



CHAIN

ASTM1980 Standard Link Chain



I .Proof Coil Chain ASTM1980 (G30)

Size inch	Material Diameter		Working Load Limit		Proof Test		Breaking Force Minimum		Max Length Per 100 Links		Max Weight Per 100 Feet	
	inch	mm	lbs	kg	lbs	kn	lbs	kn	inch	m	lbs	kg
1/8	0.156	4	375	170	800	3.6	1600	7.1	94	2.39	19	8.8
3/16	0.218	5.5	750	340	1500	6.7	3000	13.3	99	2.51	42	19
1/4	0.281	7.1	1250	570	2500	11.1	5000	22.2	104	2.64	76	34
5/16	0.343	8.7	1900	860	3800	16.9	7600	33.8	114	2.89	115	52
3/8	0.406	10.3	2650	1200	5300	23.6	10600	47.2	128	3.25	166	75
7/16	0.468	11.9	3500	1590	7000	31.1	14000	62.3	142	3.60	225	102
1/2	0.531	13.5	4500	2040	9000	40.0	18000	80.1	156	3.96	289	131
5/8	0.656	16.7	6900	3130	13800	61.4	27600	122.8	194	4.92	425	193
3/4	0.781	19.8	9750	4420	19500	86.7	39000	173.5	220	5.59	612	278

CHAIN



II .High Test Chain ASTM1980 (G43)

Size inch	Material Diameter		Working Load Limit		Proof Test		Breaking Force Minimum		Max Length Per 100 Links		Max Weight Per 100 Feet	
	inch	mm	lbs	kg	lbs	kn	lbs	kn	inch	m	lbs	kg
1/4	0.281	7.1	2600	1180	4300	19.1	7750	34.5	98	2.49	84	38
5/16	0.343	8.7	3900	1770	6400	28.5	11600	51.6	110	2.79	120	54
3/8	0.406	10.3	5400	2450	8900	39.6	16200	72.1	134	3.4	176	80
7/16	0.468	11.9	7200	3260	11900	52.9	21500	95.6	140	3.55	230	104
1/2	0.531	13.5	9200	4170	15300	68.1	27600	122.8	150	4.06	300	136
5/8	0.656	16.7	14200	6200	21200	94	42400	188	194	4.92	425	193



III .Transport Chain ASTM1980 (G70)

Size inch	Material Diameter		Working Load Limit		Proof Test		Breaking Force Minimum		Max Length Per 100 Links		Max Weight Per 100 Feet	
	inch	mm	lbs	kg	lbs	kn	lbs	kn	inch	m	lbs	kg
1/4	0.281	7.1	3150	1430	6300	28.0	12600	56.1	98	2.49	84	38
5/16	0.343	8.7	4700	2130	9400	41.8	18800	83.6	110	2.79	120	54
3/8	0.406	10.3	6600	3000	13200	58.7	26400	117.4	134	3.40	176	80
1/2	0.531	13.5	11300	5130	22600	100.5	45200	201.1	160	4.06	300	136

CHAIN

CHAIN

CHAIN

CHAIN

NACM1990 Standard Link Chain



I .Proof Coil Chain NACM1990 (G30)

Size		Material Diameter		Working Load Limit (Max)		Proof Test(Min)		Breaking Force Min		Inside Length (Max)		Inside Width (Min)	
mm	inch	mm	inch	kg	lbs	kn	lbs	kn	lbs	mm	inch	mm	inch
4	1/8	4	0.156	170	375	3.6	800	7.1	1600	23.9	0.94	6.4	0.25
5.5	3/16	5.5	0.217	365	800	7.2	1600	14.3	3200	24.8	0.98	7.7	0.3
7	1/4	7	0.276	580	1300	11.6	2600	23.1	5200	31.5	1.24	9.8	0.38
8	5/16	8	0.315	860	1900	15.1	3400	30.2	6800	32.8	1.29	11.2	0.44
10	3/8	10	0.394	1200	2650	23.6	5300	47.1	10600	35	1.38	14	0.55
13	1/2	13	0.512	2030	4500	39.8	8950	79.6	17900	45.5	1.79	18.2	0.72
16	5/8	16	0.63	3130	6900	60.3	13600	120.6	27200	56	2.2	20	0.79
20	3/4	20	0.787	4800	10600	94.3	21200	188.5	42400	70	2.76	25	0.98
22	7/8	22	0.866	5810	12800	114.1	25600	228.1	51200	77	3.03	27.5	1.08
25	1"	25	1.02	8140	17900	159.1	35800	318.2	71600	90.9	3.58	31.7	1.25

NACM1996/2003 Standard Link Chain



I .Proof Coil Chain NACM1996/2003 (G30)

Size		Material Diameter		Working Load Limit (Max)		Proof Test(Min)		Breaking Force (Min)		Inside Length (Max)		Inside Width (Min)	
mm	inch	mm	inch	kg	lbs	kn	lbs	kn	lbs	mm	inch	mm	inch
4	1/8	4	0.156	180	400	3.6	800	7.2	1600	23.9	0.94	6.4	0.25
5.5	3/16	5.5	0.217	365	800	7.2	1500	14.4	3200	24.8	0.98	7.7	0.3
7	1/4	7	0.276	580	1300	11.6	2600	23.2	5200	31.5	1.24	9.8	0.38
8.4	5/16	8	0.331	860	1900	16.9	3800	33.8	7600	32.8	1.29	11.2	0.44
10	3/8	10	0.394	1200	2650	23.5	5300	47.2	10600	35	1.38	14	0.55
11.9	7/16	11.9	0.488	1680	3700	32.9	7400	65.8	14800	41.5	1.64	16.6	0.65
13	1/2	13	0.512	2030	4500	40	9000	80	18000	45.6	1.79	18.2	0.72
16	5/8	16	0.63	3130	6900	61.3	13800	122.8	27600	56	2.2	20	0.79
20	3/4	20	0.787	4800	10500	94.3	21200	188.6	42400	70	2.76	25	0.98
22	7/8	22	0.865	5810	12800	114.1	25600	228.2	51200	77	3.03	27.5	1.08
25	1	25	1.02	8140	17900	159.1	35800	318.2	71600	90.9	3.58	31.7	1.25

II .High Test Chain NACM1990 (G43)



Size		Material Diameter		Working Load Limit (Max)		Proof Test(Min)		Breaking Force Min		Inside Length (Max)		Inside Width (Min)	
mm	inch	mm	inch	kg	lbs	kn	lbs	kn	lbs	mm	inch	mm	inch
7	1/4	7	0.276	1180	2600	16.6	3750	33.1	7500	31.5	1.24	9.8	0.38
8	5/16	8	0.315	1770	3900	21.6	4900	43.2	9700	32.8	1.29	11.2	0.44
10	3/8	10	0.394	2450	5400	33.8	7600	67.6	15200	35	1.38	14	0.55
13	1/2	13	0.512	4170	9200	57.1	12900	114.2	25700	45.5	1.79	18.2	0.72
16	5/8	16	0.63	5220	11500	86.5	19500	172.9	38900	56	2.2	20	0.79
20	3/4	20	0.787	7350	16200	130.1	30400	270.2	60700	70	2.76	25	0.98

II .High Test Chain NACM1996/2003 (G43)



Size		Material Diameter		Working Load Limit (Max)		Proof Test(Min)		Breaking Force (Min)		Inside Length (Max)		Inside Width (Min)	
mm	inch	mm	inch	kg	lbs	kn	lbs	kn	lbs	mm	inch	mm	inch
7	1/4	7	0.276	1180	2800	17.3	3900	34.6	7800	31.5	1.24	9.8	0.38
8.7	5/16	8.7	0.343	1770	3900	26	5850	52	11700	32.8	1.29	11.2	0.44
10	3/8	10.3	0.406	2450	5400	36	8100	72	16200	35	1.38	14	0.55
11.9	7/16	11.9	0.488	3270	7200	48	10800	96	21600	41.6	1.64	16.6	0.65
13	1/2	13.5	0.531	4170	9200	61.3	13800	122.6	27600	45.5	1.79	18.2	0.72
16	5/8	16	0.63	5910	13000	86.5	19500	173	39000	56	2.2	20	0.79
20	3/4	20	0.787	9180	20200	134.7	30300	269.4	60600	70	2.76	25	0.98
22	7/8	22	0.866	11140	24500	163.3	36750	326.4	73500	77	3.03	27.5	1.08

III .Transport Chain NACM1990 (G70)



Size		Material Diameter		Working Load Limit (Max)		Proof Test(Min)		Breaking Force (Min)		Inside Length (Max)		Inside Width (Min)	
mm	inch	mm	inch	kg	lbs	kn	lbs	kn	lbs	mm	inch	mm	inch
7	1/4	7	0.276	1430	3150	27	6100	53.9	12100	31.5	1.24	9.8	0.38
8.7	5/16	8.7	0.343	2130	4700	41.6	9400	83.5	18800	33.5	1.32	12.2	0.48
10	3/8	10	0.394	2990	6600	55	12400	110	24700	35	1.38	14	0.55
11.9	7/16	11.9	0.468	3970	8750	77.7	17500	155.4	35000	41.6	1.64	16.6	0.65
13	1/2	13	0.512	5130	11300	92.9	20900	185.8	41800	45.5	1.79	18.2	0.72
16	5/8	16	0.63	7170	15800	140.4	31600	280.8	63200	56	2.2	20	0.79
20	3/4	20	0.787	11200	24700	49.9	49500	439.8	98900	70	2.76	25	0.98

