



open link chain



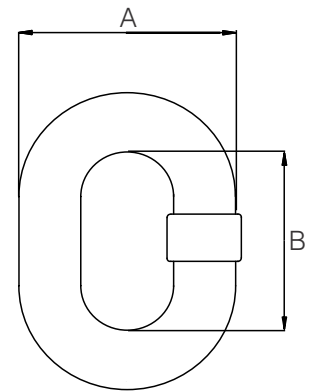
Short link chain

made to EN818-3 specifications

* made to DIN766 specifications

Chain dia [mm]	No of links per mtr	Link dimensions		Work load		Break load [t]	Weight [kgs/m]
		A [mm]	B [mm]	Gr4 [t]	Gr4 [t]		
6	32.8	21.0	18.0	0.50	2.00	2.00	0.80
7	27.8	17.0	21.0	0.75	3.00	3.00	1.10
8	25.0	28.0	24.0	1.00	4.00	4.00	1.40
10	20.8	35.0	30.0	1.60	6.40	6.40	2.20
13	16.1	45.0	39.0	2.65	10.60	10.60	3.80
* 16	13.0	56.0	48.0	4.00	16.00	16.00	5.70
* 20	10.4	70.0	60.0	6.30	25.20	25.20	9.00
22	9.4	77.0	66.0	7.50	30.00	30.00	11.00
26	8.0	91.0	78.0	10.00	40.00	40.00	15.00
32	6.5	112.0	96.0	16.00	64.00	64.00	23.00

factor of safety 4:1

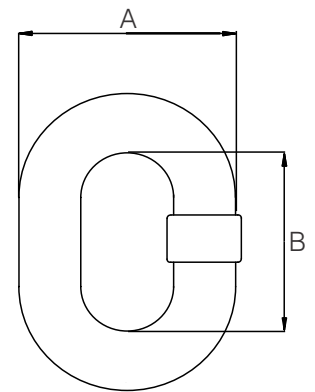


Short link chain

made to EN818-2 / SANS189 specifications

Chain dia [mm]	No of links per mtr	Link dimensions		Work load		Break load		Weight [kgs/m]
		A [mm]	B [mm]	Gr8 [t]	Gr10 [t]	Gr8 [t]	Gr10 [t]	
6	55.6	22.2	18.0	1.15	-	4.60	-	0.80
7	47.0	25.9	21.0	1.57	-	6.28	-	1.08
8	41.6	29.6	24.0	2.05	2.50	8.20	10.00	1.50
10	33.3	37.0	30.0	3.20	4.00	12.80	16.00	2.22
13	25.6	48.1	39.0	5.40	6.70	21.60	26.80	3.73
16	20.8	59.2	48.0	8.20	10.00	32.80	40.00	5.58
20	16.7	74.0	60.0	12.80	-	51.20	-	8.92
22	15.2	81.4	66.0	15.50	-	62.00	-	10.80
26	12.8	96.2	78.0	21.70	-	86.80	-	15.10
32	10.4	118.4	96.0	32.80	-	131.20	-	22.80

factor of safety 4:1

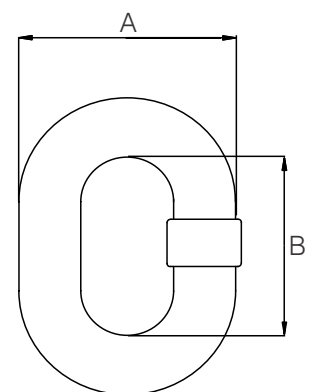


Short link chain

made to SANS1592 specifications, for lifting machines

Chain dia [mm]	No of links per mtr	Link dimensions		Work load		Break load		Weight [kgs/m]
		A [mm]	B [mm]	Gr8 [t]	Gr10 [t]	Gr8 [t]	Gr10 [t]	
5.0	66.7	17.4	15.0	0.80	1.00	3.20	4.01	0.55
6.0	55.5	20.5	18.0	1.20	1.40	4.59	5.76	0.80
6.3	52.6	21.5	19.0	1.30	1.60	5.10	6.42	0.86
7.1	47.6	23.5	21.0	1.60	2.00	6.42	8.16	1.10
8.0	41.7	26.6	24.0	2.00	2.60	8.16	10.20	1.39
9.0	37.0	30.7	27.0	2.80	3.20	10.20	12.75	1.76
10.0	35.7	34.0	28.0	3.20	4.00	12.75	16.32	2.18
11.2	29.4	37.8	34.0	4.00	5.00	16.32	20.39	2.72

