CHAINS

PRODUCTs CATALOGUE

CHAINS

LIFTING CHAINS & TRANSPORT CHAINS & COMMERCIAL CHAINS

2018 EDITION BY Z2LIFTING

ZeLiFTING

COMPANY PROFILE

HANGZHOU ZHEZHONG CHAIN CO.,LTD

is a factory, who focuses on manufacturing G80 and higher level welded lifting chain since 2006. Our main products are Grade 80 and 100 lifting chain based on EN818-2 standard and load chain, based on ISO3077, GB/T20947 standard for chain hoists.

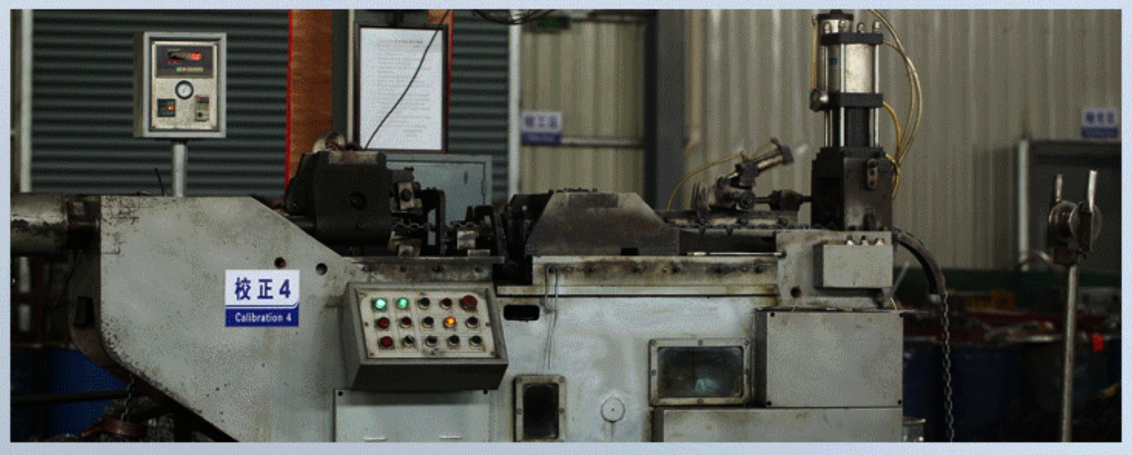
Our workshop covering is more than 16,650 square meters, and we have more than 70 employees.

We have the most advanced automatic machines and senior engineering group that all had decades's experience. Based on the good machines, skilled engineers, strict quality control systems and excellent management group, Z2 CHAIN is producing and supplying the high quality chains.

And now in our workshop, we have 13 production lines which are manufacturing most of popular dia. range of chains.

Z2 design team had manufactured more than 7 kinds of dedicated devices so far, like Calibrating Machine, Proof Test Machine, automatic Chain Stacking Machine, automatic Chain Marking Machine, High Precision Calibrating Machine, automatic Chain Measuring Machine, automatic Chain Cutter etc. And all the self-development machines had passed the national patent certification.

These devices are popular supplying to domestic and international chain manufacturers, which helps chain manufacturing to efficiency and qualify. And its final signification is labour saving and runing correct during process, which is a whole solution of welded link chain manufacturer.



LIFTING CHAIN

COMPLIES WITH EN818-2, AS2321

FOR T8 & V10 SHORT LINK CHAIN

(Dia. Range From 4mm to 23mm)

