INDEX

Chain

Short Link Grade 30
Made to DIN766 specifications

Chain Size	Work Load Limit	Links /m	Link Dimensions			Break Load	Weight
			Ø	L	W		
[mm]	[t]		[mm]	[mm]	[mm]	[t]	[kg/m]
4	0.15	41.7	4.0	16.0	24.0	0.6	0.32
5	0.25	35.7	5.0	18.0	28.0	1.0	0.50
6	0.35	32.8	6.0	18.5	30.5	1.4	0.80
7	0.45	27.8	7.0	22.0	36.0	1.8	1.10
8	0.63	25.0	8.0	24.0	40.0	2.5	1.40
10	1.00	20.8	10.0	28.0	48.0	4.0	2.20
13	1.60	16.1	13.0	36.0	62.0	6.4	3.80
16	2.50	13.0	16.0	45.0	77.0	10.0	5.70
20	4.00	10.4	20.0	56.0	96.0	16.0	9.00
22	4.80	9.4	22.0	62.0	106.0	19.2	11.00
26	6.30	8.0	26.0	73.0	125.0	25.0	15.00
28	7.50	7.5	28.0	78.0	134.0	30.0	18.00
30	8.50	6.9	30.0	84.0	144.0	34.0	19.50
32	9.50	6.5	32.0	90.0	154.0	38.0	23.00

Factor of Safety: 4:1
Material: High quality carbon-steel, ideal for lashing and general purpose use
Finish: Natural (black), electro galvanised or hot-dip galvanised

Short Link Grade 43

Made to DIN766 specifications

Chain Size	Work Load Limit	Links /m	Link Dimensions			Break Load	Weight
			Ø	L	W		
[mm]	[t]		[mm]	[mm]	[mm]	[t]	[kg/m]
4	0.27	41.7	4.0	16.0	24.0	1.10	0.32
5	0.42	35.7	5.0	18.0	28.0	1.68	0.50
6	0.58	32.8	6.0	18.5	30.5	2.32	0.80
7	0.80	27.8	7.0	22.0	36.0	3.20	1.10
8	1.08	25.0	8.0	24.0	40.0	4.32	1.40
10	1.68	20.8	10.0	28.0	48.0	6.72	2.20
13	2.85	16.1	13.0	36.0	62.0	11.40	3.80
16	4.32	13.0	16.0	45.0	77.0	17.28	5.70
20	6.80	10.4	20.0	56.0	96.0	27.20	9.00
22	8.17	9.4	22.0	62.0	106.0	32.68	11.00
26	11.40	8.0	26.0	73.0	125.0	45.60	15.00
28	13.25	7.5	28.0	78.0	134.0	53.00	18.00
30	15.20	6.9	30.0	84.0	144.0	60.80	19.50
32	17.25	6.5	32.0	90.0	154.0	69.00	23.00

Factor of Safety 4:1

Material: Hardened and tempered higher tensile steel, ideal for lashing and general purpose use

Finish: Natural (black), electro galvanised or hot-dip galvanised

Short Link Grade 80

Made to DIN766 (EN818-2) specifications

Chain Size	Work Load Limit	Links /m	Link Dimensions			Break Load	Weight
			Ø	L	W		
[mm]	[t]		[mm]	[mm]	[mm]	[t]	[kg/m]
6	1.15	55.6	6.0	18.0	22.2	4.60	0.80
7	1.57	47.0	7.0	21.0	25.9	6.28	1.08
10	3.20	33.3	10.0	30.0	37.0	12.80	2.22
13	5.40	25.6	13.0	39.0	48.1	21.60	3.73
16	8.20	20.8	16.0	48.0	59.2	32.80	5.58
20	12.80	16.7	20.0	60.0	74.0	51.20	8.92
22	15.50	15.2	22.0	66.0	81.4	62.00	10.80
26	21.70	12.8	26.0	78.0	96.2	86.80	15.10
32	32.80	10.4	32.0	96.0	118.4	131.20	22.80

Factor of Safety 4:1

Material: Heat-treated alloy steel, ideal for lifting slings and applications requiring high grade chain

Short Link Grade 50 and 60 available on request

Long Link Grade 30

Made to DIN5685 (Short) specifications

Chain Size	Work Load Limit	Links /m	Link Dimensions			Break Load	Weight
			/m	L	W		
[mm]	[t]		[mm]	[mm]	[mm]	[t]	[kg/m]
4	0.10	37.0	4.0	19	27	0.50	0.30
5	0.16	32.3	5.0	21	31	0.80	0.50
5.5	0.19	29.4	5.5	23	34	0.95	0.60
6	0.23	27.80	6.0	24	36	1.15	0.73
7	0.31	23.8	7.0	28	42	1.55	1.00
8	0.40	20.8	8.0	32	48	2.00	1.30
10	0.63	16.7	10.0	40	60	3.15	2.05
13	1.06	12.8	13.0	52	78	5.30	3.45
14	1.90	11.9	14.0	56	84	9.50	3.89
16	2.50	10.4	16.0	64	96	12.50	5.08
20	3.80	8.3	20.0	80	120	19.50	7.93
26	6.00	6.6	26.0	100	152	30.00	12.39

Factor of Safety 5:1
Material: Mild steel, ideal, for securing and general purpose use
Finish: Natural (black), electro galvanised or hot-dip galvanised
Sizes available up to 50.00 mm

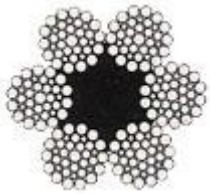
Extra Long Link Grade 43
Made to DIN5685 (Long) specifications

Chain Size	Work Load Limit	Links /m	Link Dimensions			Break Load	Weight
			Ø	L	W		
[mm]	[t]		[mm]	[mm]	[mm]	[t]	[kg/m]
6	0.600	18.5	6	42.2	54.2	2.40	0.63
7	0.825	15.9	7	48.9	62.9	3.32	0.86
8	1.080	14.7	8	52.2	68.2	4.40	1.10
10	1.180	11.7	10	65.6	85.6	6.80	1.75
13	2.850	9.3	13	82.0	108.0	11.40	2.95
16	4.320	7.6	16	100.0	132.0	17.30	-

Factor of Safety 4:1
Material: Higher tensile steel, ideal for pipe suspension, securing and general applications
Finish: Natural (black), electro galvanised or hot-dip galvanised

Ropes

6 x 36 (14/7 – 7/7/1) / IWRC



6 x 36 (14/7 – 7/7/1) / FC

Rope Ø	IWRC		FC	
	Weight	Break Load	Weight	Break Load
[mm]	[kg/100m]	[t]	[kg/100m]	[t]
8	26.8	4.11	23.7	3.81
10	41.8	6.42	37.1	5.96
12	60.7	9.25	55.7	8.56
13	71.4	10.81	65.7	10.02
14	82.6	12.54	75.8	11.62
16	107.1	16.41	98.3	15.19
18	136.3	20.80	125.0	19.27
20	170.1	25.80	156.0	23.85
22	201.7	30.10	185.0	28.75
24	239.8	37.00	220.0	34.25
26	280.1	43.53	257.0	40.27
28	325.9	50.46	299.0	46.69
32	409.0	72.88	-	-
36	525.0	92.15	-	-
38	590.0	102.96	-	-
40	648.0	114.17	-	-
41	694.0	126.40	-	-
44	787.0	137.60	-	-
48	927.0	164.12	-	-
51	1050.0	185.52	-	-
57	1330.0	230.38	-	-
60	1480.0	265.04	-	-
67	1820.0	319.06	-	-
68	1900.0	316.00	-	-
70	2000.0	331.29	-	-
72	2130.0	356.78	-	-
73	2190.0	366.97	-	-
76	2380.0	423.04	-	-

Grade: 1770 N/mm²
Finish: Galvanised or ungalvanised
Lubricated of dry

Ropes

6 x 19 (9/9/1) / IWRC

6 x 19 (9/9/1) / FC

Rope Ø	IWRC		FC	
	Weight	Break Load	Weight	Break Load
[mm]	[kg/100m]	[t]	[kg/100m]	[t]
3	3.43	0.54	3.03	0.51
4	6.10	0.96	5.39	0.89
5	9.53	1.50	8.43	1.39
6	15.0	2.42	13.9	2.13
8	27.5	4.31	24.7	3.79
10	43.0	6.75	38.6	5.92
12	61.9	9.69	55.6	8.52
13	72.7	11.40	65.2	9.98
14	84.3	13.20	75.6	11.60
16	110.0	17.30	98.8	15.20
18	139.0	21.90	125.0	19.20
20	172.0	27.00	154.0	23.70
22	208.0	32.60	187.0	28.60
24	248.0	38.80	222.0	34.00
26	291.0	45.50	261.0	39.90
28	337.0	52.90	302.0	46.40
30	387.0	60.70	347.0	53.30

Grade: 1770 N/mm²
Finish: Galvanised or ungalvanised
Lubricated or dry

Ropes

1 x 19 Stainless Steel

Rope Ø [mm]	Weight [kg/100m]	Break Load [t]
2.5	3.2	0.486
3.0	4.6	0.852
4.0	8.1	1.238
5.0	12.8	2.266
6.0	18.5	2.933

Grade: 1770 N/mm²
Finish: AISI 316

7 x 7 Stainless Steel

Rope Ø [mm]	Weight [kg/100m]	Break Load [t]
1.5	0.9	0.168
2.0	1.6	0.296
2.5	2.6	0.439
3.0	3.7	0.650
5.0	10.5	1.776
6.0	15.1	2.466
10.0	39.0	6.881

Grade: 1770 N/mm²
Finish: AISI 316

7 x 19 Stainless Steel

Rope Ø [mm]	Weight [kg/100m]	Break Load [t]
2.0	1.9	0.286
2.5	2.6	0.428
3.0	3.7	0.634
4.0	6.7	1.109
5.0	10.5	1.707
6.0	15.2	2.402
8.0	26.9	4.182
10.0	39.0	6.286

Grade: 1770 N/mm²
Finish: AISI 316

Ropes

PVC Covered SWR

Rope Ø [mm]	Weight [kg/100m]	Break Load [t]	Colour	Construction
1.5 – 3	1.1	0.13	Yellow	6 x 7 /FC
3 – 5	6.6	0.54	Red / Clear	6 x 7 /FC
4 – 6	11.4	0.96	Blue / Clear	6 x 19 /FC
6 - 8	17.0	2.00	Green	6 x 19 /FC

Grade: 1770 N/mm²
Finish: Galvanised, PVC Covered

Hooks

Sling Hook c/w
Safety Latch Eye Type
Made to EN1677-2 specifications

Finish:
Powder coated Yellow

Size [mm]	7	10	13	16	20	22

Self Locking Hook
Eye Type
Made to EN1677-2 specifications

Finish
Powder coated Yellow

Size [mm]	7	10	13	16	20	22

Grab Hook with Cradle
Eye Type
Made to EN1677-2 specifications

Finish:
Powder coated Yellow

Size [mm]	7	10	13	16	20	22

Foundry Hook
Eye Type
Made to EN1677-2 specifications

Finish:
Powder coated Yellow

Size [mm]	7	10	13	16	20	22

Hooks

Sling Hook c/w
Safety Latch Clevis Type
Made to EN1677-2 specifications

Finish:
Powder coated Yellow

Size [mm]	7	10	13	16	20	22

Self Locking Hook
Clevis Type
Made to EN1677-2 specifications

Finish
Powder coated Yellow

Size [mm]	7	10	13	16	20	22

Grab Hook with Cradle
Clevis Type
Made to EN1677-2 specifications

Finish:
Powder coated Yellow

Size [mm]	7	10	13	16	20	22

Foundry Hook
Clevis Type
Made to EN1677-2 specifications

Finish:
Powder coated Yellow

Size [mm]	7	10	13	16	20	22

Master Links
&
Links etc.

Connecting Link
Made to EN1677-2 specifications

Chain Size	A	B	C	D	E	Work Load Limit	Weight
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[t]	[kg]
6	17	42	12	16	16	1.2	0.070
7	19	48	14	20	18	1.6	0.100
10	26	78	20	31	25	3.2	0.350
13	30	84	22	33	30	5.0	0.680
16	40	102	27	40	36	8.0	1.100
20	45	115	34	45	44	12.5	1.650
22	55	133	36	51	46	15.0	2.900
26	66	146	45	60	60	21.7	4.160
32	80	197	48	78	66	32.0	8.600

Factor of Safety 4:1
Electro Galvanised Pins and Stainless Steel coils can be ordered separately

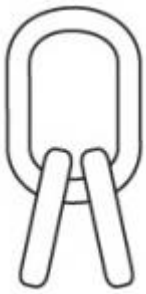
Shortening Clutch, Clevis Type
Made to EN1677-1 specifications

Finish:
Powder coated Yellow

Size [mm]	7	10	13	16	20	22

Master Links
&
Links etc.

Master Link



Sub Assembly

Recommended Master Links for Gr80 Chain Slings
Made to EN818-4 specifications

Chain Size	Rated at 0º		Rated at 0 - 90º			
	1 Leg	Link Product Code	2 Leg	Link Product Code	3 / 4 Leg	Link Product Code
[mm]	[t]		[t]		[t]	
7	1.50	ML7-8	2.12	ML7-8	3.15	SAL7-8
10	3.15	ML10-8	4.25	ML10-8	6.70	SAL10-8
13	5.30	ML13-8	7.50	ML13-8	11.20	SAL13-8
16	8.00	ML16-8	11.20	ML16-8	17.00	SAL16-8
20	12.50	ML20-8	17.00	ML20-8	26.50	-
22	15.00	ML22-8	21.20	ML22-8	31.50	-
26	21.20	ML26-8	30.00	ML26-8	45.00	-
32	31.50				67.00	-

Factor of Safety 4:1

Chain Slings

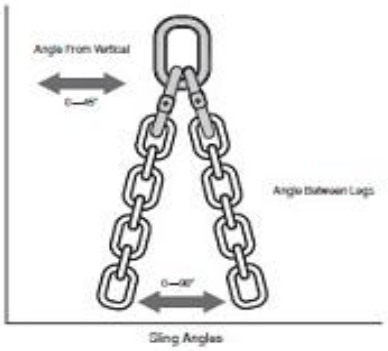
Work Load Limits of Gr80 Chain Slings
Made to EN818-4 specifications

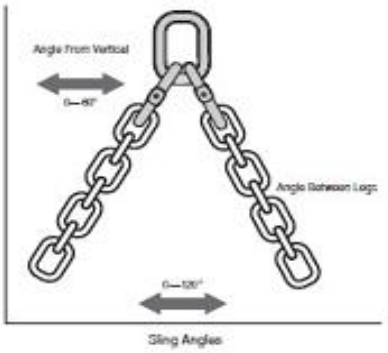
Chain Size	Rated at 0º		Rated at 0-90º		Rated at 90-120º	
	1 Leg	Endless	2 Leg	3 / 4 Leg	2 Leg	3 / 4 Leg
[mm]	[t]	[t]	[t]	[t]	[t]	[t]
7	1.50	2.50	2.12	3.15	1.50	2.24
8	2.00	3.15	2.80	4.25	2.00	3.00
10	3.15	5.00	4.25	6.70	3.10	4.80
13	5.30	8.50	7.50	11.20	5.30	8.00
16	8.00	12.50	11.20	17.00	8.00	11.80
19	11.20	18.00	16.00	23.60	11.2	17.00
20	12.50	20.00	17.00	26.50	12.5	19.00
22	15.00	23.60	21.20	31.50	15.0	22.4
26	21.20	33.50	30.00	45	21.2	31.5
32	31.50	50.00	45	67	31.5	47.50
36	40	63.00	56	85	-	-

Factor of Safety 4:1

The Work Load Limit above apply only to normal conditions of use in straight configuration and are based on the “uniform load” method of rating.

