	—	—

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