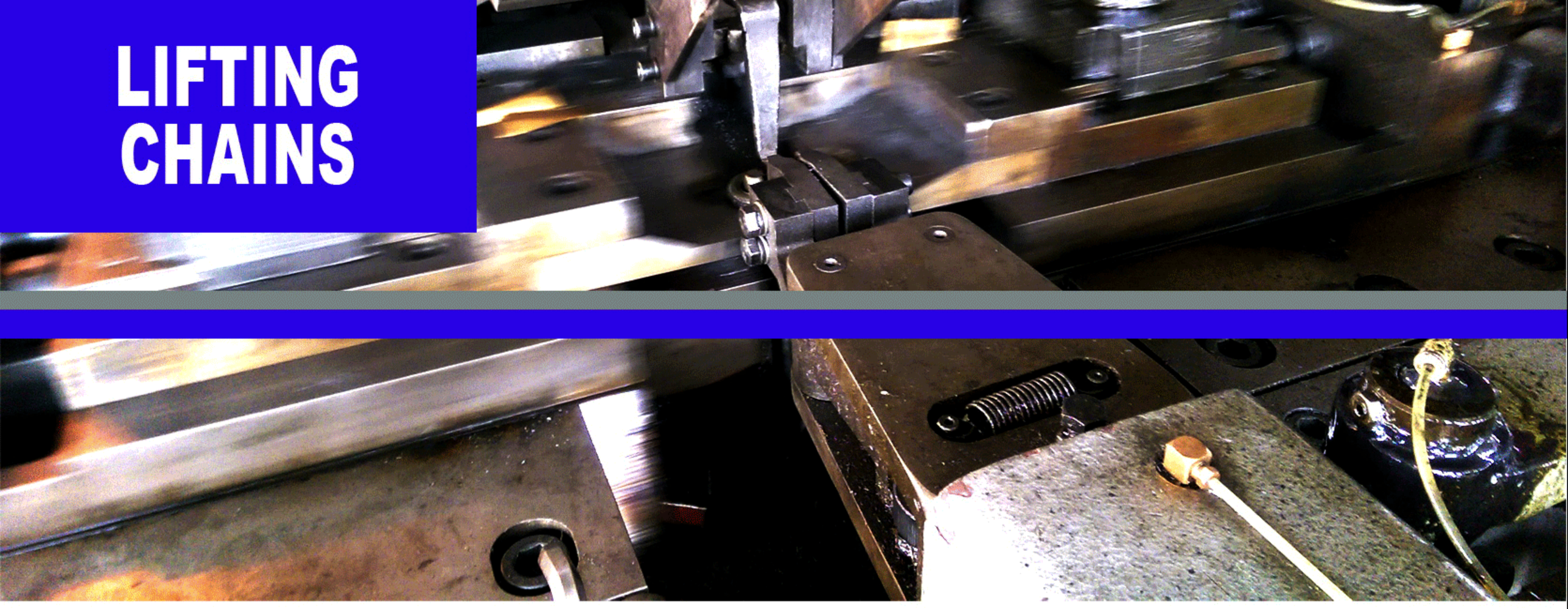
DIMENSIONS IN MILLIMETERS

PRODUCT CODE	NOMINAL SIZE Dn	MATERIAL DIAMETER TOLERANCE	WELD DIAMETER Ds MAX	PITCH Pn	PITCH P MAX	PITCH P MIN	INTERNAL WIDTH AWAY FROM WELD W1 MIN	EXTERNAL WIDTH OVER THE WELD W2 MAX
Z818-2C04	4	±0.16	4.4	12	12.4	11.6	5.2	14.8
Z818-2C05	5	±0.2	5.5	15	15.5	14.6	6.5	18.5
Z818-2C06	6	±0.24	6.6	18	18.5	17.5	7.8	22.2
Z818-2C07	7	±0.28	7.7	21	21.6	20.4	9.1	25.9
Z818-2C08	8	±0.32	8.8	24	24.7	23.3	10.4	29.6
Z818-2C10	10	±0.4	11	30	30.9	29.1	13	37
Z818-2C13	13	±0.52	14.3	39	40.2	37.8	16.9	48.1
Z818-2C16	16	±0.64	17.6	48	49.4	46.6	20.8	59.2
Z818-2C18	18	±0.9	19.8	54	55.6	52.4	23.4	66.6
Z818-2C19	19	±1	20.9	57	58.7	55.3	24.7	70.3
Z818-2C20	20	±1	22	60	61.8	58.2	26	74
Z818-2C22	22	±1.1	24.2	66	68	64	28.6	81.4
Z818-2C23	23	±1.2	25.3	69	71.1	66.9	29.9	85.1