The capacity of the chain sling decreases when (a) The angle between the legs increases (b) The sling is in choke mode.
It is assumed that endless slings will only be used in the choke hitch mode, hence the de-rated capacities.
If single leg slings are used in the choke mode, the capacities listed must be reduced by 20%.
If using grab hooks as shortening clutches, those without cradles to support the chain links, the listed Work Load Limit must be reduced (usually by 20%)

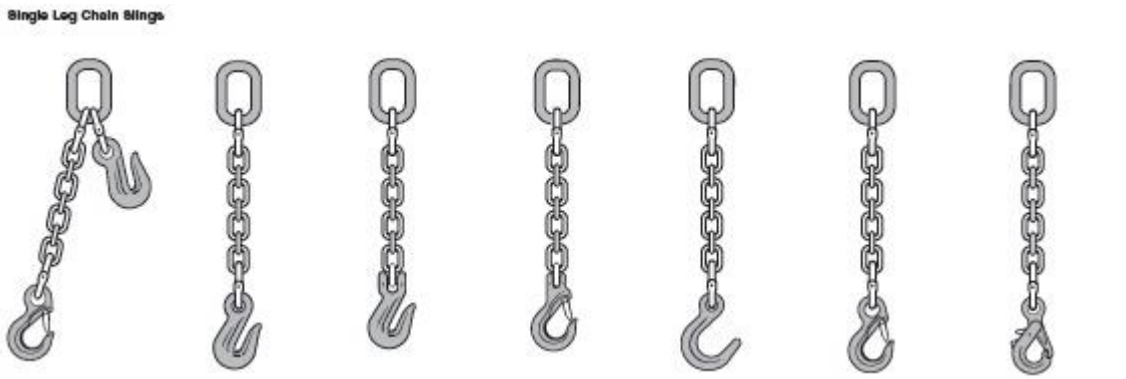




How to order chain slings

1	Chain Size [mm]		
2	Number of legs	E = endless	
		S = 1 Leg	

		D = 2 Legs		
		T = 3 Legs		
		Q = 4 Legs		
3	Length of each leg [m]			
4	End fittings	SSE = sling hook	Eye type	
		SLE = self locking hook		
		GBE = grab hook		
		FDE = foundry hook		
		SSC = sling hook	Clevis type	
		SLC = self locking hook		
		GBC = grab hook		
		FDC = foundry hook		
		ML = master link		
		BSK = basket		
5	Adjustable	-G = grab hook eye type		
		-SGE = shortening chain (4 links) and grab hook eye type		
		-SGC = shortening chain (4 links) and grab hook clevis type		
		-SC = shortening chain (4 links) and shortening clutch		



10 S 2.0 SSE-G 10 S 2.0 GBE 10 S 2.0 GBC 10 S 2.0 SSC 10 S 2.0 FDE 10 S 2.0 SSE 10 S 2.0 SLE

All codes assume that you are using 10mm Gr80 chain of 2 m length.

Double Chain Slings

10 D 2.0 GBC | 10 D 2.0 SSE | 10 D 2.0 FDE | 10 D 2.0 SLE | 10 D 2.0 SLE-SGE

3 Leg Chain Slings

10 T 2.0 SSE

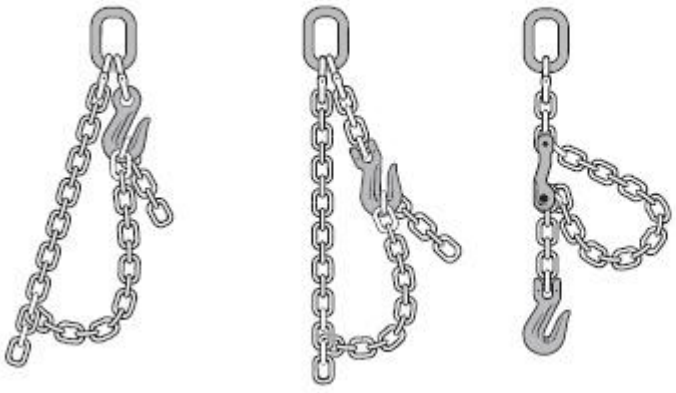
4 Leg Chain Slings

10 Q 2.0 SSE

Basket Slings

10 S 2.0 BSK | 10 D 2.0 BSK

Single Adjustable Loop Chain Slings



-G | -SGC | -SC

Double Adjustable Loop Chain Slings

-SGE

Ferrules

Aluminium Ferrules
Made to EN13411-3 (formerly DIN3093) specifications

Code	A	B	W	L	Weight
	[mm]	[mm]	[mm]	[mm]	[kg/1000pcs]
1.0	1.2	2.4	0.65	5	0.094
1.5	1.7	3.4	0.75	6	0.211
2.0	2.2	4.4	0.85	7	0.375
2.5	2.7	5.4	1.05	9	0.499
3.0	3.3	6.6	1.25	11	0.843
3.5	3.8	7.6	1.50	13	1.320
4.0	4.4	8.8	1.70	14	1.81
4.5	4.9	9.8	1.90	16	2.61
5.0	5.5	11.0	2.10	18	3.57
6.0	6.6	13.2	2.50	21	5.86
6.5	7.2	14.4	2.70	23	7.55
7.0	7.8	15.6	2.90	25	9.53
8.0	8.8	17.6	3.30	28	13.7
9.0	9.9	19.8	3.70	32	19.8
10.0	10.0	21.8	4.10	35	26.4
11.0	12.1	24.2	4.50	39	35.8
12.0	13.2	26.4	4.90	42	45.8
13.0	14.2	28.4	5.40	46	59.7
14.0	15.3	30.6	5.80	49	73.5
16.0	17.5	35.0	6.70	56	111
18.0	19.6	39.2	7.60	63	156
20.0	21.7	43.4	8.40	70	217
22.0	24.3	48.6	9.20	77	292
24.0	26.4	52.8	10.00	84	376
26.0	28.5	57.0	10.90	91	481
28.0	31.0	62.0	11.70	98	603
30.0	33.1	66.2	12.50	105	739
32.0	35.2	70.4	13.40	112	897
34.0	37.8	75.6	14.20	119	1077
36.0	39.8	79.6	15.00	126	1275

Ferrules cont.

Aluminium Ferrules
Made to EN13411-3 (formerly DIN3093) specifications

Code	A	B	W	L	Weight
	[mm]	[mm]	[mm]	[mm]	[kg/1000pcs]
38.0	41.9	83.8	15.80	133	1503
40.0	44.0	88.0	16.60	140	1734
42.0	46.2	92.4	17.50	147	2024
44.0	48.4	96.8	18.30	154	2314
46.0	50.6	101.2	19.20	161	2662
48.0	52.8	105.6	20.00	168	3010
50.0	55.0	110.0	20.80	175	3412
52.0	57.2	114.4	21.60	182	3813
54.0	59.4	118.8	22.50	189	4293
56.0	61.6	123.2	23.30	196	4772
58.0	63.8	127.6	24.20	203	5326
60.0	66.0	132.0	25.00	210	5880
64.0	69.0	137.0	26.00	225	6500
78.0	83.0	166.0	32.00	272	11500

Ferrules

Superloop Ferrules
Made to EN13411-3 specifications

Rope Ø	A	B	D	E	C	Max. Size after Swage	Weight
[in.]	[in.]	[in.]	[in.]	[in.]	[in.]	[in.]	[kg/100pcs]
1/4	1.00	0.66	0.31	0.28	0.47	0.57	2.27
5/16	1.50	0.91	0.38	0.44	0.62	0.75	6.36
3/8	1.50	0.91	0.47	0.39	0.66	0.75	6.36
7/16	2.00	1.22	0.53	0.65	0.85	1.01	15
1/2	2.00	1.22	0.63	0.56	0.91	1.01	13
9/16	2.75	1.47	0.70	0.63	1.03	1.24	29
5/8	2.75	1.47	0.75	0.63	1.09	1.24	26
3/4	3.19	1.72	0.91	0.84	1.28	1.46	40
7/8	3.56	2.03	1.03	1.00	1.53	1.68	60
1	4.00	2.28	1.16	1.13	1.72	1.93	89
11/8	4.80	2.5	1.28	1.25	1.94	2.13	118
11/4	5.19	2.78	1.44	1.41	2.16	2.32	161
13/8	5.81	3.00	1.56	1.56	2.38	2.52	192
11/2	6.25	3.25	1.69	1.69	2.63	2.71	227
13/4	7.25	3.84	1.94	1.97	3.13	3.10	366
2	8.50	4.38	2.25	2.25	3.63	3.56	514
21/4	9.56	5.03	2.50	2.53	4.03	4.12	879
21/2	10.50	5.50	2.75	2.81	4.50	4.50	1068
23/4	11.50	5.75	3.00	3.09	4.75	4.70	1271
3	12.00	6.00	3.25	3.38	5.00	4.96	1335
31/4	13.00	6.50	3.86	3.54	5.43	5.37	1650
31/2	14.00	7.00	3.88	3.94	5.84	5.77	2106
33/4	15.00	7.50	4.06	4.25	6.31	6.23	2497
4	16.00	8.13	4.38	4.50	6.81	6.69	3087
41/2	18.00	9.13	4.88	5.06	7.66	7.45	4540
5	20.00	10.52	5.50	5.63	8.73	8.28	6600
6	24.00	12.54	6.50	6.75	10.20	9.93	12300

Finish: Galvanised or self-coloured

Recommended to be used with 6 x 19, 6 x 25, 6 x 29, 6 x 36 IPS or XIP (EIP), FC / IWRC steel wire Rope. If using with any other type of construction or grade of steel wire rope, tis is recommended to perform a Brake Load test of the swaged termination to prove the adequacy of the assembly to be manufactured.

Thimbles

General Purpose Thimbles
Made to EN13411-1 (formerly BS464) specifications

Rope Ø	A	B	L	C	S	Weight
[in.]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg/100pcs]
5/16	8	54	33	22	4	5.7
3/8	10	64	38	25	4.8	7.6
7/16	13	73	41	29	4.8	14.2
1/2	14	80	44	32	5.6	18.0
9/16	14	80	44	32	5.6	18.9
5/8	16	98	59	41	7.9	34.0
11/16	19	108	67	44	7.9	39.7
3/4	21	124	73	51	9.5	62.4
13/16	21	124	73	51	9.5	62.4
7/8	22	133	83	57	9.5	75.6
15/16	25	146	92	64	10.3	105.7
1	27	162	108	70	10.3	124.7
11/8	29	178	111	76	12.7	151.0
11/4	33	197	133	95	12.7	204.0
13/8	38	229	152	105	15.9	318.0
11/2	41	254	165	114	17.5	488.0
15/8	43	254	165	114	17.5	499.0
13/4	51	286	178	127	25.4	556.0
17/8	60	318	191	133	28.6	-
2	64	330	203	140	28.6	-
21/8	64	330	203	140	28.6	-
21/4	67	356	216	146	30.2	-
21/2	70	413	241	159	31.8	-
23/4	86	502	273	203	41.3	-

Material: **Mild steel**
Finish: **Galvanised**

Sockets

Open Spelter Socket

Break Load	Rope Ø	Rope Ø	D	D1	J
[t]	[mm]	[in.]	[mm]	[mm]	[mm]
25.0	18-19	3/4	21	35	38
31.5	20-22	7/8	24	41	44
50	23-26	1	28	51	51
70	27-30	11/8	32	57	57
85	31-36	11/4-13/8	38	63	63
100	37-39	11/2	41	70	76
140	40-42	15/8	44	76	76
200	43-48	13/4-17/8	51	89	89
225	49-54	2-21/8	57	95	101
300	55-60	21/4-23/8	63	108	113
375	61-68	21/2-25/8	73	121	127
400	69-75	23/4-27/8	79	127	133
450	76-80	3-31/8	86	133	146
500	81-86	31/4-33/8	92	140	159
575	87-93	31/2-35/8	99	152	171
800	94-102	33/4-4	108	178	191
1125	122-130	5	138	250	210

Factor of Safety 5:1
Material: **Cast steel**
Finish: **Painted or galvanised**

Sockets

Closed Spelter Socket

Break Load	Rope Ø	Rope Ø	A	B	C	D	E	F	G
[t]	[mm]	[in.]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
31.5	20-22	7/8	101	90	33	24	47	92	38
50	24-27	1	114	103	36	28	57	104	44
70	27-30	11/8	127	116	39	32	63	114	51
85	31-36	11/4-13/8	139	130	43	38	70	127	57
100	37-39	11/2	152	155	51	41	79	136	63
140	40-42	15/8	165	171	54	44	82	146	70
200	43-48	13/4-17/8	190	198	55	51	89	171	76
225	49-54	2-21/8	216	224	62	57	96	193	82
300	55-60	21/4-23/8	228	247	73	63	108	216	92
375	61-68	21/2-25/8	248	270	79	73	140	241	102
400	69-75	23/4-27/8	279	286	76	79	159	273	124
450	76-80	3-31/8	305	298	83	86	171	292	133
500	81-86	31/4-33/8	330	311	102	92	184	311	146
575	87-93	31/2-35/8	356	330	102	99	197	330	159
800	94-102	33/4-4	381	356	108	108	216	362	179
1125	122-130	5	500	475	120	138	260	515	210

Factor of Safety 5:1
Material: Cast steel
Finish: Painted or galvanised

Sockets

Open Wedge Socket

Break Load	Rope Ø	A	B	C	D	E	F	Weight
[t]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm	[mm]	[kg]
10	9-10	122	47	20	21	11	26	2
16	11-13	146	57	25	25	12	32	3
25	14-16	176	70	31	30	15	44	4
32	18-19	212	80	38	35	16	44	6
45	20-22	240	96	44	41	19	52	9
70	24-26	274	114	51	50	22	58	15
100	28	310	130	57	57	25	66	20
125	32	350	146	63	64	28	79	25
125	35	400	148	69	64	28	79	38
150	38	450	160	76	70	30	93	55
200	41	500	174	76	76	33	95	66
260	44-48	550	200	89	89	39	111	90
280	51	650	200	101	95	46	140	142
360	56	660	250	114	108	54	136	176
450	63	840	270	127	121	60	161	271
520	75	1000	300	146	133	76	186	437

Factor of Safety 5:1
Material: **Cast steel**
Finish: **Painted or galvanised**

Carbon Steel Hooks

Large Eye Hook

Large Eye Hook
Made to EN1677-5 specifications

Work Load Limit	A	B	C	E	G	H	Weight
[t]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg/pc]
0.75	82	19	25	15	20	38	0.27
1.00	93	25	27	18	22	45	0.40
1.50	104	28	28	19	26	52	0.55
2.00	119	32	32	22	29	61	0.83
3.00	146	40	38	29	37	75	1.90
5.00	187	51	48	35	46	97	3.30
7.50	230	62	58	42	58	119	5.70
10.00	255	72	65	50	66	136	8.40
15.00	318	89	89	62	77	168	17.00