III .Transport Chain NACM1996/2003 (G70)



Size		Material Diameter		Working Load Limit (Max)		Proof Test(Min)		Breaking Force (Min)		Inside Length (Max)		Inside Width (Min)	
mm	inch	mm	inch	kg	lbs	kn	lbs	kn	lbs	mm	inch	mm	inch
7	1/4	7	0.281	1430	3150	28	6300	56	12600	31.8	1.24	9.8	0.38
8.7	5/16	8.7	0.343	2130	4700	41.8	9400	83.6	18800	32.8	1.29	11.2	0.44
11.9	3/8	10.3	0.406	2990	6600	58.7	13200	117.4	26400	35	1.38	14	0.55
13	1/2	13.5	0.531	5130	11300	100.4	22600	200.8	45200	45.5	1.79	18.2	0.72
16	5/8	16	0.63	7170	15800	140.4	31600	280.8	63200	56	2.2	20	0.79
20	3/4	20	0.787	11200	24700	219.6	49400	439.2	98800	70	2.76	25	0.98

CHAIN

CHAIN

NACM1990 Machine Chain/Coil Chain

I .NACM1990 Machine Chain Straight Link

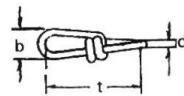


Size		Material Diameter		Working Load (Max)		Proof Test(Min)		Breaking Force (Min)		Nominal Inside Length		Nominal Inside Width	
mm	inch	mm	inch	kg	lbs	kn	lbs	kn	lbs	mm	inch	mm	inch
3	4	3	0.12	98	215	1.91	430	3.82	860	14	0.55	5.3	0.21
3.4	3	3.4	0.135	122	270	2.4	540	4.8	1080	15	0.59	6.1	0.24
3.8	2	3.8	0.148	147	325	2.89	650	5.78	1300	15.5	0.61	6.6	0.26
4.1	1	4.1	0.162	177	390	3.47	780	6.93	1560	16	0.63	7.1	0.28
4.5	1/0	4.5	0.177	211	465	4.14	930	8.27	1860	18.8	0.74	7.9	0.31
4.9	2/0	4.9	0.192	247	545	4.85	1090	9.69	2180	19.8	0.78	8.6	0.34
5.3	3/0	5.3	0.207	288	635	5.65	1270	11.29	2540	21.6	0.85	9.1	0.36
5.5	4/0	5.5	0.218	318	700	6.23	1400	12.44	2800	25.1	0.99	9.6	0.38
6.4	5/0	6.4	0.25	420	925	8.23	1850	16.44	3700	27.2	1.07	11.2	0.44

II .NACM90 Machine Chain Twist Link



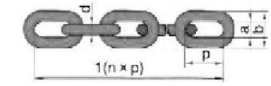
Size		Material Diameter		Working Load (Max)		Breaking Force (Min)		Nominal Inside Length		Nominal Inside Width	
mm	inch	mm	inch	kg	lbs	kn	lbs	mm	inch	mm	inch
3	4	3.0	0.12	93	205	3.64	820	13.1	0.52	4.3	0.17
3.4	3	3.4	0.135	116	255	4.53	1020	14.2	0.56	5.1	0.2
3.8	2	3.8	0.148	141	310	5.51	1240	14.7	0.58	5.3	0.21
4.1	1	4.1	0.162	168	370	6.58	1480	15	0.59	6.1	0.24
4.5	1/0	4.5	0.177	200	440	7.82	1760	17.2	0.68	6.6	0.26
4.9	2/0	4.9	0.192	236	520	9.24	2080	18.5	0.73	7.1	0.28
5.3	3/0	5.3	0.207	274	605	10.76	2420	20.3	0.8	7.9	0.31
5.5	4/0	5.5	0.218	304	670	11.91	2680	22.5	0.89	8.1	0.32
6.4	5/0	6.4	0.25	400	880	15.64	3520	25.3	1	9.4	0.37



USA Standard Double Loop Chain

Item No.	Diameter		Outside Width (b)mm	Weight Per 100ft (kg)	Item No.	Diameter		Outside Width (b)mm	Weight Per 100ft (kg)
	d(mm)	(t)mm				d(mm)	(t)mm		
5	1.6	23.4	7	1.8	1L	2.7	52	12	4.2
4	1.8	24.4	8	2.2	1/0	3	45.5	14	5.7
4L	1.8	30.5	8	1.96	1/0L	3	56	14	5.2
3	2	28	9	3	2/0	3.4	46.5	15.5	7.5
3Z	2	36.3	9	2.6	2/0Z	3.4	53	15.5	7
3L	2	38	10.5	2.6	2/0L	3.4	57	15.5	7
2	2.3	34	10	3.5	3/0	3.8	55.5	17	9.4
1	2.7	39.5	12	4.5	4/0	4.1	56	19	11
1Z	2.7	49	13.5	4.2	6/0	4.9	74	21	15.7

Grade 80 Alloy Chain

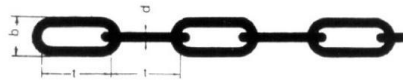


Size d x p mm	Width		Approx Weight kg/m	Working Load Limit t	Test Load kN	Breaking Load min. Kn
	Inside min.a	Outside max.b				
6 x 18	7.5	21	0.79	1.1	27	45.2
7 x 21	9	24.5	1.07	1.5	37	61.6
8 x 24	10	28	1.38	2	48	80.4
10 x 30	12.5	35	2.2	3.2	76	125
11 x 43	12.6	36.5	2.33	3.8	92	154
12 x 36	15	42	3.1	4.6	109	181
12.5 x 38	15.5	42.2	3.3	4.9	117	196
13 x 39	16.3	46	3.8	5	128	214
14 x 42	18	49	4.13	6.3	150	250
14 x 50	17	48	4	6.3	150	250
15 x 46	20	52	5.17	7	168	280
16 x 48	20	56	5.63	8	192	320
16 x 49	24.5	59.5	5.71	8	192	320
16 x 64	23.9	58.9	5.11	8	192	320
18 x 54	23	63	6.85	10	246	410
18 x 64	21	60	6.6	10	246	410
19 x 57	23.7	63.2	7.7	11.3	270	450
20 x 60	25	70	8.6	12.5	300	500
22 x 65	28	74.2	10.7	15.3	366	610
22 x 66	28	77	10.2	15.3	366	610
22 x 86	26	74	9.5	15.3	366	610
24 x 72	32	82	12.78	18	432	720
24 x 86	28	79	11.6	18	432	720
26 x 78	35	91	14.87	21.3	510	850
26 x 92	30	86	13.7	21.3	510	850
30 x 90	38	105	19.6	28.3	678	1130
30 x 108	34	98	18	28.3	678	1130
32 x 96	40	106	22.29	32.2	772	1286
34 x 126	38	109	22.7	36.3	870	1450
34 x 102	46.5	121.5	25.5	36.3	870	1450
36 x 108	49.5	128.5	31	40.7	978	1630
38 x 137	42	121	29	45.3	1086	1810
38 x 114	52	136	32	45.3	1086	1810
42 x 126	55.5	144.5	38.6	55.4	1332	2200

CHAIN

Grade 100 Lifting Chain

Size d x p mm	Width		Approx Weight kg/m	Working Load Limit t		Test Load t	Breaking Load min. t
	Inside min. a	Outside max. b		G80	G100		
6 x 18	7.5	21	0.79	1.1	1.4	2.75	5.6
7 x 21	9	24.5	1.07	1.5	2	3.75	8
8 x 24	10	28	1.38	2	2.5	6.25	10
10 x 30	12.5	35	2.2	3.2	4	10	16
13 x 39	16.3	46	3.8	5	6.7	16.75	26.8
16 x 48	20	56	5.63	8	10	25	40
19 x 57	23.7	63.2	7.7	11.3	14	35	56
20 x 60	25	70	8.6	12.5	15.6	39	62.4
22 x 66	28	77	10.2	15.3	19.1	47.75	76.4
26 x 78	35	91	14.87	21.3	27	67.5	108
32 x 96	40	106	22.29	32.2	40	100	160

