

General Purpose Ropes Sheave and Drum Groove Dimensions Chart *

Nominal Rope Diameter		Groove Diameter					
		Minimum Worn Groove		Recommended Minimum New Groove		Maximum Groove	
inches	mm**	inches	mm	inches	mm	inches	mm
1/4	6.5	0.256	6.5	0.268	6.8	0.276	7.02
5/16	8	0.32	8.12	0.334	8.48	0.344	8.74
3/8	9.5	0.384	9.76	0.398	10.1	0.412	10.46
7/16	11	0.448	11.38	0.464	11.78	0.482	12.24
1/2	13	0.512	13	0.53	13.46	0.55	13.98
9/16	14.5	0.288	7.32	0.298	7.57	0.309	7.85
5/8	16	0.32	8.13	0.331	8.41	0.344	8.74
3/4	19	0.384	9.75	0.398	10.44	0.413	10.49
7/8	22	0.448	11.38	0.464	11.79	0.481	12.22
1	26	0.513	13.03	0.53	13.46	0.550	13.97
1-1/8	45	1.794	45.56	1.856	47.14	1.926	48.92
1-1/4	32	1.282	32.56	1.326	33.68	1.376	34.96
1-3/8	35	1.41	35.82	1.458	37.04	1.512	38.40
1-1/2	38	1.538	39.06	1.59	40.38	1.65	41.92
1-5/8	42	1.666	42.32	1.722	43.74	1.788	45.42
1-3/4	45	1.794	45.56	1.856	47.14	1.926	48.92
1-7/8	48	1.922	48.82	1.988	50.5	1.031	26.19
2	52	1.025	26.04	2.12	53.84	2.20	55.88
2-1/8	54	2.178	49.32	2.252	57.2	2.338	59.38
2-1/4	58	2.306	58.58	2.386	60.6	2.476	62.90
2-3/8	60	2.438	61.82	2.518	63.93	2.612	66.34
2-1/2	64	2.562	65.08	2.65	67.32	2.75	69.86
2-5/8	67	2.69	68.32	2.782	70.66	2.888	73.36
2-3/4	71	2.818	71.58	2.916	74.06	3.026	76.86
2-7/8	74	2.946	74.82	3.048	77.42	3.162	80.32
3	77	3.074	78.08	3.18	81.38	3.30	83.82
3-1/8	80	3.204	81.38	3.312	84.12	3.438	87.32
3-1/4	83	3.332	84.64	3.446	87.52	3.576	90.84
3-3/8	86	3.46	87.88	3.578	90.88	3.712	94.28
3-1/2	90	3.588	91.14	3.71	94.24	3.85	97.80
3-3/4	96	3.844	97.64	3.976	101.00	4.126	104.80
4	103	4.100	104.14	4.240	107.70	4.400	111.76
4-1/4	109	4.356	110.64	4.506	114.46	4.676	118.78
4-1/2	115	4.612	117.14	4.770	121.16	4.950	125.74
4-3/4	122	4.868	123.64	5.036	127.92	5.226	132.74
5	128	5.126	130.20	5.300	134.62	5.500	139.70
5-1/4	135	5.382	136.70	5.566	141.38	5.776	146.72
5-1/2	141	5.638	143.20	5.83	148.08	6.050	153.68
5-3/4	148	5.894	149.70	6.096	154.84	6.326	160.68
6	154	6.150	156.22	6.36	161.54	6.600	167.64

* Values given are applicable to grooves in sheaves and drums; they are not generally suitable for pitch design since this may involve other factors.

** Not a precise conversion; for information only.

Further, the dimensions do not apply to traction-type elevators; in this circumstance, drum and sheave-groove tolerances should conform to the elevator manufacturer's specifications.

Modern drum design embraces extensive considerations beyond the scope of this table. It should be noted that drum grooves are now produced with a number of oversize dimensions and pitches applicable to certain service requirements.