杭州浙中链条有限公司

Hangzhou ZheZhong Chain Co.,Ltd

LIFTING CHAINS

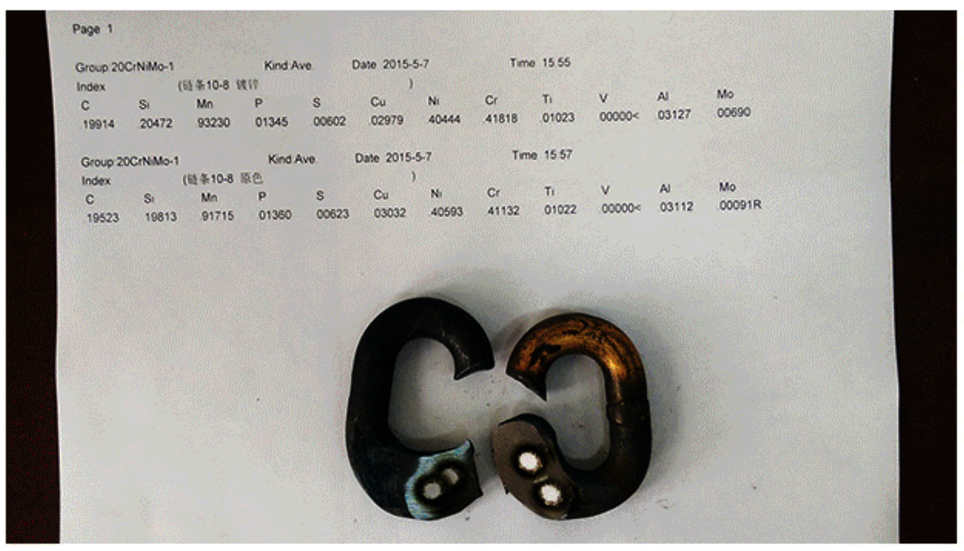


WORKING LOAD LIMITS & TEST REQUIREMENTS

PRODUCT CODE	NOMINAL SIZE Dn mm	WORKING LOAD LIMIT WLL t T8/V10	MANUFACTURING PROOF FORCE MPF kN T8/V10	BREAKING FORCE BF kN MIN T8/V10	BEND DEFLECTION f mm MIN	PACK IN DRUM meter
Z818-2C04	4	0.5/0.63	12.6/15.7	20.1/25.1	3.2	1800
Z818-2C05	5	0.8/1.0	19.6/24.5	31.4/39.3	4	1200
Z818-2C06	6	1.0/1.4	28.3/35.3	45.2/56.5	4.8	800
Z818-2C07	7	1.5/1.9	38.5/48.1	61.6/77.0	5.6	600
Z818-2C08	8	2/2.5	50.3/62.8	80.4/101	6.4	400
Z818-2C10	10	3.2/4.0	78.5/98.1	126/157	8	300
Z818-2C13	13	5.3/6.7	133/166	212/265	10	200
Z818-2C16	16	8/10	201/251	322/402	13	100
Z818-2C18	18	10/12.5	254/318	407/509	14	80
Z818-2C19	19	11.5/14	284/354	454/567	15	70
Z818-2C20	20	12.5/16	314/393	503/628	16	60
Z818-2C22	22	15/19	380/475	608/760	18	50
Z818-2C23	23	16/21	415/519	665/831	18	40

Material

The type of steel has been fully killed and fine-grained and heat-treated as hardened and tempered.
The steel contain alloying elements in sufficient quantities according to EN818-2 standard, Nickel 0.40% minimum, at least one of the Chromium 0.40% minimum or Molybdenum 0.15% minimum, and Aluminium 0.025% minimum to 0.05% Maximum and no more Sulphur and Phosphorous content than the limits which is 0.025% maximum for T8 and V10 lifting chains. (V400 refer to grade V10 Chain that has minumum elements of Ni 0.70%, Cr 0.50% and Mo 0.30% as requirements of AS 2321:2014 standard.)
All material come from the steel manufactory will be inspected and tested. Surface Inspection, Hardeness Check, Stress Test and Elements Analysis have to be processed in manufactory quality control systems.
Defect materials will be rejected and replaced.
Economic type of steel available upon request.