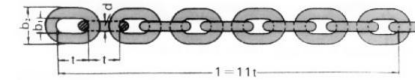


DIN 763 Link Chain

Size d		Inside Length t		Outside Width b		Working Load	Test Load	Breaking Load	Weight Per M
mm	± mm	mm	± mm	mm	± mm				
2	0.5	22	1.0	8	0.4	25	800	1250	0.06
2.5		24	1.1	10	0.5	40	800	2000	0.10
3		26	1.2	12	0.6	55	1050	3200	0.15
3.5		28	1.3	14	0.7	80	1540	3850	0.20
4		32	1.5	16	0.8	100	2500	6500	0.27
4.5		34	1.7	18	0.9	128	3000	8000	0.35
5		35	1.8	20	1.0	160	4000	10000	0.43
5.5		38.5	1.8	22	1.1	195	4200	10500	0.52
6		42	2.0	24	1.2	200	5000	12000	0.63
7		49	2.5	28	1.4	300	7500	19000	0.86
8		52	2.5	32	1.6	400	10000	25000	1.10
8.5		56	2.8	34	1.7	460	10200	25500	1.25
9		59	3.0	36	1.8	530	10500	32000	1.41
10		65	3.2	40	2.0	630	16000	40000	1.75
11		72	3.4	44	2.0	790	15800	47500	2.11
12		78	3.6	48	2.3	940	18800	56500	2.55
13	82	4.0	52	2.5	1000	25000	63000	2.95	
16	100	5.0	64	3.2	1600	40000	100000	4.45	
18	113	5.2	70	3.2	2120	42300	127000	5.65	
19	119	5.6	72	3.4	2370	47300	142000	6.25	
20	120	6.0	75	3.8	2500	50000	160000	7.00	
22	127	6.0	82	4.0	3170	63300	190000	8.55	
25	140	6.6	85	4.2	4090	81700	245000	10.9	
28	152	7.0	96	4.7	6000	120000	300000	13.9	
32	171	7.8	108	5.2	8000	160000	400000	18.2	

CHAIN

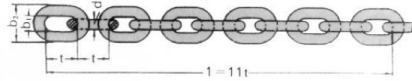
DIN 764 Link Chain



Size d		Inside Length t		Inside Width b1	Outside Width b2	Length Per 11 Links		Weight Per 100m	Breaking Load	Test Load
mm	± mm	mm	± mm	mm	mm	mm	± mm	kg	kn	kg
4	0.2	16	0.3	5	14	176	1.6	31.3	7	400
			0.2				0.9			
5	0.2	18	0.4	7	18.2	198	1.8	51.4	11.8	680
			0.2				1			
6	0.2	21	0.5	8	21.5	231	2	74	16.5	850
			0.2				1.1			
8	0.2	28	0.5	11	29	308	2.2	131.5	32	1680
			0.3				1.2			
10	0.3	35	0.6	14	36	385	2.7	200	50	2630
			0.3				1.5			
12	0.3	42	0.6	16	41	462	3.2	298	70	3680
			0.3				1.8			
13	0.4	45	0.7	18	47	495	3.5	350	80	4200
			0.4				2			
14	0.45	49	0.75	20	48	539	3.8	406	92	4830
			0.45				2			
16	0.5	56	0.9	22	58	616	4.3	520	125	6700
			0.5				2.5			
18	0.8	63	1	24	65	693	4.7	650	160	8400
			0.5				2.8			
20	1	70	1.1	27	72	770	5.4	820	200	10000
			0.6				3.2			
23	1.2	80	1.3	31	83	880	6.2	1100	250	13000
			0.7				3.5			
26	1.3	91	1.5	35	94	1001	7	1400	320	16000
			0.8				4			
28	1.4	98	1.6	36	101	1078	7.5	1650	360	18000
			0.9				4.3			
30	1.5	105	1.7	39	108	1156	7.8	1900	415	20750
			0.9				4.6			
33	1.7	115	1.9	43	119	1265	8.5	2250	500	25000
			1				4.9			

CHAIN

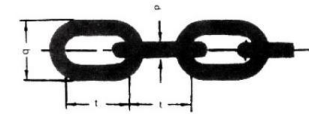
DIN 766 Link Chain



Size d	Inside Length t				Inside Width b1	Outside Width b2	Length Per 11 Links			Weight Per M kg	Breaking Load kn
	mm	±mm	mm	+mm			-mm	mm	+mm		
2	0.2	12	0.2	0.2	3.5	7.5	132	1	0.5	0.07	1.25
3	0.2	16	0.2	0.2	4.2	11	176	1.4	0.7	0.16	4
4	0.2	16	0.3	0.2	5.0	13.7	176	2.1	1.1	0.32	8
5	0.2	18.5	0.4	0.2	6.0	17	203.5	2.4	1.2	0.5	12.5
6	0.2	18.5	0.4	0.2	7.2	20.2	203.5	2.4	1.2	0.8	16
7	0.3	22	0.4	0.2	8.4	23.8	242	3	1.4	1.1	25
8	0.3	24	0.4	0.2	9.6	27.2	264	3.2	1.5	1.4	32
9	0.4	27	0.5	0.3	10.8	30.6	297	3.6	1.8	1.8	40
10	0.4	28	0.5	0.3	12	34	308	3.7	1.9	2.2	50
11	0.4	31	0.5	0.3	13.2	37.4	341	4	2	2.7	63
12	0.3	36	0.6	0.3	14.4	40.8	396	4.4	2.2	3.1	72.4
13	0.5	36	0.6	0.3	15.6	44.2	396	4.6	2.4	3.8	80
14	0.6	41	0.7	0.4	16.8	47.6	451	5.4	2.7	4.4	100
16	0.6	45	0.8	0.4	19.2	54.4	495	6	3	5.7	125
18	0.9	50	0.8	0.4	21.6	61.2	550	6.6	3.3	7.3	160
19	0.4	53	0.9	0.4	22.8	64.6	583	7	3.7	7.97	180
20	1.0	56	1.0	0.5	24	68	616	7.4	3.7	9	200
22	1.2	62	1.1	0.5	26.4	75	682	8	4	11	243
23	1.2	64	1.1	0.5	27.6	78.2	704	8.4	4.2	12	250
26	1.3	73	1.2	0.6	31.2	88.4	803	9.6	4.8	15	320
28	1.4	78	1.3	0.65	33.8	95.2	858	10.2	5.1	18	400
30	1.5	84	1.4	0.7	41	102	924	11	5.5	19.5	450
32	1.6	90	1.5	0.75	43	108.8	990	11.8	5.9	23	500

CHAIN

DIN 5685A/C Short/Long Link Chain



Size d mm	Inside Length t mm	Outside Width b mm	Weight Per 100m Kg	Test Load N	Breaking Load N	Type of Link
2	12	8	7	500	1250	A
	22		6			C
2.5	14	10	11	750	2000	A
	24		10			C
3	16	12	16.5	1120	2800	A
	26		15			C
3.5	18	14	22.5	1500	3850	A
	28		20			C
4	19	16	30	2000	5000	A
	32		27			C
4.5	20	18	39.5	2500	6300	A
	34		35			C
5	21	20	50	3150	7750	A
	35		43			C
5.5	23	22	60.5	3800	9500	A
	38.5		52			C
6	24	24	73	4500	11500	A
	42		63			C
6.5	26	26	86	5400	13500	A
	45.5		74			C
7	28	28	100	6000	15000	A
	49		86			C
8	32	32	130	8000	20000	A
	52		110			C
8.5	34	34	149	9000	22500	A
	56		125			C
9	36	36	165	10000	25000	A
	59		141			C
10	40	40	205	12500	31000	A
	65		175			C
11	44	44	250	15000	38000	A
	72		211			C
12	48	48	290	18000	45000	A
	78		255			C
13	52	52	345	21200	53000	A
	82		295			C

LIFTING SLING



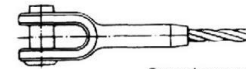
Wire Rope End Terminations



Swaged round sleeve



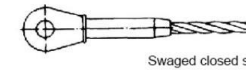
Hand spliced eye



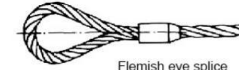
Swaged open socket



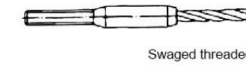
Spliced thimble



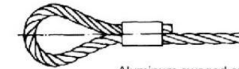
Swaged closed socket



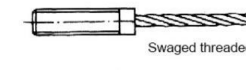
Flemish eye splice



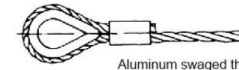
Swaged threaded stud



Aluminum swaged eye



Swaged threaded sleeve



Aluminum swaged thimble



Wedge type socket



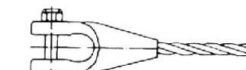
Aluminum swaged solid thimble



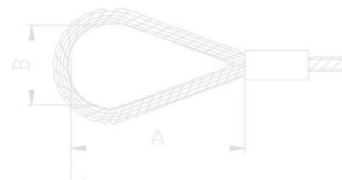
Wire rope grip



Aluminum swaged open socket



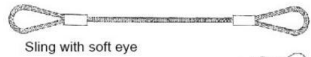
Open socket, socketed



LIFTING SLINGS

LIFTING SLING

Types of Sling



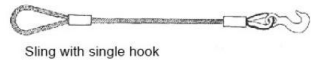
Sling with soft eye



Sling with soft eye two legs



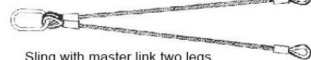
Sling with round



Sling with single hook



Sling for crane



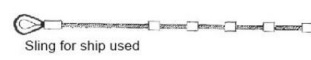
Sling with master link two legs



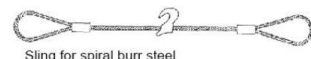
Sling with master link four legs



Containers sling for sea oil



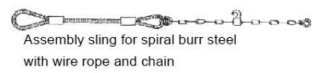
Sling for ship used



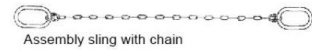
Sling for spiral burr steel



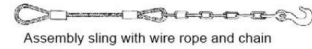
Sling for steel plate



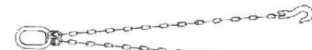
Assembly sling for spiral burr steel with wire rope and chain