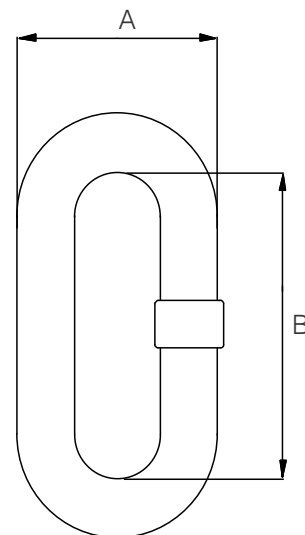
factor of safety 4:1



Long link chain

made to SANS251 specifications

Chain dia [mm]	No of links per mtr	Link dimensions		Work load	Break load	Weight [kgs/m]
		A	B	Gr3	Gr3	
		[mm]	[mm]	[t]	[t]	
5.6	44.6	19.6	22.4	0.30	1.5	0.62
6.3	39.7	22.1	25.2	0.38	1.9	0.78
7.1	35.2	24.9	28.4	0.48	2.4	0.99
8.0	31.3	28.0	32.0	0.62	3.1	1.25
9.0	27.8	31.5	36.0	0.78	3.9	1.59
10.0	25.0	35.0	40.0	1.00	5.0	1.96
11.2	22.3	39.2	44.8	1.20	6.0	2.46
13.0	19.2	45.5	52.0	1.60	8.0	3.30
16.0	15.4	60.0	64.0	2.50	12.5	5.01
20.0	12.5	72.0	80.0	3.8	19.0	7.83
26.0	9.4	94.0	106.0	6.5	32.5	13.23

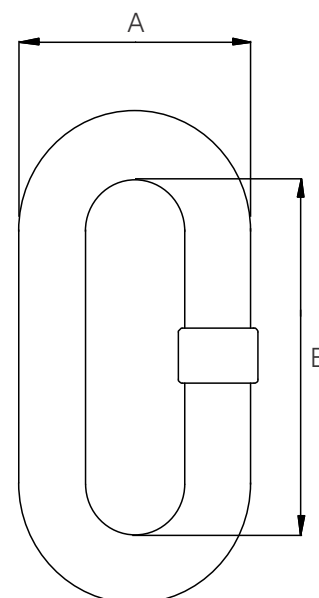


factor of safety 5:1

Extra long link chain

made to SANS251 specifications

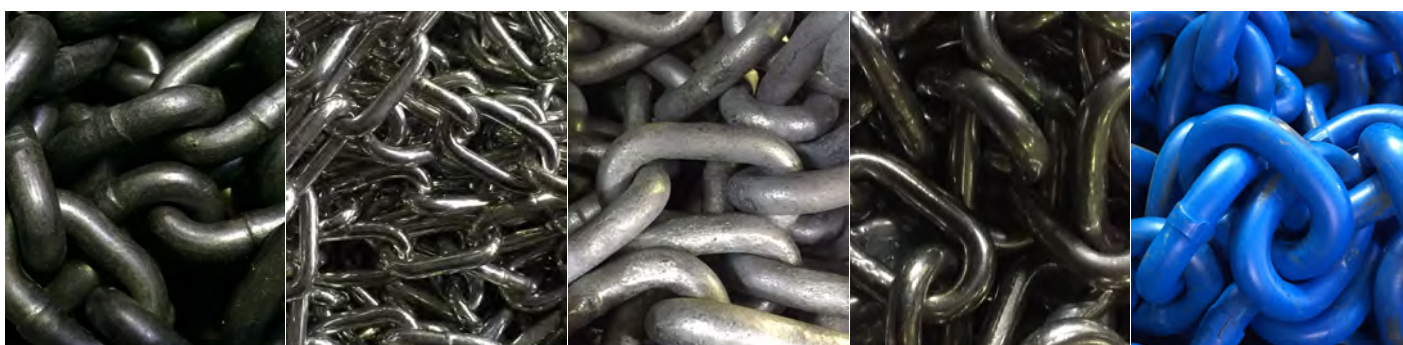
Chain dia [mm]	No of links per mtr	Link dimensions		Work load	Break load	Weight [kgs/m]
		A	B	Gr3	Gr3	
		[mm]	[mm]	[t]	[t]	
7.1	23.5	28.4	42.6	0.48	2.40	0.89
10.0	16.7	40.0	60.0	0.96	4.80	1.77
13.0	12.8	52.0	78.0	1.62	8.10	3.01
14.0	12.0	56.0	84.0	1.88	9.40	3.47
16.0	10.4	64.0	96.0	2.46	12.30	4.53



