

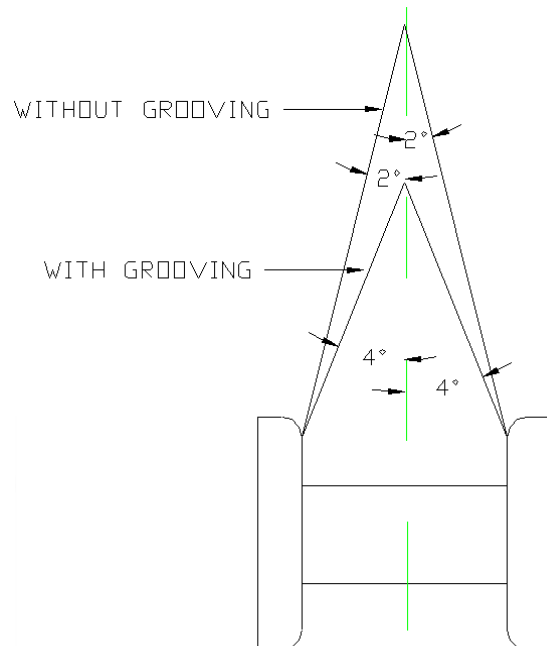
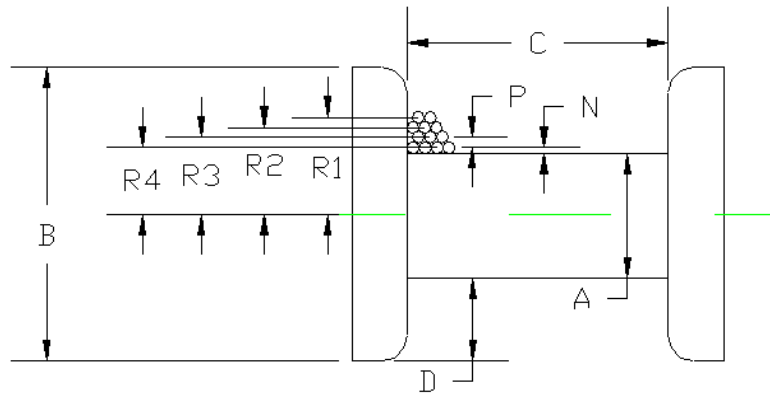
Drum Barrel Calculations

Prepared by Western Dynamics

Rope Dia.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8
Factor K	13.2	6.14	3.29	2.21	1.58	1.19	.925	.741	.607
Dim. N	.063	.094	.125	.166	.188	.219	.250	.281	.313
Dim. P	.108	.162	.217	.271	.325	.379	.433	.488	.541

Rope Dia.	3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-5/8	1-3/4	1-7/8
Factor K	.428	.308	.239	.191	.152	.127	.107	.088	.077	.067
Dim. N	.375	.483	.500	.563	.625	.688	.750	.813	.875	.938
Dim. P	.650	.758	.866	.974	1.083	1.191	1.299	1.407	1.516	1.624

All dimension are inches.

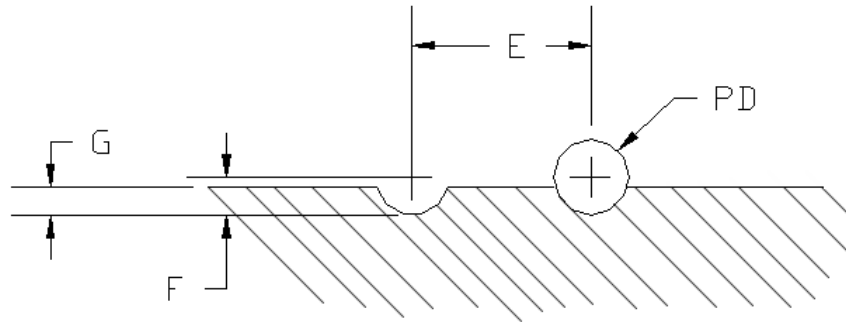


Maximum Fleet Angle for proper wire rope spooling.

Drum Barrel Calculations

Prepared by Western Dynamics

Rope Dia.	E	F	G
3/8	7/16	7/32	3/32
7/16	1/2	1/4	7/64
1/2	9/16	9/32	1/8
9/16	5/8	5/16	9/32
5/8	11/16	11/32	5/16
11/16	3/4	3/8	11/32
3/4	13/16	13/32	3/8
13/16	7/8	7/16	13/32
7/8	15/16	15/32	7/16
15/16	1	1/2	15/32
1	1-1/16	17/32	1/2



Pitch Radius (R1, R2, etc.) as inches.

$$R = (A / 2) + N + P \times (\text{number of wraps minus one})$$

Line pull (LP) as lbs.

$$LP = \text{drum torque (in/lb)} / R$$

Line speed (LS) ft. per minute

$$LS = (2 \times R \times 3.14 \times \text{drum rpm}) / 12$$

Cable storage capacity as feet.

$$\text{Length of rope} = (D + A) \times D \times C \times \text{factor K}$$

Drum diameter as inches

$$A = ((2 \times \text{drum torque}) / \text{line pull}) - \text{rope diameter}$$

Drum torque in in. lbs.

Pitch diameter of wraps (PD)

$$PD = 2 \times R$$

Drum torque (T) in. lbs.

$$T = \text{line pull} \times R$$

Drum RPM

$$RPM = (\text{line speed} \times 12) / (2 \times R \times 3.14)$$

Drum diameter as inches

$$A = ((\text{line speed} \times 12) / (\text{drum RPM} \times 3.14)) - \text{rope diameter}$$