Factor of Safety 5:1

Material: Carbon Steel
Finish: Powder coated

Available with safety latch

Swivel Hook

Swivel Hook

Work Load Limit	A	B	C	D	E	F	G	G	Weight
[t]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg/pc]
0.25	110	21	21	28	8	19	18.5	24	0.36
0.50	130	25	25	33	10	23	23.6	26	0.60
0.80	155	29	29	37	12	27	28.0	28	0.93
1.00	170	30	30	40	16	28	30.7	32	1.27
1.60	185	35	34	45	18	32	36.5	40	1.92
2.00	215	40	35	46	20	33	40.0	45	2.67
3.20	245	50	42	53	24	40	48.0	55	4.22
4.00	260	47	46	60	30	44	50.0	55	4.84
5.00	300	60	52	67	30	50	56.0	65	7.75
6.30	310	55	59	75	33	57	63.0	65	9.87
8.00	360	65	65	85	33	63	71.0	75	13.65
10.00	420	71	71	95	36	69	80.0	90	18.77

Factor of Safety 5:1

Material: Carbon steel
Finish: Powder coated

Available with safety latch

Work Load Limits of Slings

Work Load Limits of Slings using 6 x 19 or 6 x 36 /FC

Compiled in compliance with SANS7531:1987 and ISO7531:1987

Rope Ø	Nominal Break	1 Leg	Rated at 0 - 90º		Rated at 0 - 120º		Std. Size Soft Eye
			2 Leg	3 / 4 Leg	2 Leg	3 / 4 Leg	
[mm]	[kN]	[t]	[t]	[t]	[t]	[t]	[mm]
8	37.40	0.60	0.84	1.26	0.60	0.90	160
9	47.30	0.76	1.06	1.59	0.76	1.14	160
10	58.40	0.93	1.31	1.96	0.93	1.40	200
11	70.70	1.13	1.58	2.38	1.13	1.70	200
12	84.10	1.35	1.88	2.83	1.35	2.02	200
13	98.70	1.58	2.21	3.32	1.58	2.37	260
14	114.00	1.82	2.55	3.83	1.82	2.74	260
16	150.00	2.40	3.36	5.04	2.40	3.60	260
18	189.00	3.02	4.23	6.35	3.02	4.54	300
20	234.00	3.47	5.24	7.86	3.74	5.62	300
22	283.00	4.53	6.34	9.51	4.53	6.79	300
24	336.00	5.38	7.53	11.29	5.38	8.06	360
26	395.00	6.32	8.85	13.27	6.32	9.48	360
28	458.00	7.33	10.26	15.39	7.33	10.99	400
30	526.00	8.42	11.78	17.67	8.42	12.62	400
32	598.00	9.57	13.40	20.09	9.57	14.35	460
34	675.00	10.80	15.12	22.68	10.80	16.20	460
36	757.00	12.11	16.96	25.44	12.11	18.17	500
38	843.00	13.49	18.88	28.32	13.49	20.23	500
40	935.00	14.96	20.94	31.42	14.96	22.44	600
42	1030.00	16.48	23.07	34.61	16.48	24.72	600
44	1130.00	18.08	25.31	37.97	18.08	27.12	700
48	1350.00	21.60	30.24	45.36	21.60	32.40	800
52	1580.00	25.28	35.39	53.09	25.28	37.92	1000
54	1700.00	27.20	38.08	57.12	27.20	40.80	1000
56	1830.00	29.28	40.99	61.49	29.28	43.92	1100
60	2100.00	33.60	47.04	70.56	33.60	50.40	1200
64	2390.00	38.24	53.54	80.30	38.24	57.36	1500
70	2860.00	45.76	64.06	96.10	45.76	68.64	1500
76	3370.00	53.92	75.49	113.23	53.92	80.88	1500

Factor of Safety 6:1

For SWR slings 6 x 19 or 6 x 36 FC c/w ferrule secured eye termination made to SANS7531:1987 specifications. "Uniform load" method calculated is used throughout. A termination efficiency 90% is assumed.

The Work Load Limit (WLL) of SWR is calculated in accordance with SANS are as follows:

- 1 Leg = WLL of 1 Leg
- 2 Leg = WLL of 1 Leg x 1.4 (0º-90º)
- 3 / 4 Leg = WLL of 1 Leg x 2.1 (0º-90º)
- 2 Leg = WLL of 1 Leg x 1.0 (90º-120º)
- 3 / 4 Leg = WLL of 1 Leg x 1.5 (90º-120º)

Work Load Limits of Slings

Work Load Limits of SWR Slings using 6 x 19 or 6 x 36 /IWRC

Compiled in compliance with SANS7531:1987 and ISO7531:1987

	Nominal Break	1 Leg	Rated at 0 - 90º		Rated at 90 - 120º		Std. Size Soft Eye
			2 Leg	3 / 4 Leg	2 Leg	3 / 4 Leg	
[mm]	[kN]	[t]	[t]	[t]	[t]	[t]	[mm]
8	40.30	0.64	0.90	1.35	0.64	0.97	160
9	51.00	0.82	1.14	1.71	0.82	1.22	160
10	62.40	1.00	1.40	2.10	1.00	1.50	200
11	76.20	1.22	1.71	2.56	1.22	1.83	200
12	90.70	1.45	2.03	3.05	1.45	2.18	200
13	106.00	1.70	2.37	3.56	1.70	2.54	260
14	124.00	1.98	2.78	4.17	1.98	2.98	260
16	161.00	2.58	3.61	5.41	2.58	3.96	260
18	204.00	3.26	4.57	6.85	3.26	4.90	300
20	252.00	4.03	5.64	8.47	4.03	6.05	300
22	305.00	4.88	6.83	10.25	4.88	7.32	300
24	363.00	5.81	8.13	12.20	5.81	8.71	360
26	425.00	6.80	9.52	14.28	6.80	10.20	360
28	493.00	7.89	11.04	16.56	7.89	11.83	400
30	567.00	9.07	12.70	19.05	9.07	13.61	400
32	644.00	10.30	14.43	21.64	10.30	15.46	460
34	728.00	11.65	16.31	24.46	11.65	17.47	460
36	817.00	13.07	18.30	27.45	13.07	19.61	500
38	910.00	14.56	20.38	30.58	14.56	21.84	500
40	1010.00	16.16	22.62	33.94	16.16	24.24	600
42	1110.00	17.76	24.86	37.30	17.76	26.64	600
44	1220.00	19.52	27.33	40.99	19.52	29.28	700
48	1450.00	23.20	32.48	48.72	23.20	34.80	800
52	1700.00	27.20	38.08	57.12	27.20	40.80	1000
54	1840.00	29.44	41.22	61.82	29.44	44.16	1000
56	1980.00	31.68	44.35	66.53	31.68	47.52	1100
60	2270.00	36.32	50.85	76.27	36.32	54.48	1200
64	2580.00	41.28	57.79	86.69	41.28	61.92	1500
70	3090.00	49.44	69.22	103.82	49.44	74.16	1500
76	3450.00	55.20	77.28	115.92	55.20	82.80	1500

Factor of Safety 6:1

For SWR slings: 6 x 19 or 6 x 36 IWRC c/w ferrule secured eye termination made to SANS7531:1987 specifications.

"Uniform load" method calculation is used throughout. A termination efficiency of 90% is assumed.

The Work Load Limit (WLL) of slings is calculated in accordance with SANS are as follows:

- 1 Leg = WLL of 1 Leg
- 2 Leg = WLL of 1 Leg x 1.4 (0º-90º)
- 3 / 4 Leg = WLL of 1 Leg x 2.1 (0º-90º)
- 2 Leg = WLL of 1 Leg x 1.0 (90º-120º)
- 3 / 4 Leg = WLL of 1 Leg x 1.5 (90º-120º)

Steel Wire Rope Slings

Eye & Eye **Eye & Thimble** **Eye & Hook** **Thimble & Thimble** **Thimble & Hook**

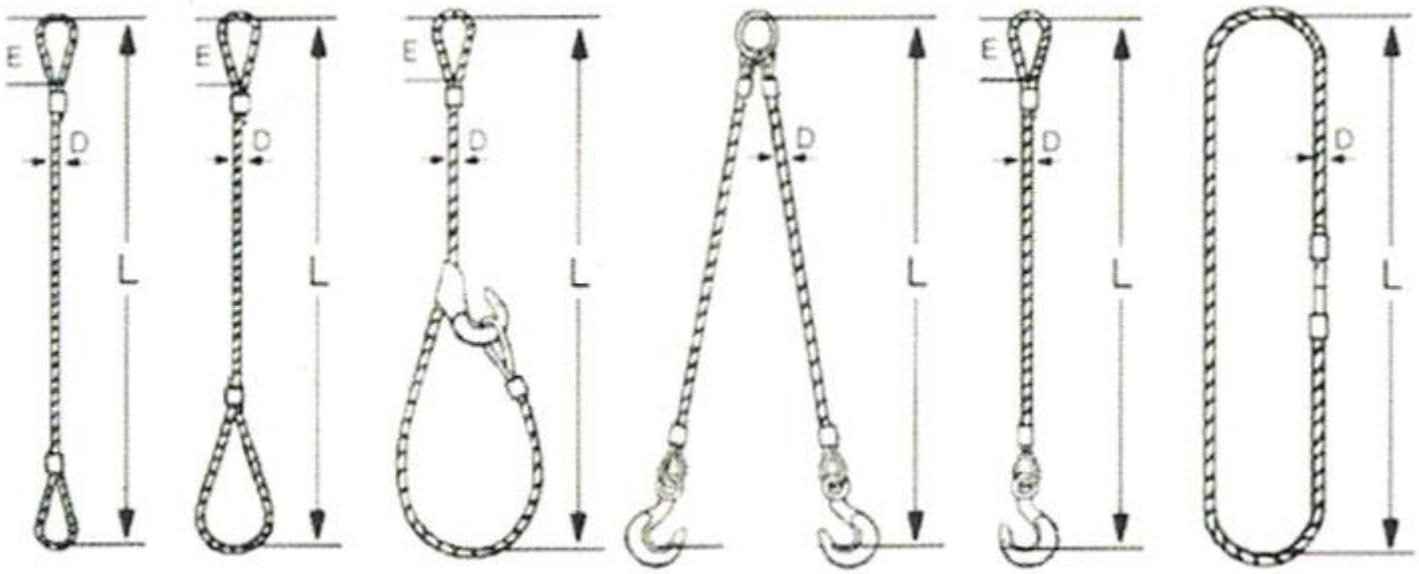
Types of available Splices

SUPERLOOP
Steel Tapered Ferrule

HAND SPLICE

AFGRIP
Alluminium Ferrule

Wire Rope Slings Made to Required Specifications



- Slings are available in various diameters and eye sizes -
- Protection sleeves for slings are also available -

How to order Wire Rope Slings:

L = Reach of effective length (pull to pull length)
D = Diameter of steel wire rope
E = Eye size (soft / hard eyes)

N.B. Specify any other features required (e.g. Hooks, shackles etc.)

Inspection of Wire Rope Slings:

All slings and attachments must be visually inspected by the person handling the sling each day they are used. In addition, a periodic inspection must be performed by a designated person, at least annually, and shall include a record of the inspection.

Inspection Criteria:

Kinking, crushing, destranding, birdcaging, stranding displacement, core protrusion, corrosion, broken or cut strands, broken wires.

Distortion of Wire Rope:

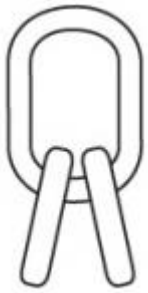
Remove from service with rope slings that have any damage resulting in distortion of the wire rope structure such as kinking, crushing, destranding, birdcaging, strand displacement or core protrusion.

Master links
&
Sub-Assemblies

Recommended Master Links and Sub-Assemblies for use with SWR slings using:
6 x 19 or 6 x 36 /FC
In compliance with SANS7531:1987 specifications

Rope Ø	Nominal Break	Rated at 0º		Rated at 0 - 90º			
		1 Leg	Product Code	2 Leg	Product Code	3 / 4 Leg	Product Code
[mm]	[kN]	[t]		[t]		[t]	
8	37.4	0.60	ML7-8	0.84	ML7-8	1.26	SAL7-8
9	47.3	0.76	ML7-8	1.06	ML7-8	1.59	SAL7-8
10	58.4	0.93	ML7-8	1.31	ML7-8	1.96	SAL7-8
11	70.7	1.13	ML7-8	1.58	ML7-8	2.38	SAL7-8
12	84.1	1.35	ML7-8	1.88	ML7-8	2.83	SAL7-8
13	98.7	1.58	ML7-8	2.21	ML7-8	3.32	SAL10-8
14	114.0	1.82	ML7-8	2.55	ML7-8	3.83	SAL10-8
16	150.0	2.40	ML7-8	3.36	ML10-8	5.04	SAL10-8
18	189.0	3.02	ML10-8	4.23	ML10-8	6.35	SAL13-8
20	234.0	3.74	ML10-8	5.24	ML13-8	7.86	SAL13-8
22	283.0	4.53	ML10-8	6.34	ML16-8	9.51	SAL16-8
24	336.0	5.38	ML13-8	7.53	ML16-8	11.29	SAL16-8
26	395.0	6.32	ML16-8	8.85	ML16-8	13.27	-
28	458.0	7.33	ML16-8	10.26	ML20-8	15.39	-
30	526.0	8.42	ML16-8	11.78	ML20-8	17.67	-
32	598.0	9.57	ML20-8	13.40	ML20-8	20.09	-
34	675.0	10.80	ML20-8	15.12	ML20-8	22.68	-
36	757.0	12.11	ML20-8	16.96	ML22-8	25.44	-
38	843.0	13.49	ML20-8	18.88	ML22-8	28.32	-
40	935.0	14.96	ML22-8	20.94	ML26-8	31.42	-
42	1030.0	16.48	ML22-8	23.07	ML26-8	34.61	-
44	1130.0	18.08	ML22-8	25.31	ML26-8	37.97	-

Master Link



Sub Assembly

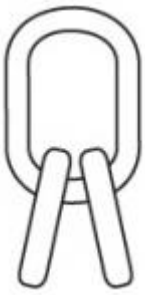
Factor of Safety 6:1

Master Links
&
Sub-Assemblies

Recommended Master Links and Sub-Assemblies for use with SWR slings using:
6 x 19 or 6 x 36 /IWRC
In compliance with SANS7531:1987 specifications

Rope Ø	Nominal Break	Rated at 0º		Rated at 0 - 90º			
		1 Leg	Link	2 Leg	Link	3 / 4 Leg	Link
[mm]	[kN]	[t]		[t]		[t]	
8	40.3	0.64	ML7-8	0.90	ML7-8	1.35	SAL7-8
9	51.0	0.82	ML7-8	1.14	ML7-8	1.71	SAL7-8
10	62.4	1.00	ML7-8	1.40	ML7-8	2.10	SAL7-8
11	76.2	1.22	ML7-8	1.71	ML7-8	2.56	SAL7-8
12	90.7	1.45	ML7-8	2.03	ML7-8	3.05	SAL10-8
13	106.0	1.70	ML7-8	2.37	ML7-8	3.56	SAL10-8
14	124.0	1.98	ML7-8	2.78	ML10-8	4.17	SAL10-8
16	161.0	2.58	ML7-8	3.61	ML10-8	5.41	SAL10-8
18	204.0	3.26	ML10-8	4.57	ML10-8	6.85	SAL13-8
20	252.0	4.03	ML10-8	5.64	ML13-8	8.47	SAL13-8
22	305.0	4.88	ML13-8	6.83	ML16-8	10.25	SAL16-8
24	363.0	5.81	ML16-8	8.13	ML16-8	12.20	-
26	425.0	6.80	ML16-8	9.52	ML20-8	14.28	-
28	493.0	7.89	ML16-8	11.04	ML20-8	16.56	-
30	567.0	9.07	ML16-8	12.70	ML20-8	19.05	-
32	644.0	10.30	ML20-8	14.43	ML22-8	21.64	-
34	728.0	11.65	ML20-8	16.31	ML22-8	24.46	-
36	817.0	13.07	ML20-8	18.30	ML22-8	27.45	-
38	910.0	14.56	ML22-8	20.38	ML22-8	30.58	-
40	1010.0	16.16	ML22-8	22.62	ML26-8	33.94	-
42	1110.0	17.76	ML22-8	24.86	ML26-8	37.30	-
44	1220.0	19.52	ML22-8	27.33	ML26-8	40.99	-