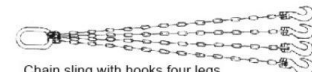
Assembly sling with chain



Assembly sling with wire rope and chain



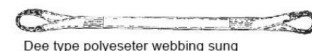
Chain sling with hooks two legs



Chain sling with hooks four legs



Special sling for power cable



Dee type polyeseter webbing sung



Single endless polyester webbing sung



Sling with socket



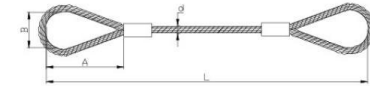
Hoist sling for crane



Sling with spliced eye termination

LIFTING SLING

WS01 Swaged Soft Eye Slings



Part No.	Rope dia. d (mm)	Soft loop dimensions (mm)		M.B.L. (t)	Working load limit (t)	
		A	B		n = 5	n = 6
WS010050	5	130	65	1.25	0.25	0.20
WS010060	6	150	75	1.80	0.36	0.30
WS010070	7	150	75	2.46	0.50	0.40
WS010080	8	200	100	3.21	0.60	0.50
WS010090	9	200	100	4.07	0.80	0.70
WS010100	10	200	100	5.03	1.00	0.80
WS010110	11	230	115	6.08	1.20	1.00
WS010120	12	230	115	7.23	1.50	1.20
WS010130	13	230	115	8.49	1.70	1.40
WS010140	14	250	125	9.85	2.00	1.60
WS010160	16	300	150	12.85	2.60	2.10
WS010180	18	300	150	16.32	3.30	2.70
WS010200	20	350	175	20.09	4.00	3.40
WS010220	22	350	175	24.27	4.90	4.10
WS010240	24	450	225	28.96	5.80	4.80
WS010260	26	450	225	33.96	6.80	5.70
WS010280	28	500	250	39.36	7.90	6.60
WS010300	30	500	250	45.17	9.00	7.50
WS010320	32	550	275	51.39	10.30	8.60
WS010340	34	600	300	58.12	11.60	9.70
WS010360	36	600	300	65.06	13.00	10.80
WS010380	38	600	300	72.50	14.50	12.10
WS010400	40	700	350	80.35	16.10	13.40
WS010420	42	800	400	88.61	17.70	14.80
WS010440	44	800	400	97.28	19.50	16.20
WS010460	46	900	450	106.05	21.20	17.70
WS010480	48	900	450	116.25	23.30	19.40
WS010500	50	1000	500	125.43	25.10	21.00
WS010520	52	1000	500	135.62	27.10	22.70

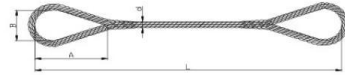
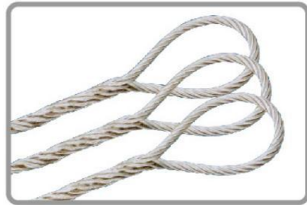
Part No.	Rope dia. d (mm)	Soft loop dimensions (mm)		M.B.L. (t)	Working load limit (t)	
		A	B		n = 5	n = 6
WS010540	54	1000	500	146.84	29.40	24.50
WS010560	56	1000	500	157.04	31.40	26.20
WS010580	58	1200	600	169.27	33.90	28.20
WS010600	60	1200	600	180.49	36.10	30.10
WS010620	62	1200	600	185.59	37.10	31.00
WS010640	64	1300	650	197.82	40.00	33.00
WS010660	66	1300	650	210.06	42.00	35.00
WS010680	68	1400	700	223.32	44.70	37.20
WS010700	70	1400	700	236.57	47.30	39.40
WS010720	72	1400	700	249.93	50.00	41.60
WS010740	74	1500	750	26.014	52.80	44.00
WS010760	76	1500	750	278.38	55.70	46.40
WS010780	78	1600	800	293.68	58.70	49.00
WS010800	80	1600	800	307.95	61.10	51.30
WS010820	82	1600	800	324.27	64.90	54.00
WS010840	84	1700	850	339.57	67.90	56.60
WS010860	86	1700	850	356.90	71.40	59.50
WS010880	88	1800	900	373.22	74.60	62.20
WS010900	90	1800	900	390.55	78.10	65.10
WS010920	92	1800	900	407.89	81.60	68.00
WS010940	94	1900	950	426.24	85.30	71.00
WS010960	96	1900	950	444.60	88.90	74.10
WS010980	98	2000	1000	462.95	92.60	77.20
WS011000	100	2000	1000	482.33	96.50	80.40
WS011020	102	2000	1000	501.10	100.40	83.60
WS011040	104	2100	1050	521.07	104.20	86.90
WS011060	106	2100	1050	541.47	108.30	90.30
WS011080	108	2200	1100	561.86	112.40	93.60
WS011100	110	2200	1100	583.28	116.70	97.20

Note:

- Steel wire ropes with diameters from Ø5 to Ø60 are 6×37+FC-1670N/mm² type complying to the GB/T20118 standard, while the ones with diameters from Ø62 to Ø110 are 6×61+FC-1670N/mm² type complying to the GB/T20067 standard.
- Values "A" or "B" can be customized. Otherwise, the values in the table apply.
- "L" value meets client requirements; n=5 and n=6 are safety factors, determined by users.

LIFTING SLING

WS02 Spliced Soft Eye Slings



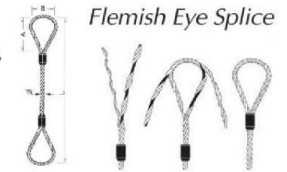
Part No.	Rope dia. d (mm)	Soft loop dimensions (mm)		M.B.L. (t)	Working load limit (t)		Part No.	Rope dia. d (mm)	Soft loop dimensions (mm)		M.B.L. (t)	Working load limit (t)	
		A	B		n = 5	n = 6			A	B		n = 5	n = 6
WS020050	5	130	65	1.25	0.24	0.20	WS020540	54	1000	500	146.84	20.60	17.10
WS020060	6	150	75	1.80	0.34	0.28	WS020560	56	1000	500	157.04	22.00	18.30
WS020070	7	150	75	2.46	0.48	0.38	WS020580	58	1200	600	169.27	23.70	19.70
WS020080	8	200	100	3.21	0.60	0.50	WS020600	60	1200	600	180.49	25.30	21.10
WS020090	9	200	100	4.07	0.72	0.60	WS020620	62	1200	600	185.59	26.00	21.70
WS020100	10	200	100	5.03	0.90	0.75	WS020640	64	1300	650	197.82	27.70	23.10
WS020110	11	230	115	6.08	1.10	0.90	WS020660	66	1300	650	210.06	29.40	24.50
WS020120	12	230	115	7.23	1.30	1.10	WS020680	68	1400	700	223.32	31.30	26.10
WS020130	13	230	115	8.49	1.50	1.30	WS020700	70	1400	700	236.57	33.10	27.60
WS020140	14	250	125	9.85	1.80	1.50	WS020720	72	1400	700	249.93	35.00	29.20
WS020160	16	300	150	12.85	2.30	1.90	WS020740	74	1500	750	264.11	37.00	30.80
WS020180	18	300	150	16.32	2.90	2.40	WS020760	76	1500	750	278.38	39.00	32.50
WS020200	20	350	175	20.09	3.60	3.00	WS020780	78	1600	800	293.68	41.10	34.30
WS020220	22	350	175	24.27	3.90	3.20	WS020800	80	1600	800	307.95	43.10	35.90
WS020240	24	450	225	28.96	4.60	3.90	WS020820	82	1600	800	324.27	45.40	37.80
WS020260	26	450	225	33.96	5.40	4.50	WS020840	84	1700	850	339.57	47.50	39.60
WS020280	28	500	250	39.36	6.30	5.20	WS020860	86	1700	850	356.90	50.00	41.60
WS020300	30	500	250	45.17	7.20	6.00	WS020880	88	1800	900	373.22	52.30	43.50
WS020320	32	550	275	51.39	7.70	6.40	WS020900	90	1800	900	390.55	54.70	45.60
WS020340	34	600	300	58.12	8.70	7.30	WS020920	92	1800	900	407.89	57.10	47.60
WS020360	36	600	300	65.06	9.80	8.10	WS020940	94	1900	950	426.24	59.70	49.70
WS020380	38	600	300	72.50	10.90	9.10	WS020960	96	1900	950	444.60	62.20	51.90
WS020400	40	700	350	80.35	12.10	10.00	WS020980	98	2000	1000	462.95	64.80	54.00
WS020420	42	800	400	88.61	12.40	10.30	WS021000	100	2000	1000	482.33	67.50	56.30
WS020440	44	800	400	97.28	13.60	11.30	WS021020	102	2000	1000	501.10	70.20	58.50
WS020460	46	900	450	106.05	14.80	12.40	WS021040	104	2100	1050	521.07	72.90	60.80
WS020480	48	900	450	116.25	16.30	13.60	WS021060	106	2100	1050	541.47	75.80	63.20
WS020500	50	1000	500	125.43	17.60	14.60	WS021080	108	2200	1100	561.86	78.70	65.60
WS020520	52	1000	500	135.62	19.00	15.80	WS021100	110	2200	1100	583.28	81.70	68.00

Note:

- Steel wire ropes with diameters from Ø5 to Ø60 are 6×37+FC-1670N/mm² type complying to the GB/T20118 standard, while the ones with diameters from Ø62 to Ø110 are 6×61+FC-1670N/mm² type complying to the GB/T20067 standard.
- Values "A" or "B" can be customized. Otherwise, the values in the table apply.
- "L" value meets client requirements; n=5 and n=6 are safety factors, determined by users.