factor of safety 5:1

Chain finish

1. Self coloured (black) - the chain is in its natural state and has not additional coating.
2. Electrogalvanised - a layer of zinc is bonded to the chain using electricity, to protect against corrosion.
3. Hot-dip galvanised - a layer of zinc is coated on the chain by immersing the chain in a bath of molten zinc, to protect against corrosion.
4. Stainless steel - a type of steel that doesn't readily corrode, rust or stain with water.
5. Painted - the chain is painted a particular colour usually to denote a different grade.



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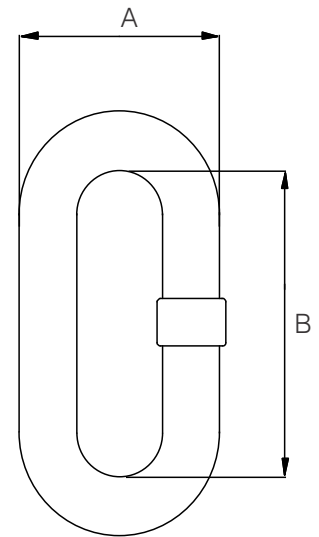
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Loghaul conveyer chain

Gr8

Chain dia	No of links per mtr	Link dimensions		Work load	Break load	Weight
		A	B	Gr8		
[mm]		[mm]	[mm]	[t]	[t]	[kg/m]
10	19.6	14.0	51.1	3.2	12.8	1.82
14	11.2	24.0	89.3	6.3	25.2	3.37
16	11.1	24.0	90.3	8.2	32.8	4.50
20	10.4	27.0	96.3	12.8	51.2	7.29

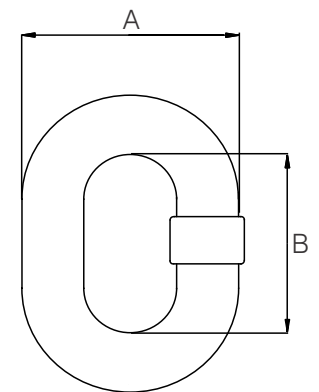
factor of safety 4:1



Short link trawling chain

Gr9

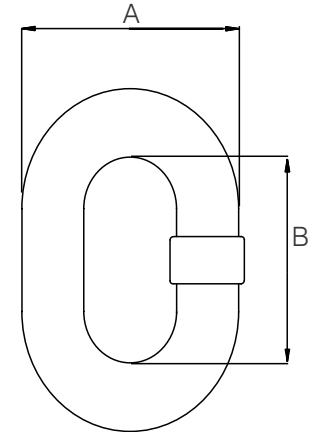
Chain dia	No of links per mtr	Link dimensions		Work load	Break load	Weight
		A	B	Gr95		
[mm]		[mm]	[mm]	[t]	[t]	[kg/m]
10	33.3	36.5	30.0	-	15.3	2.23
13	25.6	46.8	39.0	-	25.8	3.77
16	20.8	58.4	48.0	-	39.1	5.71
20	16.7	73.0	60.0	-	60.8	8.92
22	15.2	80.3	66.0	-	73.7	10.8



Mid link trawling chain

Gr9

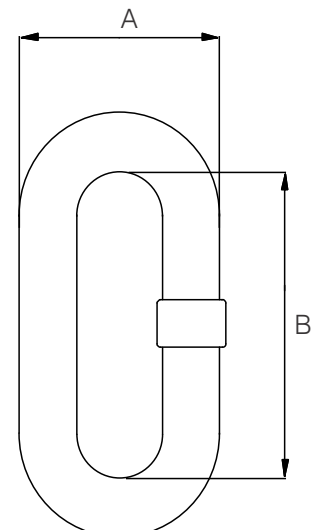
Chain dia	No of links per mtr	Link dimensions		Work load	Break load	Weight
		A	B	Gr95		
[mm]		[mm]	[mm]	[t]	[t]	[kg/m]
10	25.0	36.0	40.0	-	15.3	1.98
13	19.2	46.8	52.0	-	25.8	3.35
14	17.8	50.4	56.0	-	29.8	3.88
16	15.6	57.6	64.0	-	39.1	5.07
19	13.2	68.4	76.0	-	54.9	7.15
22	11.4	79.2	88.0	-	73.7	9.59



