

BREAKING LOAD TABLE FOR STEEL WIRE ROPE

Nomi. Dia mm	MASS 6 X 19 & 6 X 37		6 X 19 (12/6/1) IS: 2266/89 MIN BREAKING-LOAD KN		6 X 37 (18/12/6/1) IS: 2266/89 MIN BREAKING-LOAD KN		MASS 6 X 19 F & 6 X 36, 6 X 41		6 X 19 Filler (12/6 + 8F/1) IS : 2266/89 MIN BREAKING-LOAD KN		6 x 36 (14/7 & 7/7/1) 6 x 41 (16/8 & 8/8/1) IS: 2266/89 MIN BREAKING-LOAD KN		MASS		17 X 7, 18 X 7 (6/1) IS: 2366/89 MIN BREAKING-LOAD KN		6X24 (15/9 Fibre) IS: 2581/77 145Kg./mm2							
	Kg/100 Mtrs	FMC IWRC	160 Kg./mm2 FMC IWRC	180 Kg./mm2 FMC IWRC	160 Kg./mm2 FMC IWRC	180 Kg./mm2 FMC IWRC	Kg/100 Mtrs.	FMC IWRC	160 Kg./mm2 FMC IWRC	180 Kg./mm2 FMC IWRC	160 Kg./mm2 FMC IWRC	180 Kg./mm2 FMC IWRC	Kg/100 Mtrs	FMC IWRC	160 Kg./mm2 FMC IWRC	180 Kg./mm2 FMC IWRC	Mass Kg.	Min Br. Kn.						
5	8.65	9.5	-	14.6	14.7	-	-	-	-	-	-	-	-	-	-	-	-	-						
6	12.5	13.7	-	19.6	21.0	18.8	20.0	21	23	-	-	-	-	-	-	-	-	-						
7	17.0	18.6	27	30.0	32.0	26.0	28.0	28	30	-	-	-	-	-	-	-	-	-						
8	22.1	24.4	31	35.0	37.8	30.0	32.0	33	36	24.3	26.8	34	37	38	41	24.5	25.7	32	36	37	20.4	26.0		
9	28.0	30.8	39	42	44	47.5	37	40	42	46	30.8	33.9	43	46	48	52	31.0	32.6	41	42	46	47	25.8	32.0
10	34.6	38.1	48	52	54	58.3	46	50	52	56	38.0	41.8	53	57	60	65	38.3	40.2	50	52	56	58	31.8	40.0
11	41.9	46.1	58	63	66	71.3	56	60	63	68	46.0	50.6	64	69	72	78	46.3	48.6	61	62	68	70	38.5	48.0
12	49.8	54.8	69	75	78	84.2	67	72	75	81	54.7	60.2	76	82	86	93	55.1	57.9	72	74	81	84	45.8	57.0
13	58.5	64.4	82	88	92	99.4	78	84	88	95	64.3	70.7	90	97	101	109	64.7	67.9	85	87	95	98	53.8	67.0
14	67.8	74.6	95	102	107	115.6	91	98	102	110	74.5	82.0	104	112	117	127	75.0	78.8	98	101	111	114	62.4	78.0
15	77.8	85.6	110	117	122	132.0	104	112	117	127	85.5	94.0	119	129	134	145	86.0	90.3	113	116	127	131	71.6	90.0
16	88.6	97.4	124	133	139	150.0	118	128	134	144	97.3	107.0	136	147	153	165	98	103	128	132	144	149	81.5	102.0
17	100	110.0	139	151	157	170.0	134	144	151	163	110	121	155	165	173	187	111	116.5	145	149	163	168	92	115
18	112	123.0	156	160	176	190.1	150	162	169	183	123	135	172	186	194	209	124	130	162	167	183	188	103	129
19	125	137.0	174	188	196	211.7	167	180	188	203	137	151	191	207	216	231	138	145	181	186	204	210	115	144
20	138	152.0	193	208	218	235.4	185	200	209	225	152	167	212	229	239	258	153	161	200	206	226	232	127	159
21	153	168.0	213	230	240	259.0	204	220	230	248	168	184	234	253	264	285	169	177	221	227	249	256	140	175
22	167	184.0	234	252	263	284.9	224	242	253	273	184	202	257	277	289	312	185	195	242	249	273	281	154	193
24	199	219.0	278	300	313	338.1	267	288	301	325	219	241	305	330	344	372	220	231	288	297	325	335	183	229
25	216	238.0	302	326	340	367.0	289	312	326	352	238	261	331	358	374	403	239	251	312	322	352	363	199	249
26	234	257	326	352	368	397	313	338	353	381	257	283	358	387	404	436	259	272	338	348	381	393	215	269
28	271	298	378	409	426	461	363	392	409	442	298	328	416	449	469	506	300	315	392	404	442	455	250	312
32	354	390	494	534	557	602	474	512	534	577	389	428	543	586	612	661	392	412	512	527	577	595	326	407
36	448	493	625	675	705	761	600	648	676	730	493	542	687	742	775	837	496	521	648	668	731	753	413	516
40	554	609	772	834	870	940	741	800	835	902	608	669	848	916	956	1033	612	643	800	824	902	929	509	637
44	670	737	934	1009	1053	1137	896	967	1010	1090	736	810	1026	1109	1157	1250	-	-	-	-	-	-	616	770
48	797	877	1112	1201	1253	1354	1066	1151	1202	1298	876	964	1222	1319	1377	1487	-	-	-	-	-	-	734	917
52	936	1029	1305	1409	1471	1588	1252	1351	1411	1523	1028	1131	1434	1548	1616	1745	-	-	-	-	-	-	861	1067

Note: (a) Mass of Rope in Kg/100 mtrs. shown above is approximate. (b) The breaking load figures shown above are in Kilo Newtons. To obtain values in Metric Tonnes, multiply figures shown above by 0.1020
 (c) Sizes 15, 17, 21 & 25mm are not covered in IS specification.

$$\text{MAXIMUM SAFE WORKING LOAD} = \frac{\text{BREAKING LOAD OF ROPE}}{\text{FACTOR OF SAFETY}}$$