Master Link

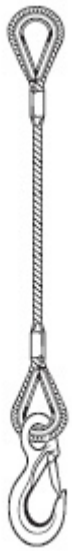


Sub Assembly

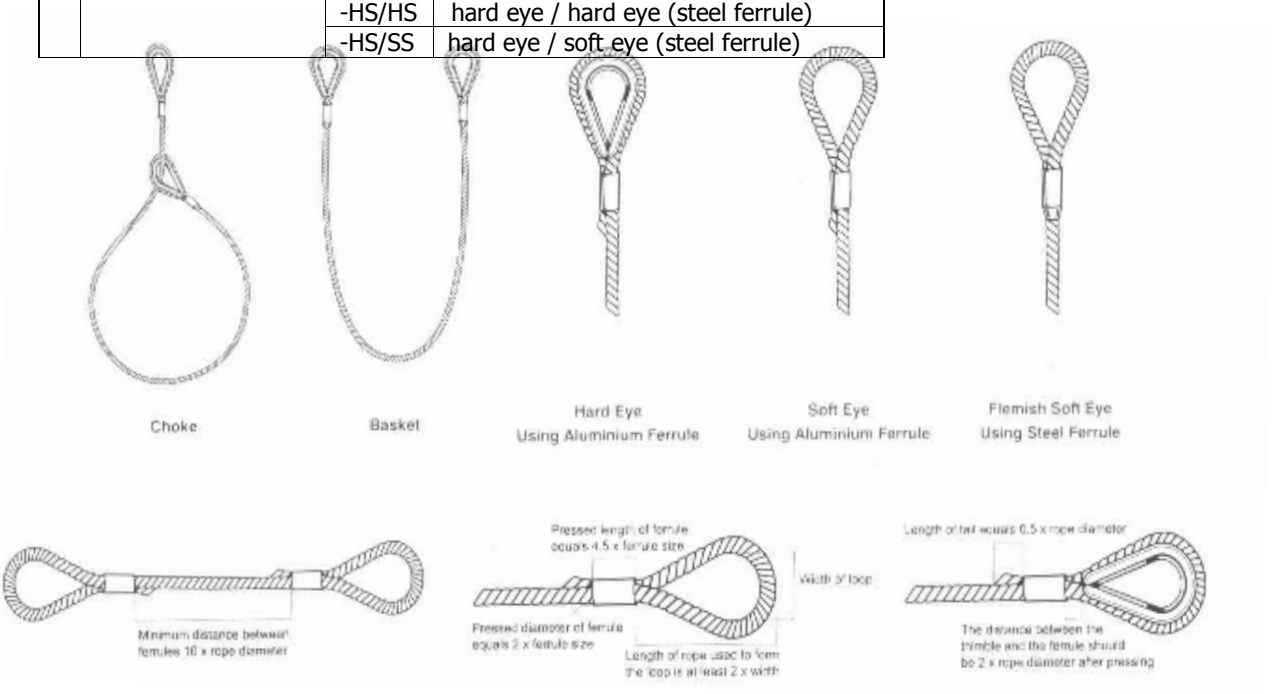
Factor of Safety 6:1

How to order SWR slings

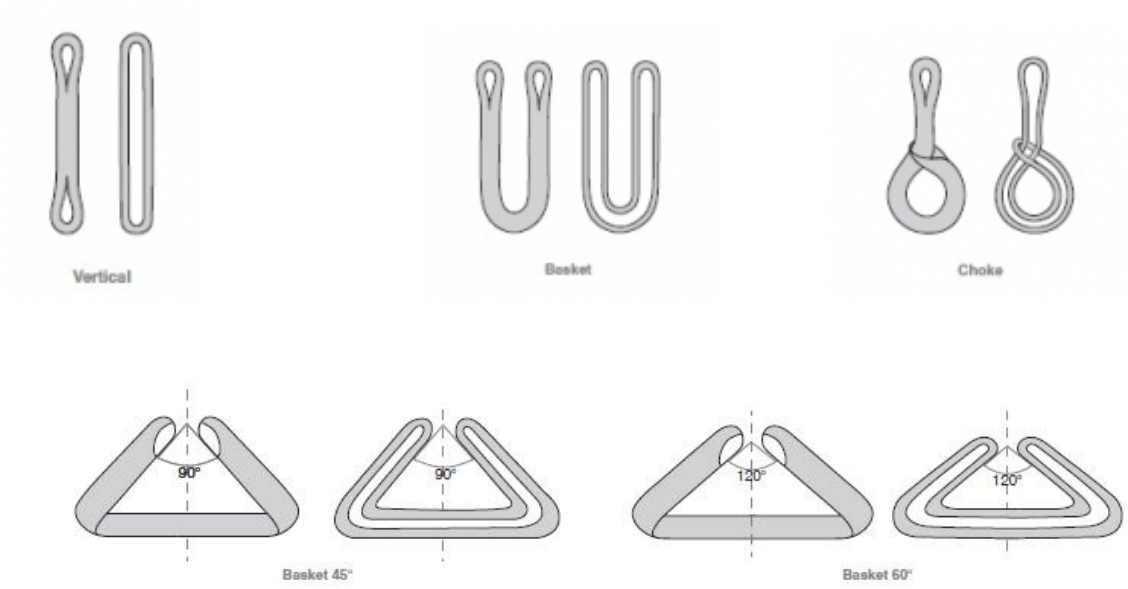
Sling Code	10	FC	S	2.5	LEH	-HS/HS
	1	2	3	4	5	6



1	Rope Ø [mm]		
2	Construction of rope	FC	Fibre Core
		IWRC	Inner Wire Rope Core
3	Number of legs	E	endless
		S	1 Leg
		D	2 Legs
		T	3 Legs
		Q	4 Legs
4	Length of each leg [m]		
5	End fittings	LEH	large eye hook
		SWH	swivel hook
		BSC	screw pin bow shackle
		BSF	safety pin bow shackle
		DSC	screw pin dee shackle
		DSF	safety pin dee shackle
		ML	master link
6	Type of eye	-SA/SA	soft eye / soft eye (aluminium ferrule)
		-HA/HA	hard eye / hard eye (aluminium ferrule)
		-HA/SA	hard eye / soft eye (aluminium ferrule)
		-SS/SS	soft eye / soft eye (aluminium ferrule)
		-HS/HS	hard eye / hard eye (steel ferrule)
		-HS/SS	hard eye / soft eye (steel ferrule)



Webbing Slings



Endless Round Slings
Manufactured to En1492-2 and SANS94-2 specifications (SWL = WLL x M)

M = 1	M = 0.8	M = 2	M = 1.4	M = 1	M = 1.4	M = 2
Vertical	**Choke**	**Basket**	**Basket 90º**	**Basket 120º**	**2 Leg FOS 5:1**	**4 Leg FOS 5:1**
[t]	**[t]**	**[t]**	**[t]**	**[t]**	**[t]**	**[t]**
1.0	0.8	2.0	1.4	1.0	1.4	2.0
1.5	1.2	3.0	2.1	1.5	2.1	3.0
2.0	1.6	4.0	2.8	2.0	2.8	4.0
3.0	2.4	6.0	4.2	3.0	4.2	6.0
4.0	3.2	8.0	5.6	4.0	5.6	8.0
5.0	4.0	10.0	7.0	5.0	7.0	10.0
6.0	4.8	12.0	8.4	6.0	8.4	12.0
8.0	6.4	16.0	11.2	8.0	11.2	16.0
12.0	9.6	24.0	16.8	12.0	16.8	24.0

Factor of Safety 7:1; multi-leg slings Factor of Safety 5:1
M = Mode Factor for symmetrical loading

Simplex Flat Webbing Slings
Manufactured to EN1492-2 and SANS94-1 specifications (SWL = WLL x M)

Width	M = 1	M = 0.8	M = 2	M = 1.4	M = 1	M = 1.4	M = 2
	Vertical	Choke	Basket	Basket 90º	Basket 120º	2 Leg FOS 5:1	4 Leg FOS 5:1
[mm]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
50	1.0	0.8	2.0	1.4	1.0	1.4	2.0
75	1.5	1.2	3.0	2.1	1.5	2.1	3.0
100	2.0	1.6	4.0	2.8	2.0	2.8	4.0
150	3.0	2.4	6.0	4.2	3.0	4.2	6.0
200	4.0	3.2	8.0	5.6	4.0	5.6	8.0
250	5.0	4.0	10.0	7.0	5.0	7.0	10.0
300	6.0	4.8	12.0	8.4	6.0	8.4	12.0

Factor of Safety 7:1; multi-leg slings Factor of Safety 5:1

Duplex Flat and Endless Webbing Slings

Manufactured to EN1492-1 and SANS94-1 specifications (SWL = WLL x M)

Width	M = 1	M = 0.8	M = 2	M = 1.4	M = 1
	Vertical	Choke	Basket	Basket 90º	Basket 120º
[mm]	[t]	[t]	[t]	[t]	[t]
50	2.0	1.6	4.0	2.8	2.0
75	3.0	2.4	6.0	4.2	3.0
100	4.0	3.2	8.0	5.6	4.0
150	6.0	4.8	12.0	8.4	6.0
200	8.0	6.4	16.0	11.2	8.0
250	10.0	8.0	20.0	14.0	10.0
300	12.0	9.6	24.0	16.8	12.0

Factor of Safety 7:1; multi-leg slings Factor of Safety 5:1

Slings are colour coded according to their WLL as follows:

Colour	Violet	Green	Yellow	Grey	Red	Brown	Blue	Orange
Work Load Limit	1 t	2 t	3 t	4 t	5 t	6 t	8 t	10-15 t

Shackles

Dee and Bow with Screw Pin

Dee and Bow with Bolt, Nut & Split Pin

Body Ø Bow + Dee	Pin Ø Bow + Dee	Work Load Limit	Bow Type			Dee Type	
			A	B	L	A	L
[mm]	[mm]	[t]	[mm]	[mm]	[mm]	[mm]	[mm]
6	8	0.50	12	19	23	12	27
10	11	1.00	17	26	33	17	37
11	13	1.50	18	29	37	18	44
13	16	2.00	20	33	46	20	48
16	20	3.25	27	43	52	27	61
20	22	4.75	30	51	61	30	71
22	25	6.50	36	58	76	36	95
25	28	8.50	44	67	83	44	107
28	32	9.50	47	73	91	47	84
32	35	12.0	52	81	101	52	119
35	38	13.5	58	91	118	58	134
38	42	17.0	61	98	125	61	144
44	51	25.0	74	126	150	74	180
51	56	35.0	85	143	170	85	197
64	70	55.0	105	184	203	105	267

Factor of Safety 6:1

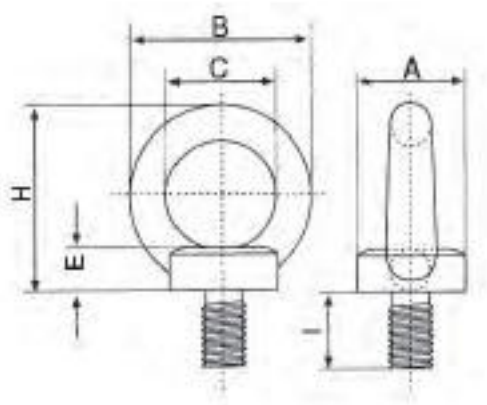
Finish: Body galvanised; pin powder coated

Marking: Body: material grade, size, WLL, manufacturer, batch number;
Pin: material grade, manufacturer

Large Dee Type Shackles
Proof Load = Work Load Limit x 2
Made to BS3032 specifications

Size	Work Load Limit	L	Pin Ø	Weight
[mm]	[t]	[mm	[mm]	[mm]
6	0.15	29	10	0.10
10	0.45	41	12	0.18
12	0.75	54	16	0.33
16	1.25	70	20	0.63
20	2.00	86	22	0.98
22	2.75	98	25	1.50
25	3.75	108	28	2.18
28	4.75	124	32	3.02
32	5.75	137	35	4.05
38	8.50	168	44	6.40
45	11.50	206	51	10.30
50	15.00	238	57	19.10

Eye Bolts

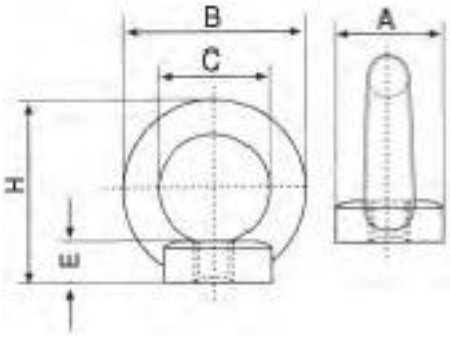


Eyebolts – Drop Forged
Made to DIN580 specifications

Size	Work Load Limit	A	B	C	I	E	H	Weight
[mm]	[t]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg/100pcs]
6	0.07	17	28	16	13	6	34	3.0
8	0.14	20	36	20	13	6	36	6.0
10	0.23	25	45	25	17	8	45	10.3
12	0.34	30	54	30	20.5	10	53	17.7
14	0.49	35	63	35	27	12	60	27.7
16	0.70	35	63	35	27	12	62	28.0
20	1.2	40	72	40	30	14	71	42.4
22	1.5	45	81	45	35	14	80	67.0
24	1.8	50	90	50	36	18	90	83.4
30	3.6	65	108	60	45	22	109	166
36	5.1	75	126	70	54	26	128	265
42	7.0	85	144	80	63	30	147	403
45	8.0	85	144	80	63	30	150	521
48	8.6	100	166	90	68	35	168	632

Factor of Safety 6:1
Material: **C15**
Finish: **Galvanised**
Marking: **material grade, size, WLL, manufacturer's mark**

Eyenuts



Eyenuts – Drop Forged
Made to DIN582 specifications

Size	Work Load Limit	A	B	C	E	H	Weight
[mm]	[t]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg/100pcs]
6	0.07	20	36	20	8.5	34	4.2
8	0.14	20	36	20	8.5	36	5.2
10	0.23	25	45	25	10	45	9.4
12	0.34	30	54	30	11	53	16.0
16	0.7	35	63	35	13	62	24.0
20	1.2	40	72	40	16	71	35.2
22	1.5	45	81	45	18	80	58.0
24	1.8	50	90	50	20	90	70.6
30	3.6	65	108	60	25	109	132.0
33	4.3	65	108	60	25	110	170.0
36	5.1	75	126	70	30	128	208.0
39	6.1	75	126	70	30	130	260.0
42	7.0	85	144	80	35	147	311.0
45	8.0	85	144	80	35	150	407.0
48	8.6	100	166	90	40	168	502.0

Factor of Safety 6:1
Material: **C15**
Finish: **Galvanised**
Marking: **Material grade, size, WLL, manufacturer's mark**

Carabine Hooks

Stainless Steel Carabine Hooks

Ø [mm]	Outside Length [mm]	Product Code
4	40	CH4x40S
5	50	CH5x50S
6	60	CH6x60S
8	80	CH8x80S
10	100	CH10x100S
12	140	CH12x140S