Long link trawling chain

Gr9

Chain dia	No of links per mtr	Link dimensions		Work load	Break load	Weight
		A	B	Gr95		
[mm]		[mm]	[mm]	[t]	[t]	[kg/m]
9.0	15.8	34.0	63.0	-	11.7	1.36
11.2	15.8	42.4	63.0	-	18.2	2.24
13.0	12.5	52.0	80.0	-	24.3	2.98
16.0	10.0	58.0	100.0	-	36.9	4.39
20.0	10.4	71.0	96.0	-	57.7	7.37





Terminology

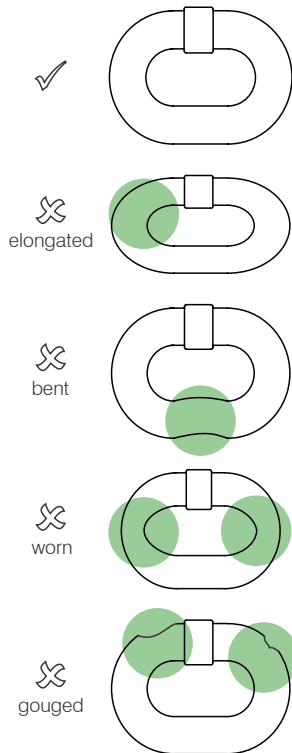
- breaking force - when a chain is subjected to a static tensile test, the maximum force that the chain can withstand, before destruction.
- calibrated chain - when a chain is intended for use as load chains in chain hoists and similar devices the links are made to close-tolerance.
- chain size - nominal diameter of the steel wire or bar from which a chain is made.
- chemical composition - chemicals added to steel to stabilize against strain-age embrittlement.
- factor of safety - allowance stresses made for possible accidental loads of high magnitude, in order to provide a margin of safety, and to protect against failure from unpredictable causes.
- grade of chain - number that represents the minimum mean stress at failure of a chain.
 - G4 - 400 Mpa
 - G8 - 800 Mpa
 - G100 - 1000 Mpa
- pitch - inside length of a chain link
- processing - treatment of a chain after it has been welded
- total ultimate elongation - total extension of a measured length of chain at the actual breaking force, expressed as a percentage increase of the original measured length.
- working load limit - maximum mass that can be safely handled at a specified position and under specific conditions.

ALWAYS:

- inspect chain before use and before placing into storage.
- ensure the links are not twisted or bent and there are no nicks or gouges, excessive wear at the bearing points or stretched links.

NEVER:

- use chain that shows signs of damage.
- pass chain over sharp edges as this can cause the link to bend and break below the specified breaking force.
- use grades other than G8 or G10 for lifting slings.
- weld or heat G8 or G10 chains as this can cause the links to harden and become brittle.
- tie knots in chain as this can reduce the working load.



Basis of grade symbols for lifting chains

- fine tolerance chain used on lifting machines
- medium tolerance chain used for chain slings

	Grade		Mean stress at the specified minimum BL N/mm ²
	fine tolerance	medium tolerance	
M		4	400
P		5	500
S		6	630
T		8	800
V		10	1000

Local standards

- SANS189 - short-link steel chain (close-tolerance) for lifting purposes.
- SANS251 - long-link and extra-long-link medium tolerance steel chains for general purposes.
- SANS1592 - short-link steel chain (close-tolerance) for lifting appliances.

International standards

- EN818-2 - short-link chain for lifting purposes (medium tolerance) grade 8.
- EN818-3 - short-link chain for lifting purposes (medium tolerance) grade 4.
- DIN763 - tested, non-calibrated, long-link round steel chains.
- DIN766 - round steel link chains, grade 3, quenched and tempered.

Requirements for working load limit and elongation

Temperature of chain [°C]	Reduction of working load limit		Standard	Minimum elongation required		
	G8	G10		G4	G8	G10
-40 - 200	0%	0%	EN818-2 EN818-3	25%	20%	20%
+200 - 300	10%	do not use	SANS189	25%	20%	20%
+300 - 400	25%	do not use	SANS251	17%	17%	-
above 400	do not use	do not use	SANS1592	-	15%	15%