LIFTING SLING

- The wire rope slings pressed with steel sleeves are manufactured according to the EN13414 standard.
- Steel wire rope with diameters from 5mm-130mm can be pressed with steel sleeves, and the Minimum Breaking Load is 5 times of Working Load Limited.
- All the products can pass the 2 times safety tensile test or breaking load test. Certificate of Quality and Certificate of Tensile Test can be offered.
- Wire ropes with different structures have different working load. And working load can be figured out according to the wire rope structure required.



WS03 6x37+IWRC-1770Mpa

Part No.	Rope Dia (mm)	Working Load Limited(Ton)						Eye Size (mm)	
		Vertical	Choker	Basket Hitches			A	B	
WS030100	10	1.2	0.9	2.4	2.0	1.7	1.2	200	100
WS030120	12	1.8	1.4	3.6	3.1	2.5	1.8	240	120
WS030140	14	2.3	1.8	4.6	4.0	3.2	2.3	280	140
WS030160	16	3.0	2.0	6.0	5.0	4.0	3.0	320	160
WS030180	18	4.0	3.0	8.0	7.0	6.0	4.0	360	180
WS030200	20	5.0	4.0	10.0	8.0	7.0	5.0	400	200
WS030220	22	6.0	5.0	12.0	10.0	8.0	6.0	440	220
WS030240	24	7.0	5.0	14.0	12.0	10.0	7.0	480	240
WS030260	26	8.0	6.0	16.0	14.0	11.0	8.0	520	260
WS030280	28	9.0	7.0	18.0	16.0	13.0	9.0	560	280
WS030300	30	11.0	9.0	22.0	19.0	15.0	11.0	600	300
WS030320	32	12.0	10.0	24.0	21.0	17.0	12.0	640	320
WS030340	34	14.0	11.0	28.0	24.0	19.0	14.0	680	340
WS030360	36	15.0	12.0	30.0	27.0	22.0	15.0	720	360
WS030380	38	17.0	14.0	34.0	30.0	24.0	17.0	760	380
WS030400	40	19.0	15.0	38.0	33.0	27.0	19.0	800	400
WS030420	42	21.0	17.0	42.0	37.0	30.0	21.0	840	420
WS030450	45	24.0	19.0	48.0	42.0	34.0	24.0	900	450
WS030500	50	30.0	24.0	60.0	52.0	42.0	30.0	1000	500
WS030520	52	32.0	26.0	64.0	56.0	46.0	32.0	1040	520
WS030560	56	37.0	30.0	74.0	65.0	53.0	37.0	1120	560
WS030600	60	43.0	34.0	86.0	75.0	61.0	43.0	1200	600
WS030650	65	50.0	40.0	100.0	87.0	71.0	50.0	1300	650
WS030700	70	58.0	47.0	116.0	101.0	82.0	58.0	1400	700
WS030750	75	67.0	53.0	134.0	116.0	95.0	67.0	1500	750
WS030800	80	76.0	61.0	152.0	132.0	108.0	76.0	1600	800
WS030850	85	86.0	69.0	172.0	149.0	122.0	86.0	1700	850
WS030900	90	96.0	77.0	192.0	167.0	137.0	96.0	1800	900
WS030950	95	107.0	86.0	214.0	186.0	152.0	107.0	1900	950
WS031000	100	119.0	95.0	238.0	207.0	169.0	119.0	2000	1000
WS031020	102	120.0	96.0	240.0	208.0	170.0	120.0	2040	1020
WS031050	105	123.0	99.0	246.0	214.0	175.0	123.0	2100	1050

* WLL=MBL X 0.9 (Pressing Efficiency of Aluminum Ferrules)/5 (Safety Factor)

LIFTING SLING

WS04 Cast in Lift Anchor



Part No.	θ (mm)	Load(ton)	Height(mm)	Width(mm)
WS040060	6	0.8	200	50
WS040080	8	1.6	235	70
WS040100	10	2.5	280	80
WS040140	14	5.2	385	180
WS040160	16	6.3	385	180
WS040200	20	10	470	200
WS040220	22	12.5	510	200
WS040240	24	16	560	220
WS040280	28	20	610	280

WS05 Rd-thread Lift Loop



Part No.	d*e(mm)	θ (mm)	Load(ton)	Height(mm)
WS050060	Rd12*22	6	0.5	155
WS050070	Rd14*24	7	0.8	155
WS050080	Rd16*27	8	1.2	155
WS050100	Rd20*35	10	2	215
WS050160	Rd30*50	16	4	300
WS050180	Rd36*65	18	6.3	340
WS050200	Rd42*70	20	8	425
WS050260	Rd52*80	26	12.5	480

WS06 M-thread Lift Loop



Part No.	d*e(mm)	Load(ton)	Height(mm)	Width(mm)
WS060060	M12*22	6	0.5	155
WS060070	M14*24	7	0.8	155
WS060080	M16*27	8	1.2	155
WS060100	M20*35	10	2	215
WS060160	M30*50	16	4	300
WS060180	M36*65	18	6.3	340
WS060200	M42*70	20	8	425
WS060260	M52*80	26	12.5	480

LIFTING SLING



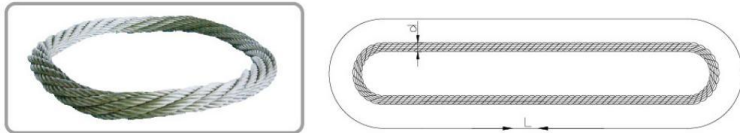
WS20 Endless Locking Type(6x37+IWRC)

Part No.	Rope Dia (mm)	Working Load Limited(Ton)					
		Vertical	Choker	Basket Hitches			
				30°	45°	60°	
WS200100	10	2.1	1.6	4.2	3.7	2.9	2.1
WS200120	12	3.2	2.3	6.3	5.5	4.4	3.2
WS200140	14	4	3	8	7	6	4
WS200160	16	5	4	11	9	7	5
WS200180	18	7	5	13	12	9	7
WS200200	20	8	6	16	14	11	8
WS200220	22	10	7.5	20	17	14	10
WS200240	24	12	9	24	21	17	12
WS200260	26	14	11	29	25	20	14
WS200280	28	17	13	33	29	23	17
WS200300	30	19	14	38	33	27	19
WS200320	32	21	16	42	37	30	21
WS200340	34	24	18	48	42	34	24
WS200360	36	27	20	54	47	38	27
WS200380	38	30	23	60	52	42	30
WS200400	40	34	26	68	60	47	34
WS200420	42	37	28	74	65	52	37
WS200450	45	43	33	86	75	60	43
WS200500	50	53	40	106	93	74	53
WS200520	52	56	43	112	99	78	56
WS200560	56	66	50	132	117	93	66
WS200600	60	76	58	152	134	107	76
WS200650	65	89	68	179	157	125	89
WS200700	70	104	79	208	183	146	104
WS200750	75	119	90	237	209	166	119
WS200780	78	129	98	257	226	180	129
WS200820	82	142	108	285	251	199	142
WS200870	87	156	119	313	275	219	156
WS200920	92	179	136	358	315	250	179
WS200950	95	191	145	382	336	267	191
WS201000	100	203	154	406	357	284	203
WS201020	102	219	167	438	386	307	219
WS201050	105	232	176	463	408	324	232

* WLL=MBL X 0.9 (Pressing Efficiency of Aluminum Ferrules)/5 (Safety Factor)

