

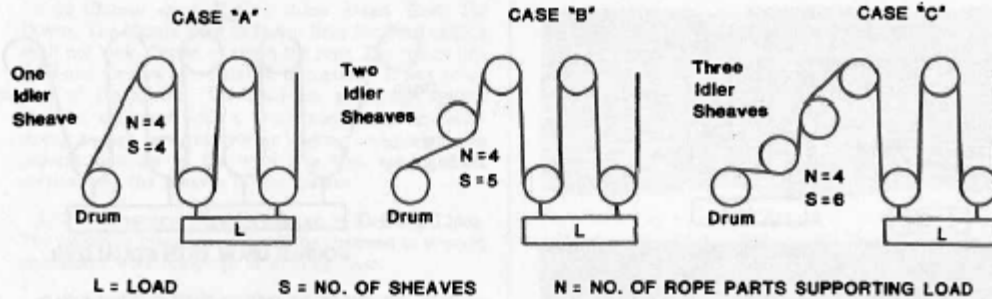
**Wire Rope Breaking Strength = 192 -kip**

**Single Line Pull = 64 -lb**

<b># of Lines</b>	<b>Hoist Capacity*</b>
8	512
10	640
12	768

\*Based on 100% efficiency

1 3/8" Cable



98-2.2

FAST LINE TENSION = FAST LINE FACTOR X LOAD

1	2	3	4	5	6	7	8	9	10	11	12	13	
Plain Bearing Sheaves						Roller Bearing Sheaves							
K = 1.09*						K = 1.04*							
N	Efficiency			Fast Line Factor			Efficiency			Fast Line Factor			
	Case A	Case B	Case C	Case A	Case B	Case C	Case A	Case B	Case C	Case A	Case B	Case C	
2	.890	.807	.740	.368	.620	.675	.943	.907	.872	.530	.551	.574	
3	.844	.774	.710	.395	.431	.469	.925	.889	.855	.360	.375	.390	
4	.810	.743	.682	.309	.336	.367	.908	.873	.839	.275	.286	.298	
5	.778	.714	.655	.257	.280	.305	.890	.856	.823	.225	.234	.243	
6	.748	.686	.629	.223	.243	.265	.874	.840	.808	.191	.198	.206	
7	.719	.660	.605	.199	.216	.236	.857	.824	.793	.167	.173	.180	
8	.692	.635	.582	.181	.197	.215	.842	.809	.778	.148	.154	.161	
9	.666	.611	.561	.167	.182	.198	.826	.794	.764	.135	.140	.145	
10	.642	.589	.540	.156	.170	.185	.811	.780	.750	.123	.128	.133	
11	.619	.568	.521	.147	.160	.175	.796	.766	.736	.114	.119	.124	
12	.597	.547	.502	.140	.152	.166	.782	.752	.723	.106	.111	.115	
13	.576	.528	.485	.133	.145	.159	.768	.739	.710	.100	.104	.108	
14	.556	.510	.468	.128	.140	.153	.755	.725	.698	.095	.099	.102	
15	.537	.493	.452	.124	.135	.147	.741	.713	.685	.090	.094	.097	

$$\text{EFFICIENCY} = \frac{(K^N - 1)}{K^N (K - 1)}$$

$$\text{Fast Line Factor} = \frac{1}{N \times \text{EFFICIENCY}}$$

NOTE: The above cases apply also where the rope is dead ended at the lower or traveling block or derrick floor after passing over a dead sheave in the crown.

\*In these tables the K factor for sheave friction is 1.09 for plain bearings and 1.04 for roller bearings. Other K factors can be used if recommended by the equipment manufacturer.

FIG. 2.2  
EFFICIENCY OF WIRE ROPE REEVING FOR MULTIPLE SHEAVE BLOCKS  
CASES A, B AND C  
(Fast Line and Efficiency Factors for Derricks, Booms, etc.)