Material: AISI 316
Finish: Stainless Steel

Mild Steel Carabine Hooks

Ø [mm]	Outside Length [mm]	Product Code
4	40	CH4x40
5	50	CH5x50
6	60	CH6x60
8	80	CH8x80
10	100	CH10x100

Material: Mild steel
Finish: Zinc plated

Mild Steel Carabine Hooks c/w Insert

Ø [mm]	Outside Length [mm]	Insert Ø [mm]	Product Code
4	40	4	CH4x40I
5	50	5	CH5x50I
6	60	6	CH6x60I
8	80	8	CH8x80I
10	100	10	CH10x100I
12	140	12	CH12x140I

Material: Mild steel
Finish: Zinc plated

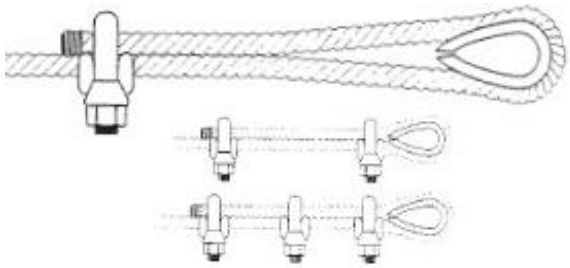
Clamps

SWR Clamps – Drop Forged
Made to EN13411-5 Type B specifications

Size	B	C	E	G2	H	L	S	Thread Ø	Weight
[mm]	[t]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg/100pcs]
6	6	29	24	14	5.0	35	20	M6	4.7
8	6	36	31	18	6.5	40	20	8	8.0
10	7	45	35	22	8.0	50	28	10	15
12	8	51	39	226	10.0	60	53	12	25
14	9	53	45	28	10.0	65	40	12	29
16	10	60	48	32	11.0	75	45	14	35
18	12	62	53	34	11.0	80	50	14	45
20-22	12	78	62	44	15.0	100	60	18	96
24-25	13	86	68	48	16.0	110	65	20	125

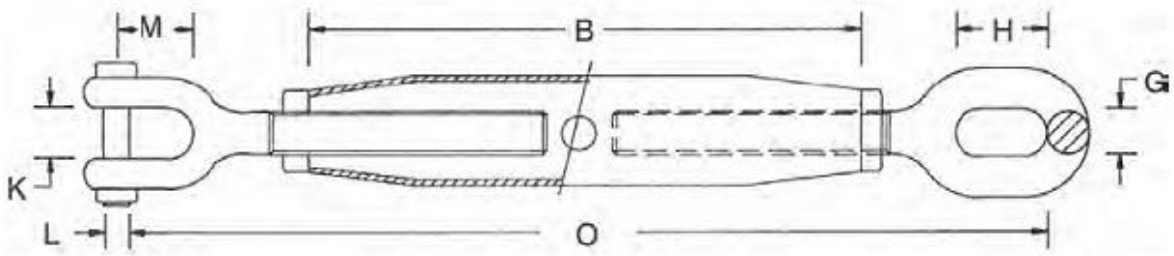
Finish: Body galvanised
Pin powder coated

Rope Ø [in.]	Min. No. Of clips required	Torque Value [ft. Lbs.]
1/4	2	12
5/16	2	19
3/8	2	25
1/2	3	35
5/8	3	50
3/4	4	100
7/8	4	140
1	5	140
11/8	6	140
11/4	7	275
13/8	7	275
11/2	8	275



Forged Base
Rolled Threads
Entire Clip – "Hot Dip" galvanised to resist corrosive and rusting action.
Forged Clamps must be torque in accordance with the Torques listed above.

Rigging screws



Oval Eye and Oval Eye

Oval Eye and Jaw

Jaw and Jaw

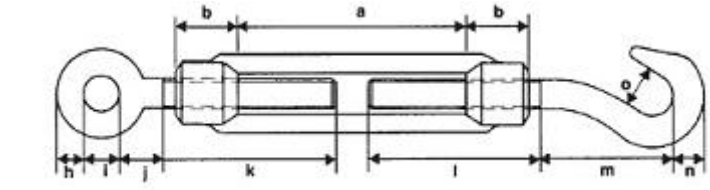
Rigging Screws with Lock-Nuts

Thread Ø	Work Load Limit	Body Length B	Approx. Take-up	Oval Eye Inside Length H	Oval Eye Inside Width K	Jaw Inside Length M	Jaw Inside Width K	Eye Material Ø G	Jaw Pin Ø L	Length In O	Length Out O	Weight
[mm]	[t]	[t]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
10	0.5	123	80	13	13	21	10	8	8	235	315	0.28
12	0.7	193	130	29	14	25	12	11	10	330	462	0.66
16	1.2	230	140	40	16	32	17	15	10	410	550	1.20
20	1.5	230	140	50	21	37	19	17	16	440	580	2.15
22	2.2	295	215	50	23	43	24	17	20	535	750	3.30
24	3.2	350	240	55	24	52	28	17	18	610	850	5.20
32	4.8	370	260	64	30	62	31	20	26	700	960	9.35
38	6	410	280	64	35	70	36	22	32	740	1020	11.20
51	11	420	310	100	44	100	53	38	39	800	1110	22.00

Factor of Safety 5:1
Finish: Galvanised

Always ensure that the end fittings are correctly screwed into the body and use the locking nuts to prevent the rigging screw from unscrewing.
The Work Load Limit values are only indicative. Rigging screws are not suitable for lifting purposes.

Turnbuckles



Turnbuckles – Drop Forged
Made to DIN1480 specifications

Dimensions	A	B	H	I	J	K	L	M	N	O	Eye/Eye		Hook/Eye	
											Length In A	Length Out B	Length In A	Length Out B
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
M 6 x 110	80	15	5.5	8.5	10	55	55	27	8.0	8	147	227	155	235
M 8 x 110	75	18	6.0	10.0	8	60	55	30	10.0	11	147	221	158	237
M10 x 125	85	20	8.0	12.5	13	70	63	32	13.0	10	176	276	182	255
M12 x 125	80	23	10.5	17.5	14	65	65	45	15.0	16	189	273	201	285
M14 x 140	90	25	11.5	17.5	19	75	75	45	16.0	18	213	313	221	321
M16 x 170	110	30	14.0	19.0	22	88	90	48	18.5	20	252	368	259	377
M20 x 200	130	35	14.0	24.0	22	105	103	61	24.0	22	292	432	307	445
M22 x 220	145	38	17.0	27.0	25	115	115	70	29.0	26	325	479	342	496
M24 x 255	170	43	18.0	27.0	25	135	135	70	31.0	27	360	544	377	561
M30 x 255	160	48	20.0	31.0	30	135	140	75	38.0	31	378	552	391	570
M33 x 295	180	58	22.0	34.0	30	155	150	90	39.0	36	424	618	449	638
M36 x 295	180	58	28.0	38.0	33	160	160	100	45.0	44	438	642	466	670
M39 x 330	200	65	32.0	42.0	40	175	175	100	47.0	44	494	714	512	732
M42 x 330	200	65	32.0	49.0	40	170	190	150	52.0	48	508	718	569	799
M48 x 355	195	80	37.0	58.0	55	185	190	170	60.0	58	581	791	638	853

Material: **Mild steel**
Finish: **Galvanised**

Turnbuckles are not suitable for lifting purposes

Drum Clamps

Vertical Drum Clamp

Work Load Limit	Suspension Eye	Drum Length	Weight
[t]	[mm]	[mm]	[kg]
0.5	80 x 60	560	6.5
0.8	80 x 60	560	8.0

Factor of Safety 5:1

For vertical lifting of steel drums containing 215-225ℓ.
Single hand operation.
Made from high grade steel.

Manilla Blocks

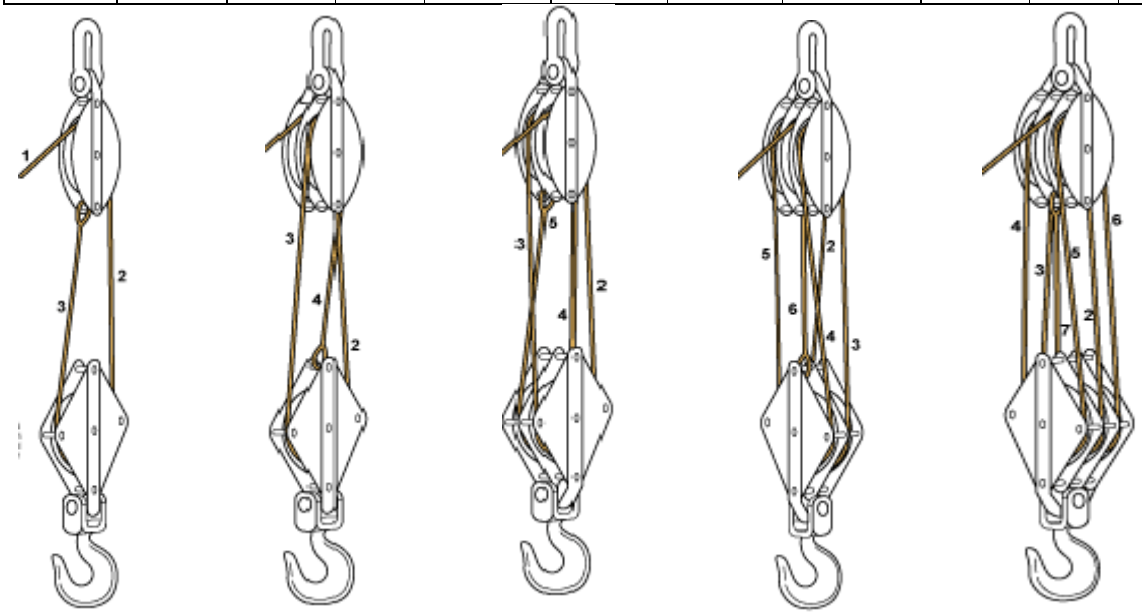
Single Rope Block

Double Rope Block

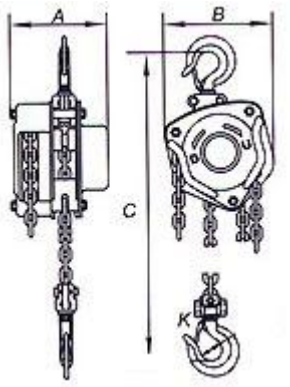
Treble Rope Block

Manilla Rope Blocks (London Pattern)

Sheave Ø	Manilla Rope Ø	Single Sheave			Double Sheave			Treble Sheave		
		Weight	Work Load Limit	Length Without Eye	Weight	Work Load Limit	Length Without Eye	Weight	Work Load Limit	Length Without Eye
[mm]	[mm]	[kg]	[t]	[mm]	[kg]	[t]	[mm]	[kg]	[t]	[mm]
50	10	0.64	0.10	180	1.0	0.10	200	1.2	0.15	210
75	12	1.10	0.15	210	1.8	0.15	235	2.8	0.25	245
100	16	2.00	0.25	280	3.5	0.50	345	4.7	1.00	365
120	20	3.30	0.50	330	5.2	0.50	390	7.0	1.00	395
130	22	3.50	0.50	350	5.9	1.00	420	8.2	1.50	435
150	26	6.10	1.00	385	10.0	1.50	445	12.5	2.00	470



Chain Block



Chain Block

Chain Block

Capacity	Std. Lift	No. Of Falls	Test Load	Load Chain		Hand chain	Pull to lift Rated load	Net weight	Gross weight	Extra Weight /m	A	B	C	K
[t]	[m]		[t]	[mm]	Grade	[mm]	[kg]	[kg]	[kg]	[kg]	[mm]	[mm]	[mm]	[mm]
0.5	3	1	0.75	5x15	80	4.8x22.2	25	9.0	9.4	1.416	127	144	285	37
1	3	1	1.5	6.3x19	80	4.8x22.2	33	12.2	12.7	1.732	147	157	315	45
1.5	3	1	2.25	7.1x21	100	4.8x22.2	34	14.5	15.0	1.972	147	174	340	49
2	3	1	3.0	8x24	100	4.8x22.2	34	21.0	22.2	2.58	179	204	380	52
3	3	2	4.5	9x27	100	5.5x23.6	35	22.0	22.7	3.072	147	206	475	67
5	3	2	7.5	9x27(2)	100	5.5x23.6	39	40.0	41.5	4.71	179	263	600	78
10	5	4	15	9x27(4)	100	5.5x23.6	41	89.4	96.9	8.23	179	367	740	64
20	5	8	30	9x27(8)	100	5.5x23.6(2)	41x2	214.7	244.7	16.46	207	873	870	92

Factor of Safety 4:1

30 t and 50 t units are available upon request

Standard Features:

- Meets all pertinent world standards
- Gears are designed in Japan
- Compact design for limited headroom applications
- High strength steel frame and gear case built to be durable for the rugged needs of construction, mining and rigging
- Heat treated spur gear efficiently designed to provide smooth load handling and low hand pull
- Reinforced double pawl brake system and larger diameter pawl springs ensure reliable brake
- Open frame design for easy cleaning, quick load sheave inspection and easy hoist maintenance
- Lightweight high strength grade 100 alloy steel load chain, except on 0.5 t and 1 t units
- Cast safety latches on hooks
- Zinc plated load chain
- CSIR

Optional Features

- Caged roller bearings on load sheave
- thrust bearings in bottom hook assembly

Instructions for the Safe Use

Only trained staff are to operate this equipment. Before using the unit, always check the following:
- Rated capacity (Work Load Limit) of the unit is correct for the load.
- Suspension points are sound, runway and carriages are suitable for the equipment.
- Load will be lifted in a vertical plane.
- Load chain does not show any twists, kinks or knots.
- Chain length is sufficient to lower the load fully.

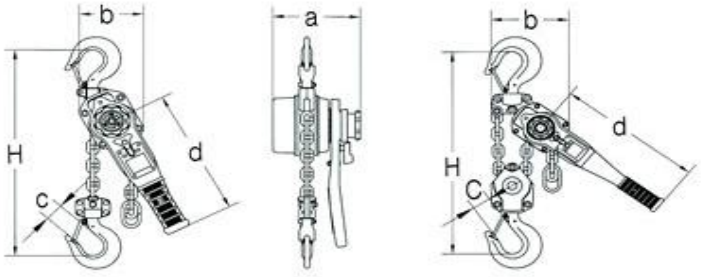
In general, a visual inspection of the unit should be conducted prior to use and independently inspected every 6 months, along with a proof test once a year conducted by a registered LME.