LIFTING SLING

WS21 Endless Wire Rope Slings

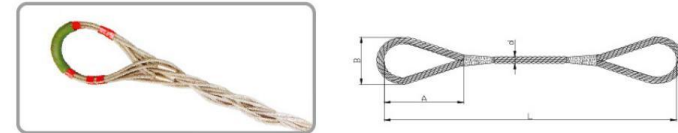


Part No.	Nominal dia. d (mm)	Breaking load (KN)	Vertical working load of single leg (KN)		Working load of double leg (KN)		Working load of four leg (KN)		Approx. weight (kg/m)
			$\alpha=0^\circ$	$\alpha \leq 45^\circ$	$45^\circ \leq \alpha \leq 90^\circ$	$\alpha \leq 45^\circ$	$45^\circ \leq \alpha \leq 90^\circ$	$\alpha \leq 45^\circ$	
WS210100	10	60	10	18	14	36	28	0.29	
WS210120	12	100	16	30	22	60	44	0.48	
WS210150	15	140	23	41	32	82	64	0.71	
WS210180	18	180	30	54	42	108	84	0.98	
WS210210	21	235	39	70	55	140	110	1.11	
WS210240	24	305	51	92	70	184	140	1.44	
WS210270	27	385	64	115	90	230	180	1.82	
WS210300	30	475	79	142	110	284	220	2.25	
WS210360	36	605	114	205	160	410	320	3.39	
WS210420	42	930	155	280	217	560	434	4.61	
WS210480	48	1220	203	365	284	730	568	6.02	
WS210540	54	1540	256	460	358	920	716	7.62	
WS210600	60	1900	316	570	442	1140	894	9.38	
WS210660	66	2305	384	690	538	1380	1076	11.36	
WS210720	72	2745	458	824	640	1648	1280	13.53	
WS210780	78	3220	536	964	750	1928	1500	15.91	
WS210840	84	3730	622	1120	870	2240	1740	18.43	
WS210900	90	4285	714	1285	1000	2570	2000	21.15	
WS210960	96	4880	812	1462	1136	2924	2274	24.07	
WS211020	102	5510	918	1652	1285	3304	2570	27.20	
WS211080	108	6175	1030	1854	1442	3708	2884	30.46	
WS211140	114	6875	1146	2062	1604	4124	3208	34.00	
WS211200	120	7615	1270	2286	1778	4572	3556	37.67	
WS211260	126	8400	1400	2520	1960	5040	3920	41.48	
WS211320	132	9210	1535	2763	2150	5526	4300	45.56	
WS211380	138	10032	1672	3010	2340	6020	4680	49.78	
WS211440	144	10945	1824	3282	2554	6564	5108	54.20	
WS211500	150	11855	1976	3556	2766	7112	5532	58.82	
WS211560	156	12860	2144	3860	3002	7720	6004	63.65	
WS211620	162	13860	2310	4158	3234	8316	6468	68.68	
WS211680	168	14955	2492	4486	3488	8972	6976	74.12	
WS211740	174	16050	2675	4815	3745	9630	7490	78.88	
WS211800	180	17145	2858	5144	4000	10288	8000	85.00	
WS211860	186	17600	2934	5282	4108	10564	8216	94.52	
WS211920	192	18695	3116	5608	4362	11216	8724	100.6	
WS211980	198	19800	3300	5940	4620	11880	9240	106.8	
WS212040	204	21100	3526	6346	4936	12692	9672	113.6	
WS212100	210	22345	3724	6702	5214	13404	10428	120.4	
WS212160	216	23710	3950	7110	5530	14220	11060	127.2	
WS212220	222	24990	4165	7498	5830	14995	11660	134.6	
WS212280	228	26355	4392	7906	6150	15812	12300	142.1	
WS212340	234	27815	4636	8345	6490	16690	12980	149.6	
WS212400	240	29275	4880	8784	6832	17568	13664	157.1	

Note: Safety factor 6:1, for use in general frequent lifting environment.

LIFTING SLING

WS22 Large Diameter Cable-Laid Slings



Part No.	Nominal dia. d (mm)	Main rope dia. (mm)	Core rope dia. (mm)	Breaking load		Working load limit		Approx. weight (kg/m)
				(KN)	(t)	(KN)	(t)	
WS220700	70	22	26	1460	149	304	31	15.62
WS220760	76	24	28	1736	177	373	38	18.54
WS220820	82	26	30	2039	208	451	46	21.67
WS220900	90	28	34	2363	240	539	55	25.61
WS220960	96	30	36	2713	277	647	66	29.24
WS221020	102	32	38	3089	315	756	77	33.15
WS221080	108	34	40	3486	355	882	90	37.28
WS221140	114	36	42	3905	398	1022	104	41.69
WS221200	120	38	44	4363	445	1182	120	46.32
WS221260	126	40	46	4838	493	1360	139	51.18
WS221320	132	42	48	5314	542	1551	158	56.27
WS221440	144	46	52	6394	652	2022	206	67.24
WS221500	150	48	54	6955	709	2295	234	73.13
WS221560	156	50	56	7517	767	2506	256	78.90
WS221620	162	52	58	8165	833	2722	278	85.59
WS221680	168	54	60	8770	894	2923	298	92.17
WS221740	174	56	62	9461	965	3154	322	98.96
WS221800	180	58	64	10152	1035	3384	345	106.28
WS221920	192	62	68	11578	1181	3859	394	121.12
WS222040	204	66	72	13133	1339	4378	446	136.79
WS222160	216	68	80	13954	1423	4651	474	149.00
WS222280	228	74	80	16502	1683	5500	560	171.59
WS222400	240	76	88	17410	1775	5803	592	184.97
WS222520	252	80	92	19310	1969	6437	656	205.03
WS222640	264	84	96	21254	2167	7085	722	225.20
WS222760	276	88	100	23328	2379	7776	793	246.83
WS222880	288	90	108	24408	2489	8136	830	265.53
WS223000	300	96	108	26525	2705	8842	902	294.38
WS223120	312	100	112	28771	2934	9591	978	319.14
WS223360	336	108	120	32616	3326	10866	1108	383.31
WS223600	360	116	128	37627	3837	12542	1280	441.30
WS223840	384	124	136	42984	4383	14328	1460	503.59
WS224080	408	130	148	47088	4802	15696	1600	560.43
WS224320	432	138	156	53136	5418	17712	1806	629.93
WS224560	456	146	164	56592	5771	18864	1924	705.58

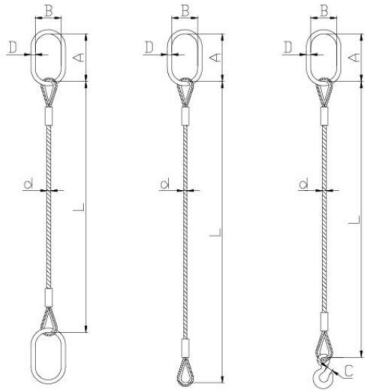
Note:

- Steel wire ropes with diameters from Ø67 to Ø456 are 6×36WS+IWR, 6×65WS+IWR types complying to the GB/T20118 and GB/T20067 standards.
- Large diameter steel cable twisting joint riggings are manufactured according to the EN13414 standard, and the safety factor should be selected according to the EN13414 standard.

LIFTING SLING

WS31 Single-leg Swaged Sling Assembly

LIFTING SLINGS



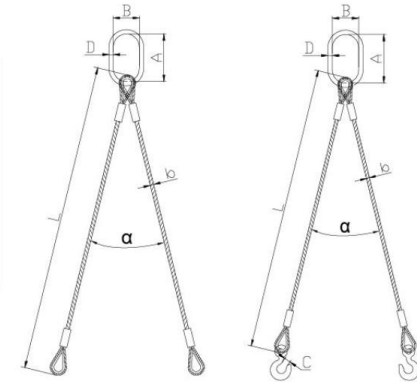
Part No.	Rope dia. (mm)	Working load limit (KN)	Loop dimension A×B×D (mm)	Dimension of hook opening C (mm)
WS310060	6	2.90	110x60x14	24
WS310080	8	4.90	110x60x14	24
WS310100	10	7.90	110x60x14	24
WS310120	12	11.80	110x60x16	25
WS310140	14	15.70	110x60x16	27
WS310160	16	21.60	135x75x18	30
WS310180	18	26.50	135x75x18	38
WS310200	20	32.40	160x90x22	38
WS310240	24	49.00	160x90x22	38
WS310280	28	68.60	180x100x26	45
WS310320	32	88.30	200x110x32	61
WS310380	38	117.70	260x140x36	67
WS310400	40	132.40	260x140x36	67
WS310440	44	147.00	300x160x40	67
WS310520	52	216.00	350x190x50	87
WS310560	56	257.00	350x190x50	87
WS310640	64	335.00	400x200x56	108
WS310700	70	400.00	400x200x56	108

Note:

1. The steel wire ropes are 1670N/mm² fiber core type.
2. "L" value meets client requirements.

LIFTING SLING

WS32 Double-leg Swaged Sling Assembly



LIFTING SLINGS

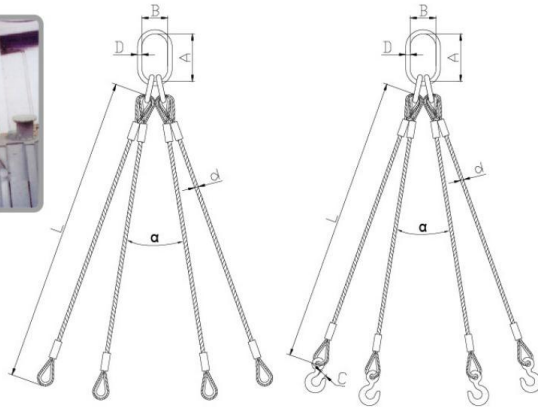
Part No.	Rope dia. (mm)	Working load limit (KN) $\alpha \leq 90^\circ$	Working load limit (KN) $90^\circ \leq \alpha \leq 120^\circ$	Loop dimension A×B×D (mm)	Dimension of hook opening C (mm)
WS320060	6	4.10	2.90	110x60x14	24
WS320080	8	6.90	4.90	110x60x14	24
WS320100	10	11.00	7.90	110x60x14	25
WS320120	12	16.50	11.80	110x60x16	25
WS320140	14	22.00	15.70	135x75x18	27
WS320160	16	30.00	21.60	135x75x18	30
WS320180	18	37.00	26.50	160x90x22	38
WS320200	20	45.00	32.40	160x90x22	38
WS320240	24	68.60	49.00	180x100x26	45
WS320280	28	96.00	68.60	200x110x32	61
WS320320	32	123.60	88.30	260x140x36	66
WS320380	38	165.00	117.70	300x160x40	87
WS320400	40	185.00	132.40	340x180x45	87
WS320440	44	206.00	147.00	340x180x45	87
WS320520	52	302.40	216.00	350x190x50	102
WS320560	56	359.80	257.00	400x200x56	107
WS320640	64	469.00	335.00	430x220x63	121
WS320700	70	560.00	400.00	460x250x72	146

Note:

1. The steel wire ropes are 1670N/mm² fiber core type.
2. "L" value meets client requirements.

LIFTING SLING

WS33 Four-leg Swaged Sling Assembly



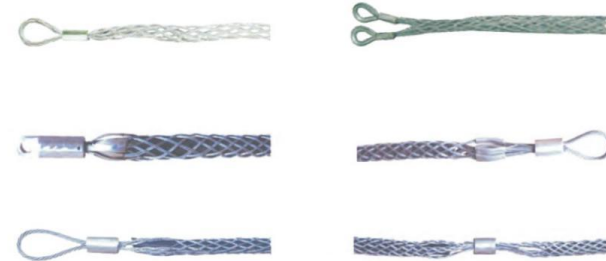
Part No.	Rope dia. (mm)	Working load limit (KN) $\alpha \leq 90^\circ$	Working load limit (KN) $90^\circ \leq \alpha \leq 120^\circ$	Main loop dimension AxBxD (mm)	Assistant loop dimension AxBxD (mm)	Dimension of hook opening C (mm)
WS330060	6	6.10	4.40	100x60x14	85x40x12	24
WS330080	8	10.30	7.40	100x60x14	85x40x12	25
WS330100	10	16.60	11.90	100x60x14	85x40x12	27
WS330120	12	24.80	17.70	160x90x18	100x60x14	30
WS330140	14	33.00	23.60	160x90x20	100x60x14	38
WS330160	16	45.40	32.40	180x100x22	150x70x18	38
WS330180	18	55.70	39.80	180x100x22	150x70x18	45
WS330200	20	68.00	48.60	270x140x28	160x90x22	45
WS330240	24	102.90	73.50	270x140x32	180x100x25	61
WS330280	28	144.10	102.90	260x140x36	—	66
WS330320	32	185.40	132.50	340x180x45	—	87
WS330380	38	247.00	176.60	340x180x50	—	102
WS330400	40	278.00	199.00	340x180x50	—	102
WS330440	44	309.00	221.00	340x180x50	—	108
WS330520	52	450.00	324.00	430x220x63	—	121
WS330560	56	540.00	386.00	460x250x72	—	146

- Note:
- The steel wire ropes are 1670N/mm² fiber core type.
 - "L" value meets client requirements.

LIFTING SLING

Cable Stockings

Cable Stocking is a woven wire rope sleeve with an eye or eyes at the end, the sleeve is designed to fit onto a wire rope or cable to become an attachment point for hauling, or for securing the wire rope or cable during installation.



WS51 Double Eye Cable Stockings (Type B)

- ▶ This is similar to the single eye type and has similar applications. The extra eye is provided to lift the assembly while the other eye is made off to a fixture.
- ▶ Type B double eye cable stockings are made of galvanized steel wire and aluminium alloy ferrule.



Part No.	Hose OD (mm)	Overall length (mm)	Eye dimension (mm)	Number of strands	Breaking load (KN)
WS510408	4-8	300	50	8	10.24
WS510812A	8-12	400	57	8	10.56
WS510812B	8-12	400	57	12	15.84
WS511320	13-20	580	57	8	10.56
WS512232	22-32	690	57	8	10.56
WS513332	33-32	690	57	12	15.84
WS513444	34-44	910	62	12	25.20
WS514555	45-55	1120	62	12	25.20
WS515666	56-66	1300	75	12	25.20
WS515666	56-66	1300	75	12	37.80
WS517082	70-82	1560	95	12	37.80
WS5185XX	85-100	2250	100	12	35.44
WS51104X	104-130	2250	130	12	56.40

LIFTING SLING

WS52 Single Eye Cable Stockings (Type A)

- ▶ The eye is used for installing, lifting, or for hauling when the cable stocking is securely connected to a fixture.
- ▶ Type A single eye cable stockings are made of galvanized steel wire and aluminium alloy ferrule.



Part No.	Hose OD (mm)	Overall length (mm)	Eye dimension (mm)	Weave	Rope dia. (mm)	Breaking load (KN)
WS520508A	5-8	300	50	3×2	1.2	0.62
WS520508B	5-8	300	50	4×2	1.2	0.83
WS520812A	8-12	400	57	4×2	1.6	1.10
WS520812B	8-12	400	57	3×3	1.6	1.24
WS520812C	8-12	400	57	4×2	1.6	1.47
WS520812D	8-12	400	57	4×3	1.6	1.65
WS521222A	12-22	580	57	4×2	1.6	1.10
WS521222B	12-22	580	57	4×3	1.6	1.65
WS521222C	12-22	580	57	6×2	1.6	1.47
WS521222D	12-22	580	57	6×3	1.6	2.21
WS522333A	23-33	690	57	6×2	1.6	1.65
WS522333B	23-33	690	57	6×3	1.6	2.47
WS522333C	23-33	690	57	6×2	1.6	2.21
WS522333D	23-33	690	57	6×3	1.6	3.31
WS523444A	34-44	910	62	6×2	2.0	2.14
WS523444B	34-44	910	62	6×3	2.0	3.20
WS523444C	34-44	910	62	6×2	2.0	3.00
WS523444D	34-44	910	62	6×3	2.0	4.50
WS524555A	45-55	1120	62	6×2	2.0	2.14
WS524555B	45-55	1120	62	6×3	2.0	3.20
WS524555C	45-55	1120	62	6×2	2.0	3.00
WS524555D	45-55	1120	62	6×3	2.0	4.50
WS525666A	56-66	1300	75	6×2	2.5	3.25
WS525666B	56-66	1300	75	6×3	2.5	4.88
WS525666C	56-66	1300	75	6×2	2.5	4.27
WS525666D	56-66	1300	75	6×3	2.5	6.36
WS526782A	67-82	1560	95	6×2	2.5	3.25
WS526782B	67-82	1560	95	6×3	2.5	4.88
WS526782C	67-82	1560	95	6×2	2.5	4.24
WS526782D	67-82	1560	95	6×3	2.5	6.36
WS5283XXA	83-100	2250	100	6×2	3.0	4.78
WS5283XXB	83-100	2250	100	6×3	3.0	7.17
WS5283XXC	83-100	2250	100	6×2	3.0	7.22
WS5283XXD	83-100	2250	100	6×3	3.0	10.83
WS52100XA	100-130	2250	130	6×2	4.0	7.83
WS52100XB	100-130	2250	130	6×3	4.0	11.74
WS52100XC	100-130	2250	130	6×2	4.0	11.07
WS52100XD	100-130	2250	130	6×3	4.0	16.61
WS52130XA	130-180	3000	175	6×2	5.0	12.20
WS52130XB	130-180	3000	175	6×3	5.0	18.30
WS52130XC	130-180	3000	175	6×2	5.0	17.06
WS52130XD	130-180	3000	175	6×3	5.0	25.59

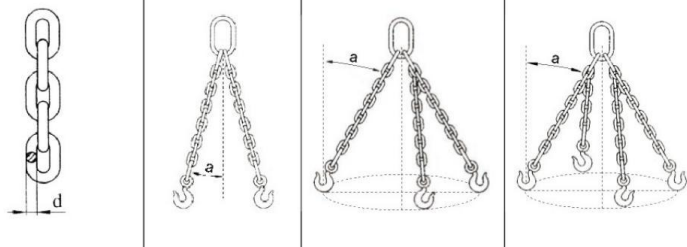
LIFTING SLING

WS61 Hoist Chain Working Load Limits (T)

Part No.	a d (mm)	吊钩吊链				吊钩式吊索			
		直吊		穿套式吊索		直吊		穿套式吊索	
		L=1.0	L=0.8	L=1.0	L=1.12	L=1.0	L=0.8		
WS610060	6.0	1.0	0.8	4.0	1.6	1.4	1.0	1.1	0.8
WS610080	8.0	2.0	1.6	8.0	3.2	2.8	2.0	2.0	1.6
WS610100	10	3.2	2.5	12.5	5.0	4.5	3.2	3.6	2.5
WS610110	11	3.8	3.0	15.2	6.0	5.3	3.8	4.1	3.0
WS610120	12	4.6	3.6	18.4	7.3	6.5	4.6	5.2	3.6
WS610125	12.5	5.0	4.0	20	8.0	7.0	5.0	5.5	4.0
WS610130	13	5.3	4.2	21.2	8.4	7.4	5.3	5.8	4.2
WS610140	14	6.2	5.0	24.8	9.9	8.7	6.2	6.9	5.0
WS610150	15	7.0	5.6	28	11.2	9.8	7.0	7.7	5.6
WS610160	16	8.0	6.4	32	12.8	11.2	8.0	8.8	6.4
WS610180	18	10.0	8.0	40	16.0	14.0	10.0	11.0	8.0
WS610190	19	11.3	9.0	45.2	18	15.8	11.3	12.4	9.0
WS610200	20	12.5	10	50	20	17.5	12.5	13.7	10
WS610220	22	15.0	12.0	60	24.0	21.2	15.0	17.0	12.0
WS610240	24	18.0	14.4	72	28.8	25.2	18.0	20.2	14.4
WS610260	26	21.3	17.0	85.2	34.1	29.8	21.3	23.4	17.0
WS610300	30	28.2	22.6	112.8	45.1	39.5	28.2	31.6	22.6
WS610320	32	32.1	25.6	128.4	51.3	44.9	32.1	35.3	25.6
WS610340	34	36.2	28.9	144.8	57.9	50.7	36.2	40.5	28.9
WS610360	36	40	32	160	64	56	40	44	32
WS610380	38	45.3	36.2	181.1	72.4	63.4	45.3	49.8	36.2
WS610420	42	55.5	44.4	222	88.8	77.7	55.5	61	44.4