Electric Chain Hoist

Capacity	Motor Power		Lifting Speed				No. Of falls	Net Weight		Gross Weight		
			50Hz		60Hz							
	Single	Dual	Single	Dual	Single	Dual		Single	Dual	Single	Dual	
[t]	[kW]	[kW]	[m/min]	[m/min]	[m/min]	[m/min]		[kg]	[kg]	[kg]	[kg]	
1-E	1.5	-	4.7	-	5.6	-	1	63	-	69	-	Single
2-E	1.5	-	2.3	-	2.8	-	1	74	-	81	-	Phase
0.5-L	1.0	1.5/0.5	6.7	6.7/2.2	8.0	8.0/2.6	1	58	63.5	64	69.5	3
0.5-H	1.0	1.5/0.5	11.3	11.3/3.8	13.5	13.5/4.5	1	60	63.5	66	69.5	Phase
1-L	1.0	1.5/0.5	4.7	4.7/1.6	5.6	5.6/1.8	1	58	63.5	64	69.5	
1-H	1.5	1.5/0.5	6.7	6.7/2.2	8.0	8.0/2.6	1	60	63.5	66	69.5	
1-NL	1.0	1.5/0.5	4.7	-	5.6	-	1	52.5	-	58.5	-	
1-NH	1.5	1.5/0.5	6.7	-	8.0	-	1	54.5	-	60.5	-	
2-L	1.0	1.5/0.5	2.3	2.3/0.8	2.8	2.8/0.9	2	70.5	75	76.5	81	
2-H	1.5	1.5/0.5	3.3	3.3/1.1	4.0	4.0/1.3	2	70.5	75	76.5	81	
2-NL	1.0	1.5/0.5	2.3	-	2.8	-	2	63	-	69	-	
2-NH	1.5	1.5/0.5	3.3	-	4.0	-	2	65.5	-	71.5	-	
3-L	1.0	1.5/0.5	1.5	1.5/0.5	1.8	1.8/0.6	3	84.5	87.5	97.5	100.5	
3-H	1.5	1.5/0.5	2.2	2.2/0.7	2.6	2.6/0.9	3	84.5	87.5	97.5	100.5	
3-NL	1.0	1.5/0.5	1.5	-	1.8	-	3	77	-	90	-	
3-NH	1.5	1.5/0.5	2.3	-	2.6	-	3	79	-	92	-	
2-S	-	3/1	6.6	6.6/2.2	7.9	7.9/2.6	1	116.5	118	144.5	146	
2.5-S	-	3/1	5.3	5.3/1.8	6.4	6.4/2.1	1	116	125	144	153	
3-S	3	3/1	4.3	4.3/1.4	5.2	5.2/1.7	2	134	136	162	164	
5-S	-	3/1	2.6	2.6/0.9	3.2	3.2/1.0	2	145	154	173	182	
7.5-S	-	3/1	1.8	1.8/0.6	2.1	2.1/0.7	3	195	204	223	232	
10-S	3x2	3x2/1x2	2.6	2.6/0.9	3.2	3.2/1.0	6	334	351	392	407	
15-S	3x2	3x2/1x2	1.8	1.8/0.6	2.1	2.1/0.7	8	400	417	468	485	
20-S	3x2	3x2/1x2	1.3	1.3/0.4	1.6	1.6/0.5	1	510	527	590	577	

Standard lift 3m
Power supply: Single Phase 220V – 600V.
3 Phase 220V – 600V
Duty Rating: Single Phase 25%, 3 Phase 45%

Lever Hoist



Lever Hoist

Lever Hoist

Capacity	No. Of falls	Load Chain		Pull to Lift Rated Load	Net Weight With 1.5m Of Lift	Extra Weight /m	A	B	C	D	H
[t]		[mm]	Grade	[kg]	[kg]	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]
0.75	1	6.3	80	15	6.9	0.85	148	128	37	256	295
1	1	6.3	80	20	7.1	0.85	148	128	45	256	310
1.5	1	7.1	100	18	9.7	1.11	163	148	47	368	335
3	1	9.0	100	38	16.3	1.77	191	181	62	368	405
6	2	9.0	100	39	26.7	3.55	191	244	78	368	550

Factor of Safety 4:1

A dependable lever host with capacities and features that make it ideal for all industrial lifting, pulling and positioning applications.

Standard Features:

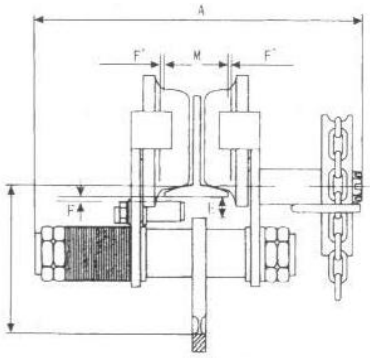
- All steel construction for external impact resistance
- High-strength, cold-formed, stamped steel construction makes it lighter in weight yet impact Resistant for longer life
- Open frame design provides access for easy cleaning and inspection
- 360º handle rotation with short stroke to ratchet loads
- Rubber grip handle for a better comfortable operation
- Easy free chaining operation
- Cast safety latches on hooks
- CSIR tested

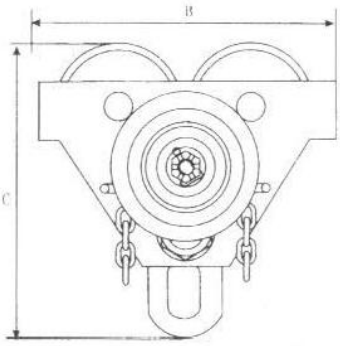
Advanced Features

- 360º rotation handle needs only 15 position loads, a big plus in tight places.
- Responsive load control through six pinion gear teeth and a four pocket load sheave.
- Alloy steel load chain is induction welded and quenched for strength and endurance. 1.5 t, 3 t and 6 t fitted with Grade 100 chain.
- Forged alloy steel hooks have a wide throat opening with deformation indicators. Hooks are designed to spread at 270-350% of the rated load to indicate a clear visual warning of hoist overload.

Beam Trolley

[Geared]



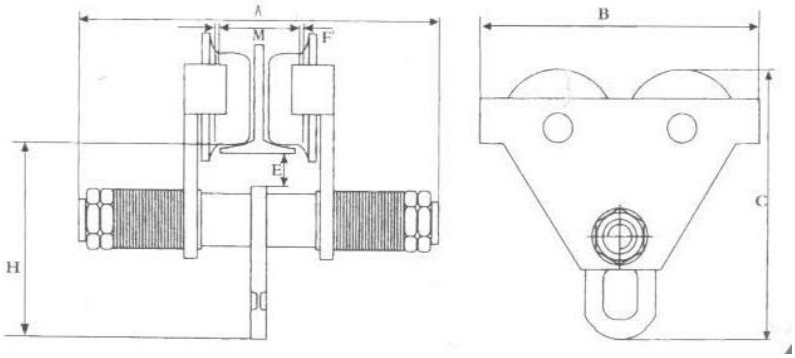


Geared Beam Trolley – TG

Work Load Limit	Test Load	Chain Pull To Lift Load	Min Radius Curve	A	B	C	H	I-Beam Recommended	
								M	E Min
[t]	[t]	[kN]	[m]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
0.5	0.75	40	1.0	248	184	198	113	68-126	9
1.0	1.5	45	1.0	286	220	237	134	80-146	9
2.0	3	70	1.1	396	254	293	158	80-168	10
3.0	4.5	80	1.3	430	199	341	186	88-168	10
5.0	7.5	95	1.4	451	326	395	220	100-170	12
10	15	200	1.7	480	389	500	285	122-203	22
20	30	445	2.8	537	574	622	315	122-203	30

Factor of Safety 4:1
Standard lift 3m

Beam Trolley
[Plain]



Plain Beam Trolley – TP

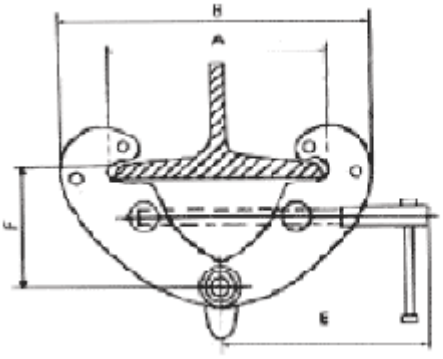
Work Load Limit	Test Load	Min Radius Curve	A	B	C	H	I-Beam Recommended	
							M	E Min
[t]	[t]	[m]	[t]	[mm]	[mm]	[mm]	[mm]	[mm]
0.5	0.75	0.9	248	184	198	113	68-126	9
1.0	1.5	1.0	314	220	237	134	80-146	9
1.5	2.25	1.0	314	250	262	142	80-146	9
2.0	3	1.1	330	254	262	158	80-168	10
3.0	4.5	1.3	356	299	341	186	88-168	10
5.0	7.5	1.4	385	326	395	219	100-170	12
10	15	1.7	403	389	500	285	122-203	22

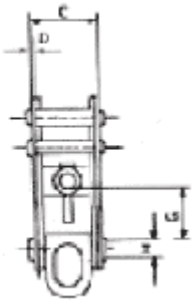
Factor of Safety 4:1

Features for Geared Beam Trolley and Plain Beam Trolley:

- Adjustable to any beam width, simply by adjusting the number of collars.
- The wheels are made to fit any shape of beam, i.e. I-Beam or RSJ types.
- High grade sealed ball bearings.
- With anti-drop plates.
- Operationally tested to 150% of the Working Load Limit and issued with an individual test certificate.

Beam Clamp





Beam Clamp

Work Load Limit	Test Load	Jaw Opening	A Max	B		C	D	E	F		G Min	H	Net Weight	Packing Size
				Min	Mix				Min	Max				
[t]	[t]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[mm]
1	1.5	75-220	260	180	360	64	5	215	102	155	25	22	4.5	430x100x170
2	3	75-220	260	180	360	74	6	215	102	155	25	22	5	430x100x170
3	4.5	80-320	354	235	490	103	8	260	140	225	45	24	10.5	390x140x340
5	7.5	80-320	354	235	490	110	10	260	140	225	45	28	11	390x140x340
10	15	80-350	400	250	520	120	12	280	160	230	70	44	16	550x170x280

Factor of Safety 4:1
Operationally tested to 150% of the Work Load Limit and issued with an individual test certificate.

Lifting Clamps

Vertical Lifting Clamp

Horizontal Lifting Clamp

Vertical Lifting Clamp

Work Load Limit	Test Load	Jaw Opening	Net Weight
[t]	[t]	[mm]	[kg]
1	2	0-22	3.8
2	4	0-30	6.0
3	6	0-35	9.3
5	10	0-45	18.5
7	14	0-50	33.0
10	20	0-50	48.5

Factor of Safety 5:1
Operationally tested to 200% of the Work Load Limit and issued with an individual test certificate

Horizontal Lifting Clamp

Work Load Limit	Test Load	Jaw Opening	Net Weight
[t]	[t]	[mm]	[kg]
1	2	0-30	4
2	4	0-35	7.2
3	6	0-40	8
4	8	0-45	8.5
5	10	0-50	9

Factor of Safety 5:1
Operationally tested to 200% of the Work Load Limit and issued with an individual test certificate

Tirfors

SWR Lifting & Pulling Machine (Cast Aluminium Body)

Lifting Capacity	Pulling Capacity	Lever Pull at Rated Load	Forward Travel	Rope Ø	Net Weight			Dimensions		
					Body	SWR 20 m	Lever Handle	L	W	H
[t]	[t]	[N]	[mm]	[mm]	[kg]	[kg]	[kg]	[mm]	[mm]	[mm]
0.8	1.25	284	52	8.3	6.4	7.0	1.15	440	70	255
1.6	2.5	412	55	11	12.4	11.5	2.5	560	100	295
3.2	5.0	441	28	16	23.3	23.5	2.5	675	120	350

Factor of Safety (Winch) 5:1
Factor of Safety (SWR) 6:1

- Each machine is tested to 1.5 times of capacity and a test certificate issues.
- Test certificates are also issued for steel wire rope.
- Standard length of steel wire rope is 20 metres. Custom lengths available on request

Hand Winches

Hand Winch – Belt

Hand Winch – SWR

Hand Winch

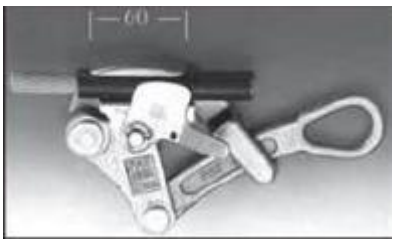
Capacity	Break Load	Gear Ratio	Belt		Rope		A	B
			Width	Length	Ø	Length		
[t]	[t]		[mm]	[m]	[mm]	[m]	[mm]	[mm]
0.36	0.54	3:2:1	50	7	4.5	10	95	90
0.45	0.675	4:1:1	50	7	4.5	10	135	90
0.54	0.810	4:1:1	50	7	4.8	10	135	90
0.63	0.945	4:1:1	50	7	4.8	10	155	100
0.8	1.2	4:1:1	50	8	5.1	10	172	93
0.9	1.35	4:6:1	50	8	5.1	10	188.3	129.5
1.14	1.71	5:1:1	50	8	5.6	10	188.3	129.5

Special Feature:

- Winches are coated with an oven cured epoxy that outlasts a conventional finish.
  It provides an extremely tough durable finish with resistance to rust, salt, spray chemical erosion, general weathering, abrasion and impact

Wire Grips

SD Wire Grip



2 Ton Mighty Grip

2 Ton Aluminium Covered Grip (Smooth Jaws)

3 Ton Grip

Model	Rope Ø [mm]	Work Load Limit [t]	Weight [kg]
1 Ton SD Wire Grip	2.6 ~ 15	1	0.6
2 Ton Mighty Grip	4 ~ 22	2	1.3
2 Ton Aluminium Covered Grip Smooth Jaws	4 ~ 22	2	1.3
3 Ton Grip	16 ~ 32	3	2.5

Powerline Kits available on request including:
Sling, Lever Hoist, NGK Grip and carry bag.

Load Binder

Load Binder – Ratchet Type

Load Binder – Lever Type

Load Binder – Ratchet Type

Chain Size	Min. Break Load	Lashing Capacity	Take Up	Handle Length	Barrel Length	Weight
[mm]	[t]	[kg]	[mm]	[mm]	[mm]	[kg]
10 / 13	14.97	4.175	200	356	254	5.6

Finish: Powder coated

Features:

- Continuous take-up feature with infinite adjustment
- One piece assembly, no bolts or nuts to loosen
- Ratchet spring rust proofed
- All load bearing and load holding parts forged
- Eye bolts and hooks are alloy steel, quenched and tempered
- Easy to operate-positive ratchet
- Traceable batch marking on each unit

Load Binder – Lever Type

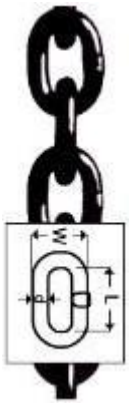
Chain Size	Min. Break Load	Lashing Capacity	Take Up	Handle Length	Weight
[mm]	[t]	[kg]	[mm]	[mm]	[kg]
10	8.563	2.45	102	405	3.50
13	14.97	4.175	115	470	5.10

Finish: Powder coated

Features:
- Drop forged and heat treated
- Each binder is proof tested
- Traceable batch marking on each unit

Precautions:

- Do not use ‘extender bars” for additional leverage when tensioning binders.
- Inspect tensioning devices for any sign of damage or wear prior to use.
- Ensure the load binder handle is locked in place by rope, wire, chain or locking mechanism to prevent the handle from accidentally releasing.
- Load binders should not be used for lifting purposes.



Lashing Chain

Cargo Ratchet and Strap With J-Hook

Lashing Chain

Chain Size	Break Load	D	L	W
[mm]	[t]	[mm]	[mm]	[mm]
10	6.72	10	28	34.0
13	11.40	13	36	44.2

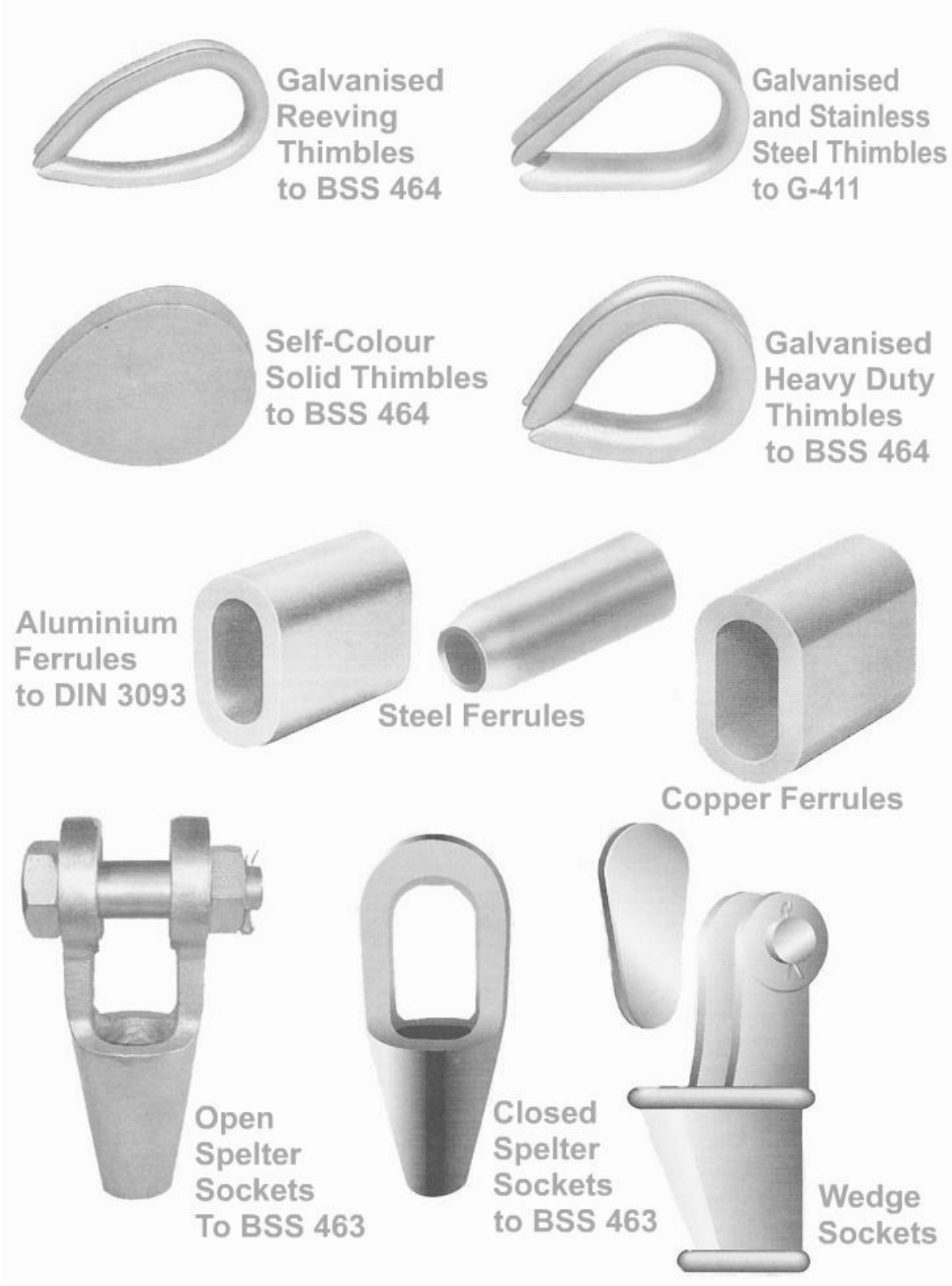
Material: **Grade (M)4**
Finish: **Hot-dip galvanised or self coloured (black)**

Cargo Ratchet and Strap with J-Hook

- Ratchet tensioning systems available in various sizes from 25mm – 100mm for securing all types of general cargo.
- Lashing straps available in lengths of your choice with either J-Hooks or D-Rings as terminal fittings in webbing up to 6 t.

Precautions:

- Remove twists, kinks or knots from chain before use.
- It is advisable that the total breaking strength or the lashing chain must at least equal 1.7 times the mass of the load carried.
- Inspect chain, fittings, ratchets and straps for sign of wear prior to use.
- Always apply the lashing chains or straps across the load where the mass is concentrated to avoid unbalanced binding.


Galvanised
Reeving
Thimbles
to BSS 464
Galvanised
and Stainless
Steel Thimbles
to G-411
Self-Colour
Solid Thimbles
to BSS 464
Galvanised
Heavy Duty
Thimbles
to BSS 464
Aluminium
Ferrules
to DIN 3093
Steel Ferrules
Copper Ferrules
Open
Spelter
Sockets
To BSS 463
Closed
Spelter
Sockets
to BSS 463
Wedge
Sockets

Rope Cutters

Model WR-10 Cuts up to 10mm Rope
Model WR-16 Cuts up to 16mm Rope

Model RC-8 Cuts up to 5mm Rope

Spare blade kits

Rope Swagers

Model HCS-350 Swagers 2mm to 3.5mm Rope

Model HCS-600 Swagers 2mm to 5mm Rope

Lever Pullers

Available in 2 - 4 Ton Capacities
Not to be used for lifting

General Information
Chain Slings

Chain Inspection:
Inspection and Removal from service
Per Occupational Health and Safety Act (OHSA)

Frequent Inspection:

Normal Service: Monthly
Severe Service: Daily to Monthly

Check chain and attachments for wear, nicks, cracks, breaks, gouges, stretch, bend, weld splatter, discolouration from excessive temperature, and throat openings of hooks.

1. Chain links and attachments should hinge freely to adjacent links.
2. Latches on hooks, if present, should hinge freely and seat properly without evidence of permanent distortion.

Periodic Inspection
(Inspection Records Required):

Normal Service: Yearly
Severe Service: Monthly

This inspection shall include everything in a frequent inspection plus each link and end attachment shall be examined individually, taking care to expose inner link surfaces of the chain and chain attachments.

1. Worn links should not exceed values given by the manufacturer.
2. Sharp transverse nicks and gouges should be rounded out by grinding.
3. Hooks should be inspected in accordance with international standards.
4. If present latches on hooks should seat properly, rotate freely, and show no permanent distortion.

Caution

Only Alloy chain is recommended for lifting applications. It must be recognised that certain factors in the usage of chain and attachments can be abusive and lessen the load that the chain or attachments can withstand. Some examples are twisting of the chain, disfigurement, deterioration by straining, usage, weathering and corrosion, rapid application of load or jerking applying excessive loads, and sharp corners cutting action.

Due to the crushing effect Grab Hooks without saddles have upon chain, the design factor for all assemblies must be reduced by 20%.

All ratings given in tons [t] refer to 1000 kgs.

Severe Environment

- Chain and components must not be used in alkaline or acid.
- Comprehensive and regular examination must be carried out when used in severe or corrosive inducing environments.
- In certain situations consult your dealer.

Extreme Temperature Conditions

The in service temperature of the whole or part of the chain sling effects the Work Load Limit as follows:

Temperature of Sling	Reduction of Work Load Limit
[ºC]	[%]
-40 – 200	0%
+200 – 300	10%
+300 - 400	25%

Upon return to the normal temperature, the sling reverts to its full capacity within the above temperature range. Chain slings shall not be used above or below these temperatures.

Surface treatment

Note! Hot dip galvanising or plating is not allowed outside the control of the manufacturer.

Asymmetric loading conditions

For unequally loaded chain legs we recommend that the Work Load Limit is determined as follows:

- 2 leg slings are calculated as the corresponding 1 leg sling
- 3 / 4 leg slings are also calculated as the corresponding 1 leg sling, (Unless it is that 2 legs are equally carrying the major part of the load, then it can be calculated as the corresponding 2 leg sling.)

Protect yourself and others

- Before each use, the chain sling shall be checked for obvious damage or deterioration. Never use a worn out or damaged sling.
- Know the weight of the load, the centre of gravity and ensure it is ready to move and no obstacles will obstruct the lift.
- Never use an improper sling configuration Check that the load does not exceed the Work Load Limit on the ID Tag for the specific working configuration.
- Never use a sling without a legible ID Tag.
- Prepare the landing site,
- Take into consideration that the load may swing or rotate.
- Watch your feet and fingers while loading/unloading.
- Never overload a sling and avoid shock loading.
- Never ride on the load.
- Never go under a suspended load.
- Note that as the angle between the legs of a sling increase, the work load limit decreases.

General Advice

- Ensure that the sling is precisely as ordered.
- Ensure that the manufacturer's certificate is correct.
- Ensure that the identification and the Work Load Limit on the ID Tag correspond to the information is compulsory: Work Load Limit, Number of chain legs, normal size [mm], Individual ID mark, manufacturer, angle of operation.

- Ensure that the full details of the chain sling are recorded.
- Ensure that the staff using the chain sling have received the appropriate information and training.

General Information
Steel Wire Rope

Points to remember when ordering SWR:

1.	Finish:	Ungalvanised, galvanised, stainless steel
2.	Rope diameter:	24 mm
3.	Construction and type:	6 x 36 (WS) /IWRC, 6 X 36 (WS) /FC
4.	Direction and type of lay:	Right Hand Regular Lay (RHRL)
5.	Length and quantity:	1,000 m x 5 R/L
6.	Lubrication:	A-1 (Petroleum), C (Asphalt)
7.	Specification:	BS, JIS, EN
8.	Grade of wire:	IPS, EIPS, 165 kg/mm², 1770 N/mm²
9.	Application:	Crane
10.	Packing:	Coil, wooden reel, steel reel
11.	Remarks:	Other special requirement

Galvanised Steel Wire Strand:

1.	Strand Diameter:	¼ in. 7/2.00
2.	Length and quantity:	1,000 m x 10 R/L
3.	Direction and type of lay:	Right Hand Regular Lay (RHRL)
4.	Specification:	ASTM A-475, BS-183
5.	Grade of wire:	EHS, 1100, Grade 1
6.	Weight of zinc coating:	Class A

Stainless Steel Wire Rope:

1.	Construction:	6 x 24 /FC, 6 x 24 /IWRC
2.	Grade:	AISI 302, AISI 304, AISI 305, AISI 316
3.	Rope diameter:	24 mm, ¾ in.
4.	Direction and type of lay:	Right Hand Regular Lay (RHRL)
5.	Length and Quantity:	1,000 x 1 R/L
6.	Tensile strength:	165 kg/mm², 1,770 N/mm²
7.	Packaging:	Wooden reel, plastic spool
8.	Specification:	DIN, BS, JIS
9.	Application:	Crane
10.	Remarks:	Other special requirements

General Information
Webbing Slings

Information for use and maintenance of Flat woven and Round Webbing Slings
In accordance with SANS 94-1:2003 and 94-2:2003 specifications

Limitations on the use of the sling due to
Environmental conditions or hazardous applications

a. Selective material resistance to chemicals
   - Polyester is resistant to most mineral acids but is damaged by alkalis.
   - Polyamides are virtually immune to the effects of alkalis, however they are attacked by mineral acids.
   - Polypropylene is little affected by acids or alkalis.
   - Contaminated slings should be taken out of service at once, soaked in cold water, dried naturally and referred to a competent person for examination.
   - Slings with Grade 8 fittings of master links should not be used in acidic conditions.

b. Restrictions due to temperature
   - Flat woven and Round slings are suitable for use and storage in the following temperature ranges:
   - Polyester and polyamide: -40 ºC – 100 ºC
   - Polypropylene: -40 ºC – 80 ºC

   These ranges vary in a chemical environment, in which case the advice of the manufacturer or supplier should be sought.

c. Susceptibility to cutting and abrasion
   - Always protect webbing slings from sharp edges.
   - Do not drag a load in the sling and do not drag slings over the ground or rough surfaces.

d. Degradation due to ultra-violet radiation.
   - Flat woven and Round slings are susceptible to degradation of exposed to ultra-violet radiation.

Before putting the sling into use first check the following:

a. Availability of manufacturer's certificate.
b. The sling corresponds precisely to the specifications on the order.
c. The identification and WLL marked on the sling correspond with the information on the certificate.

Before each use / period of use check the following:

a. Inspect for defects such as cuts, tears, abrasions, knots, chemical damage, friction damage or deformed fittings.
b. Presence of label and legibility of marking.
c. If any defects are detected withdraw the sling from service.

Selection and use of woven webbing slings

a. Determine the mass of the load, its centre of gravity, attachment points and proposed method of attachment.
b. Observe the marked WLL and mode factors. In the case of multi-leg slings, this will include restrictions on angle of sling legs.
c. When using slings with soft eyes, the minimum eye length for a sling for use with a hook should be not less than 3.5 times the maximum thickness of the hook.
d. The load should be secured by the sling in such a manner that it cannot topple or fall out of the sling during the lift. The sling should be arranged so that the point of lift is directly above the centre of gravity and the load is balanced and stable.
e. Slings should be protected from sharp edges, friction and abrasions, whether from the load or lifting appliance.
f. Care should be taken to ensure that the load is controlled, e.g. to prevent accidental rotation or collision with objects.
g. Snatch or shock loading should be avoided as this will increase the forces acting on the sling.
h. Care should be taken to ensure the safety of personnel during lift. Hands and other body parts should be kept away from the sling to prevent injury as the slack is taken up.
i. The load should be lowered in an equally controlled manner as when lifted. Trapping the sling when lowering should be avoided and the load should not rest on the sling as this could cause damage.
k. On completion of the lifting operation the sling should be returned to proper storage. When not in use, slings should be stored in clean dry and well ventilated conditions, at ambient temperature and on a rack, away from heat sources.

Periodic examination and maintenance

a. Examination periods should be determined by a competent person, taking into account the application, environment, frequency of use and similar matter, but in any event should be visually examined at least annually by a competent person.
b. Records of such examinations should be maintained.
c. Damaged slings should be withdrawn from service. Never attempt to carry out repairs to the slings yourself.

SANS 33	Equipment for use in industrial rope access work
SANS 61-1	Cranes – Limiting and indicating devices Part 1: General
SANS 94-1	Textile slings – Safety Part 1: Flat woven webbing slings, made of man-made fibres, for general purpose use
SANS 94-2	Textile slings – Safety Part 2: Round slings, made of man-made fibres, for general purpose use
SANS 189:2006	Short-link steel chain (medium-tolerance) for lifting purposes
SANS 251	Long-link and extra-long link medium tolerance steel chains for general purpose
SANS 0293	Condition assessment of steel wire ropes on mine winders
SANS 500 DRAFT	Inspection and testing of manually operated chain blocks and chain lever hoists
SANS 813	Clamps for wire ropes
SANS 1562	Aging-resistant steels for haulage and lifting equipment
SANS 1592	Short-link steel chain (close-tolerance) for lifting appliances
SANS 1594	Manually operated chain blocks
SANS 1595	Forged steel lifting hooks for use with steel chains of strength grade M(4), P(5), S(6), T(8) and V(10)
SANS 1596	Drop forged eyebolts and eye nuts for lifting purposes
SANS 1599-2	Cranes Par 2: Power-driven mobile cranes
SANS 1636	Manually operated chain lever hoists
SANS 1637	Reconditioned manually operated chain lever hoist
SANS 1638	Pneumatically operated chain hoists
SANS 1639	Reconditioned pneumatically operated chain hoists
SANS 1640	Reconditioned manually operated chain blocks
SANS 1819	Snatch blocks
SANS 1820	Reconditioned snatch blocks
SANS 1824	Beam trolleys (crawls)
SANS 2262	General purpose thimbles for use with steel wire ropes- Specification
SANS 2408	Steel wire ropes for general purposes – Minimum requirements
SANS 2415	Forged shackles for general lifting purposes – Dee shackles & bow shackles
SANS 3056	Non-calibrated round steel link lifting chain and chain slings – Use and maintenance

South African National Standards and Title cont.