LIFTING SLING

WS61 H Oist Chain Working Load Limits (T)



Part No.	d (mm)	a		a		a		a	
		L=Loadfactor	0°-45°	45°-60°	0°-45°	45°-60°	0°-45°	45°-60°	0°-45°
WS620060	6	1.5	1.1	2.3	1.6	2.3	1.6	2.3	1.6
WS620080	8	2.8	2.0	4.2	3.0	4.2	3.0	4.2	3.0
WS620100	10	4.4	3.2	6.7	4.8	6.7	4.8	6.7	4.8
WS620110	11	5.3	3.8	7.9	5.7	7.9	5.7	7.9	5.7
WS620120	12	6.4	4.6	9.6	6.9	9.6	6.9	9.6	6.9
WS620125	12.5	7.0	5.0	10.5	7.5	10.5	7.5	10.5	7.5
WS620130	13	7.4	5.3	11.1	7.9	11.1	7.9	11.1	7.9
WS620140	14	8.8	6.3	13.2	9.5	13.2	9.5	13.2	9.5
WS62150	15	9.8	7.0	14.7	10.5	14.7	10.5	14.7	10.5
WS620160	16	11.2	8.0	16.8	12	16.8	12	16.8	12
WS620180	18	14.0	10.0	21.0	15.0	21.0	15.0	21.0	15.0
WS620190	19	15.8	11.3	23.7	16.9	23.7	16.9	23.7	16.9
WS620200	20	17.5	12.5	26.2	18.7	26.2	18.7	26.2	18.7
WS620220	22	21.3	15.3	32.0	22.9	32.0	22.9	32.0	22.9
WS620240	24	25.2	18.0	37.8	27.0	37.8	27.0	37.8	27.0
WS620260	26	30.2	21.6	45.3	32.4	45.3	32.4	45.3	32.4
WS620300	30	39.5	28.3	59.3	42.4	59.3	42.4	59.3	42.4
WS620320	32	44.8	32	67.2	48	67.2	48	67.2	48
WS620340	34	50.7	36.3	76.1	52.4	76.1	52.4	76.1	52.4
WS620360	36	56	40	84	60	84	60	84	60
WS620380	38	63.4	45.3	95.1	67.9	95.1	67.9	95.1	67.9
WS620420	42	77.7	55.5	116.5	83.2	116.5	83.2	116.5	83.2

LIFTING SLINGS

LIFTING SLING

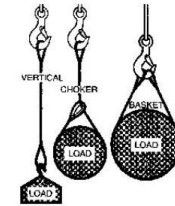
Sling Application

Hitches

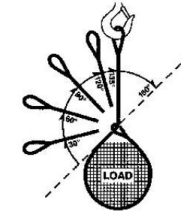
Every lift uses one of three basic hitches:

1. **Vertical** – The vertical, or straight, attachment is simply using a sling to connect a lifting hook or other device to a load. Full rated load of the sling may be used, but never exceeded. A tagline should be used on such a lift to prevent rotation, which can damage the sling. A wire rope sling with a hand-tucked splice can unlay and fail if the sling is allowed to rotate.

2. **Choker** – Choker Hitch configurations reduce the rated capacity of a sling by 20 to 25 percent. If a load is hanging free, the normal choke angle is approximately 135°. When the choke angle is less than 120°, an adjustment in the choker rated capacity must be made (see illustration below). Extreme care should be taken to determine the choke angle as accurately as possible. As indicated in the table below, the decrease in rated capacity is dramatic.



Choker Hitch	
RATED CAPACITY ADJUSTMENT	
Choke Angle (Degrees)	IWRC and Fiber Core Rope Percent of Choker Rated Capacity
Over 120	100
90 – 120	87
60 – 89	74
30 – 59	62
Up to 29	49

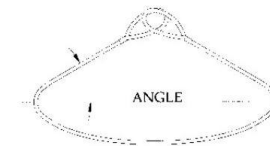


Angle Adjustment

Rated capacity adjustment for slings in choker hitch when angle is less than 120°. Choke angles greater than 135° are unstable and should not be used.

3. **Basket** – Basket hitches distribute a load equally between the two legs of a sling, within limitations imposed by the angles at which legs are rigged to the load (see discussion of sling angles).

Basket Hitch	
CAPACITY ADJUSTMENT	
Angle (Degrees)	Percent of Single Leg Capacity
90	200
60	170
45	140
30	100



A basket hitch has twice the capacity of a single leg only if legs of sling are vertical. and only if D/d ratio is 25:1 and it is vertical. D/d > 25:1 per ANSI B30.9.

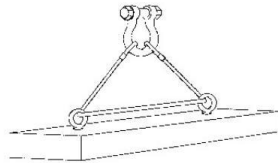
LIFTING SLINGS

WARNING: Do not use, or allow the use of the products in this catalog, unless the user has read and understands the applicable instructions and product warnings. Information available upon request.

LIFTING SLING

Reeving

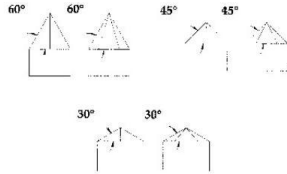
Reeving through connections to load increases load on connections fitting by as much as twice. Do not reeve!



Triple and Quad Leg Slings

Triple leg slings have 50% more capacity than double leg only if the center of gravity is in center of connection points and the legs are adjusted properly (equal share of the load).

Quad leg slings offer improved stability but do not provide increased lifting capacity.



Center Of Gravity (COG)

The location of the center of gravity to the pick points is an important consideration.

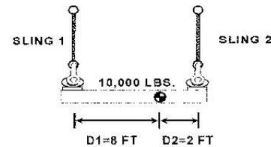
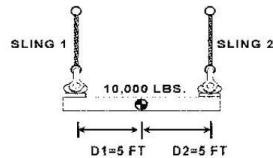
COG and Sling Loading

When lifting vertically, the load will be shared equally if the center of gravity is spaced equally between the pick points, as in the first illustration at right. If the weight of the load is 10,000 lbs., then each sling will have a load of 5,000 lbs. and each shackle and eyebolt will also have a load of 5,000 lbs.

When the center of gravity is not equally spaced between the pick points, as in the second illustration, the slings and fittings will not carry an equal share of the load. The sling connected to the pick point closest to the center of gravity will carry the greatest share of the load. Sling 2 is closest to COG. It will have the greatest share of load.

$$\text{Sling 2} = 10,000 \times 8 / (8+2) = 8,000$$

$$\text{Sling 1} = 10,000 \times 2 / (8+2) = 2,000$$



WARNING: Do not use, or allow the use of the products in this catalog, unless the user has read and understands the applicable instructions and product warnings. Information available upon request.

LIFTING SLING

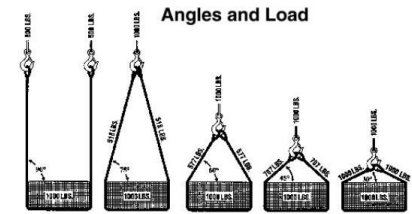
Sling Angle

Sling Angle (also called angle of loading) is the angle measured between a horizontal plane and the sling leg or body. This angle is very important and can have a dramatic effect on the rated capacity of the sling (see illustration below). As illustrated at right, when this angle decreases, the load on each leg increases. This principle applies whether one sling is used to pull at an angle, in a basket hitch, or for multilegged bridle slings. Sling angles of less than 30° shall not be used.

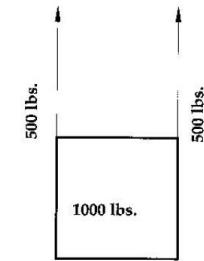


Angles and Stress

How do you carry two buckets of water? These illustrations typify the stresses imposed on slings when the legs are attached to the load at various angles.



Sling Angles

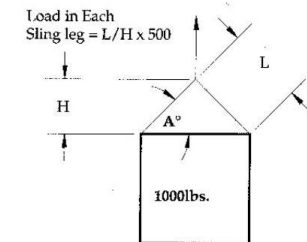
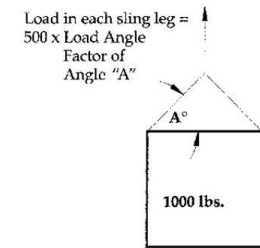


Load Angle Factor

Sling Angle Degrees (A°)	Load Angle Factor = L/H
90	1.00
60	1.155
50	1.305
45	1.414
30	2.00

LOAD ON EACH LEG OF SLING = (Load ÷ 2) x LOAD ANGLE FACTOR

ANSI B30.9 recommends against the use of a horizontal sling angle smaller than 30°.



WARNING: Do not use, or allow the use of the products in this catalog, unless the user has read and understands the applicable instructions and product warnings. Information available upon request.