SANS 3189-1	Sockets for wire ropes for general purposes Part 1: General characteristics and conditions of acceptance.
SANS 3189-2	Sockets for wire ropes for general purposes Part 2: Special requirements for sockets produced by forging or machine from solid
SANS 3189-3	Sockets for wire ropes for general purposes Part 3: Special requirements for sockets produced by casting
SANS 4301-1	Cranes and lifting appliances – Classification Part 1: General
SANS 4301-2	Lifting appliances – Classification – Part 2: Mobile cranes
SANS 4301-3	Cranes – Classification – Part 3: Tower cranes
SANS 4301-5	Cranes – Classification Part 5: Overhead travelling and portal bridge cranes
SANS 4308-1	Cranes and lifting appliances – Selection of wire ropes Part 1: General
SANS 4308-2	Cranes and lifting appliances – Selection of wire ropes Part 2: Mobile cranes – Coefficient of utilization
SANS 4309	Cranes – Wire ropes – Care, maintenance, installation, examination and discard
SANS 4310	Cranes – Test code and procedures
SANS 4344	Steel wire ropes for lifts – Minimum requirements
SANS 7363	Cranes and lifting appliances – Technical characteristics and acceptance documents
SANS 7531	Wire rope slings for general purposes – Characteristics and specifications
SANS 7592	Calibrated round steel link lifting chains – Guidelines to proper use and maintenance
SANS 7593	Chain slings assembled by methods other than welding – Grade T(8)
SANS 7752-5	Lifting appliances – Controls – Layout and characteristics – Part 5: Overhead travelling cranes and portal bridge cranes
SANS 8539	Forged steel lifting components for use with grade T(8) chain
SANS 9374-1	Cranes – information to be provided Part 1: General
SANS 9926-1	Cranes – Training of drivers Part 1: General
SANS 9928-1	Cranes – Crane driving manual Part 1: General

South African National Standards and Titles cont.

SANS 10148	The installation and operation of cable cranes and aerial rope-ways
SANS 10295-2	Suspended access equipment Part 2: Temporary suspended platforms (TSPs)
SANS 10296	Hand signals used with cranes and with lifting and suspended equipment
SANS 10316	Aircraft ground support – Vehicle-mounted loading equipment
SANS 10335	The installation, maintenance and safe use of overhead monorail transport systems for underground use
SANS 11661	Mobile cranes – Presentation of rated capacity charts
SANS 23853	Cranes – Training of slingers and signallers
SANS 50818-6	Short link chain for lifting purposes – Safety Part 6: Chain slings – Specification for information for use and maintenance to be provided by the manufacturer
SANS 52195-2	Load resistant assemblies on road vehicles – Safety Part 2: Web lashing made from man-made fibres
SANS 52195-3	Load resistant assemblies on road vehicles – Safety Part 3: Lashing chains
SANS 52195-4	Load resistant assemblies on road vehicles – Safety Part 4: Lashing steel wire rope
ARP 051	Steel wire rope end connections

Non-metric to Metric Conversion

Non-metric to Metric **Metric to non-metric**

Linear		
Units	**To Convert**	**Multiply by**
in. > cm	inches into centimetres	2.540
in. > m	inches into metres	2.540×10^{2}
in. > mm	inches into millimetres	25.4
ft > m	feet into metres	0.3048
yd > m	yards into metres	0.9144
mi > km	miles into kilometres	1.609344
mi > m	miles into metres	1609.344
ft > cm	feet into centimetres	30.48

Linear		
Units	**To Convert**	**Multiply by**
mm > ft	millimetres into feet	3.281×10^{3}
mm > in.	millimetres into inches	0.03937
cm > in.	centimetres into inches	0.3937
m > ft	metres into feet	3.281
m > yd	metres into yards	1.09361
km > yd	kilometres into yards	1093.61
km > mi	kilometres into miles	0.62137

Mass		
Units	**To Convert**	**Multiply by**
oz > g	ounces into grams	28.3495
lb > g	pounds into grams	453.6
lb > kg	pounds into kilograms	0.4536
t > kg	tons into kilograms	1000
gr > g	grains into grams	0.0648

Mass		
Units	**To Convert**	**Multiply by**
g > oz	grams into ounces	0.03527
g > gr	grams into grains	15.4324
kg > lb	kilograms into pounds	2.2046
kg > t	kilograms into tons	0.001
kg > st	kilograms into stones	0.1575
kg > swt	kilograms into hundredweight	0.01968

Area		
Units	**To Convert**	**Multiply by**
$in.^2 > cm^3$	sq. inches into sq. centimetres	6.4516
$ft^2 > cm^2$	sq. feet into sq. centimetres	929.03
$ft^2 > m^2$	sq. feet into sq. metres	0.092903
$yd^2 > m^2$	sq. yards into sq. metres	0.8361
$mi^2 > km^2$	sq. miles into sq. kilometres	2.58999
$mi^2 > m^2$	sq. miles into hectares	258.999
$ac > m^2$	acres into sq. metres	4046.856
$ac > ha$	acres into hectares	0.40469

Area		
Units	**To Convert**	**Multiply by**
$mm^2 > in.^2$	sq. millimetres into sq. inches	1.550×10^3
$cm^2 > in.^2$	sq. centimetres into sq. inches	0.1550
$m^2 > ft^2$	sq. metres into sq. feet	10.7639
$m^2 > yd^2$	sq. metres into sq. yards	1.19599
$m^2 > ac$	sq. metres into acres	2.47105×10^4
$km^2 > mi^2$	sq. kilometres into sq. miles	0.3861
$km^2 > ac$	sq. kilometres into acres	247.105
$ha > ac$	hectares into acres	2.47105

Volume and Capacity		
Units	**To Convert**	**Multiply by**
$in.^3 > cm^3$	cu. inches into cu. centimetres	16.3871
$in.^3 > \ell$	cu. inches into litres	0.016387
$ft^3 > m^3$	cu. feet into cu. metres	0.028317
$ft^3 > \ell$	cu. feet into litres	28.32
$pt > \ell$	pints into litres	0.56826
$qt > \ell$	quarts into litres	258.999
$yd^3 > m^3$	Cu. Yards into cu. metres	0.7646
UK gal > ℓ	UK gallon into litres	4.54609
US gal > ℓ	US gallon into litres	3.7854

Volume and Capacity		
Units	**To Convert**	**Multiply by**
$cm^3 > in.^3$	cu. centimetres into cu. inches	0.06102
$m^3 > ft^3$	cu. metres into cu. feet	35.3147
$m^3 > yd^3$	cu. metre into cu. yards	1.30795
$\ell > in.^3$	Litres into cu. inches	61.03
$\ell > pt$	Litres into pints	1.7598
$\ell > qt$	Litres into quarts	0.8799
ℓ > UK gal	Litres into UK gallons	0.219976
ℓ > US gal	Litres into US gallons	0.264178

Power		
Units	**To Convert**	**Multiply by**
hp > kW	horsepower into kilowatts	0.7457
hp > PS	horsepower into metric horsepower	1.01387
ft lb-f/s>kW	foot pound – force/second into kilowatts	0.001356

Power		
Units	**To Convert**	**Multiply by**
kW > hp	kilowatts into horsepower	1.341
PS > hp	metric horsepower into horsepower	0.98632
PS > ft/lbf/s	metric horsepower into foot pounds – force/second	542.48

Force		
Units	**To Convert**	**Multiply by**
lbf > N	pounds force into newtons	4.44822
pdl > N	poundals into newtons	0.138255
kN > t	kilonewtons into tons	0.10197

Force		
Units	**To Convert**	**Multiply by**
N > lbf	newtons into pounds force	0.2248
N > pdl	newtons into poundals	7.2330
t > kN	tons into kilonewtons	9.8066

Velocity		
Units	**To Convert**	**Multiply by**
mph > km/h	miles per hour into kilometres/hour	1.609344
ft/s > cm/s	feet per second into metres per second	0.3048
ft/s > cm/s	feet per second into centimetres per second	30.48

Velocity		
Units	**To Convert**	**Multiply by**
cm/s > ft/s	centimetres per second into feet per second	0.03281
m/s > ft/min	metres per second into feet per minute	196.9
m/s > ft/s	metres per second into feet per second	3.281
km/h > mph	kilometres per hour into miles per hour	0.6214

Calculation Formulae

To Calculate	Multiply
area of triangle	base by ½ height
area of circle	(diameter)² by 0.7854
area of sector of circle	arc by ¼ diameter
area of square rhombus	base by height
area of equaliteral triangle	(side)² by 0.433
area of trapezium	height by ¼ sum of parallel sides
area of ellipse	major axis by minor axis x 0.7854
area of parabola	containing rectangle by 0
circumference of circle	diameter by 3.1416
convex surface of sphere	(diameter)² by 3.1416
surface of cone	½ side by perimeter of base + area of f base
solidity of sphere	(diameter)³ by 0.5236
volume of cylinder	area of base by height
content of cube or prism	length by breadth of depth
content of cone	height by 1/3 area of base
volume of hexagonal prism	(side)² by height by 2.598

Decimal Equivalents Inch to Millimetre

[in.]	Decimal	[mm]	[in.]	Decimal	[mm]	[in.]	Decimal	[mm]
1/64	.015625	.396875	23/64	.359375	9.128125	45/64	.703125	17.859375
1/32	.03125	.793750	3/8	.3750	9.525000	23/32	.71875	18.265250
3/64	.046875	1.190625	25/64	.390625	9.921875	47/64	.734375	18.653125
1/16	.0625	1.587500	13/32	.40625	10.318750	3/4	.7500	19.050000
5/64	.078125	1.984375	27/64	.421875	10.715625	49/64	.765625	19.446875
3/32	.09375	2.381250	7/16	.4375	11.112500	25/32	.78125	19.843750
7/64	.109375	2.778125	29/64	.453125	11.509375	51/64	.796875	20.240625
1/8	.1250	3.175000	15/32	.46875	11.906250	13/16	.8125	20.637500
9/64	.140625	3.571875	31/64	.484375	12.303125	53/64	.828125	21.034375
5/32	.15625	3.968750	1/2	.5000	12.700000	27/32	.84375	21.431250
11/64	.171875	4.365625	33/64	.515625	13.096875	55/64	.859375	21.828125
3/16	.1875	4.762500	17/32	.53125	13.493750	7/8	.8750	22.225000
13/64	.203125	5.159375	35/64	.546875	13.890625	56/64	.890625	22.621875
7/32	.21875	5.556250	9/16	.5625	14.287500	29/32	.90625	23.018750
15/64	.234375	5.953125	37/64	.578125	14.684375	59/64	.921875	23.415625
1/4	.2500	6.350000	19/32	.59375	15.081250	15/16	.9375	23.812500
17/64	.265625	6.746875	39/64	.609375	15.478125	61/64	.953125	24.209375
9/32	.28125	7.143750	5/8	.6250	15.875000	31/32	.96875	24.606250
19/64	.266875	7.540625	41/64	.640625	16.271875	63/64	.984375	25.003125
5/16	.3125	7.937500	21/32	.65625	16.668750	1	1.000	25.400000
21/64	.328125	8.334375	43/64	.71875	17.065625			
11/32	.34375	8.731250	11/16	.6875	17.462500			

Glossary of Terms

A

AISI: Abbr. *American Iron and Steel Institute,* defines the standardised numbered AISI steel grades by American Iron and Steel Institute.
Attachments: Any attachment, such as hooks or links, should have a rated Work Load Limit at least equal to the chain with which it is used.

B

Break Load: The load at which a product may fail and release the load.
Break Strength: See Break Load
BS: Abbr. *British Standard*

C

Carbon Steel: Lower grade steel, generally 300 MPa
Cast Steel: Material used in the casting process to manufacture a product. The molten material is poured into a mound and left to harden.
Chain Size: The diameter of the chain link material.

D

DIN: Abbr**.** *Deutsches Institut für Normung* (German Institute for Standardisation), the German national organisation for standardisation and is that country's ISO member body.
DNV: Abbr. *Det Norske Veritas:*
Det Norske Veritas: Norwegian headquarters of international organisation for standardisation.
Drop Forged: Method of manufacturing a product. The product is hot formed using a stamping process.
Duty Rating: The number of repetitive cycles a product is required to perform during testing, Also called E.D. Rating.

E

EIPS: Abbr. *Extra Improved Plough Steel*
EN: Electro Galvanised: Method of finishing whereby an electric current is used to induce a chemical reaction to coat steel with zinc.
EN: Technical European Standard developed by the European Committee for Standardisation to harmonise material or product specifications.

F

Factor of Safety: Industry term denoting theoretical reserve capability.
Usually computed by dividing the catalogue stated ultimate load by the catalogue stated Work Load Limit and generally expressed as a ratio, for example 5:1.
FC: Abbr. *Fibre Core:* Inner core of a wire rope made from man made fibre material.
FOS: Abbr. *Factor of Safety*

H

Hot-Dip Galvanised: Method of using molten zinc to coat steel.

I

I-Beam: Steel beam used in building construction.
ISO: Abbr. *International Standards Organisation*
IWRC: Abbr. *Inner Wire Rope Core:* Inner core of a wire rope made from steel wire.
IPS: Abbr. *Improved Plough Steel*

M

Minimum Ultimate Load: The minimum load at which a new chain will break when tested by applying direct tension to a straight length of chain at a uniform rate of speed in a testing machine.

N

Nominal Break: The force at which a product will fracture.

P

Powder Coated: Type of coating, which is applied as a free-flowing, dry powder. The coating is typically applied electrostatically and is then cured under heat to allow it to flow and form a coat.
Proof Load: The load applied in excess of the Work Load Limit. At this load, the product should show no visual deformation.
Proof Test: The tensile test applied to new chain for the sole purpose of detecting injurious defects in the material or manufacture. It is the load which the chain has withstood under a test in which the load has been applied in direct tension to a straight length of chain.
PVC Covered: Method of encasing steel wire rope with a PVC sheath.

R

Rated Load: The maximum recommended load that should be exerted on the item. Also used for the Rated Load: Work Load Limit (WLL), and "Resultant Safe Working Load". All Rated Load values - unless noted otherwise - are for in-line pull with respect to the centreline on the item.

S

SABS: Abbr. *South African Bureau of Standards;* now SANS
SANS: Abbr. *South African National Standards*
Shock Load: The resulting load for a rapid change of movement, such as impacting or jerking of a static load, A shock load is generally significantly greater than the static load.
Standard Lift: Standard height a chain or lever hoist is required to lift of lower a load. This depends on the length of load and hand chain fitted to the hoist.
Swage: The process of clamping together steel wire rope using a ferrule in order to make an eye.
SWL: Abbr. *Safe Work Load Limit*
Safe Work Load Limit: The maximum load a piece of equipment is capable of raising, lowering of suspending under particular service conditions. The SWL can be less than the WLL if the working conditions are extreme but it can never be more.
SWR: Abbr. *Steel Wire Rope*

T

Test Certificate: A detailed record issued by the manufacturer of a product stating Work Load Limit and Factor of Safety. This document highlights the capacity of the product and how it should be used.
Test Load: The force to which a product is tested. At this load, the product should show no visual deformation.

U

Uniform Load method calculation: The method of calculating the Work Load Limit for multi-leg slings using the assumption that the load will be evenly distributed to each leg and that each leg will therefore carry the same force.

W

WLL: Abbr. *Work Load Limit*
Work Load Limit: The maximum load which should be applied to a chain, when the chain is new or "in as new" condition, and then the load is uniformly applied in direct tension to a straight length of chain.