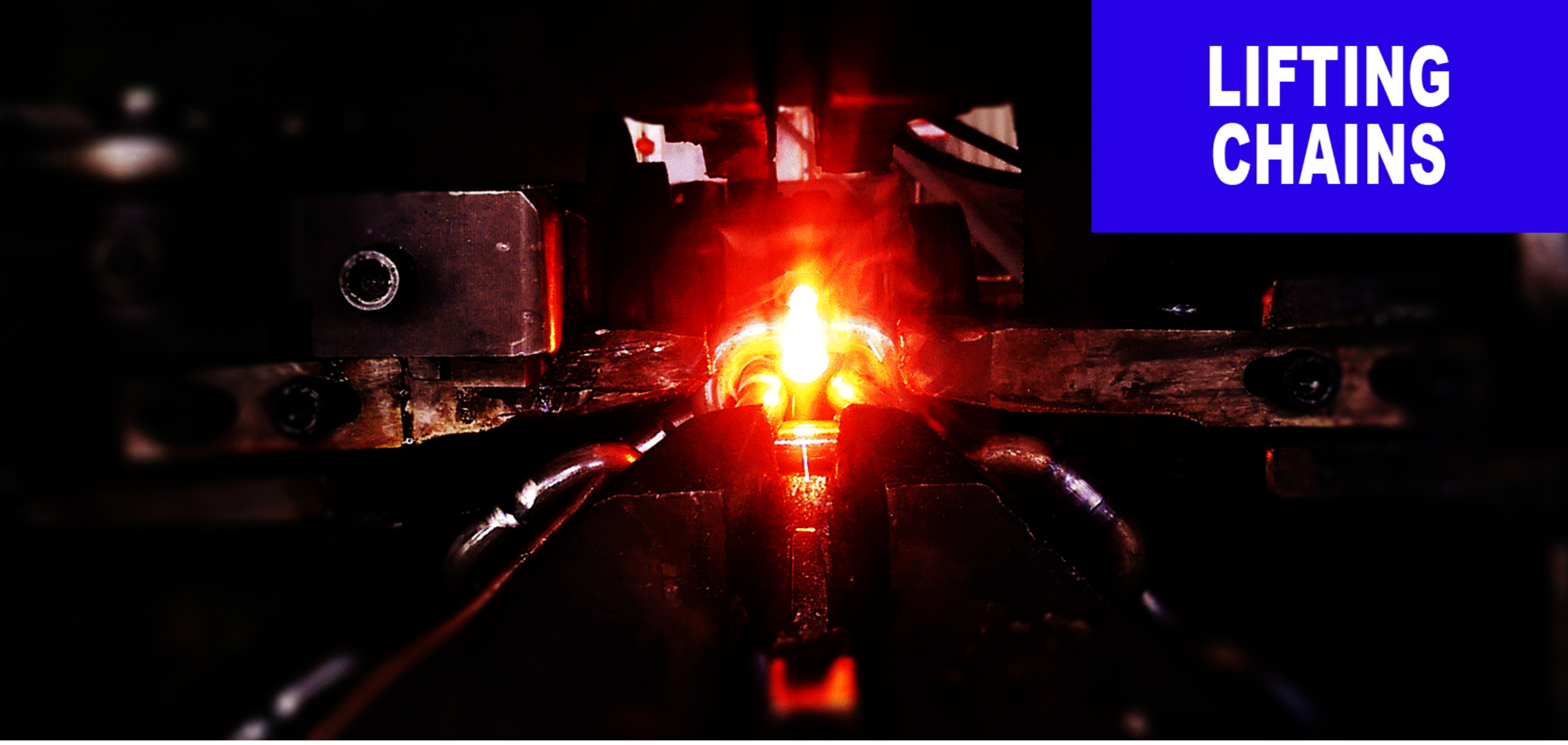

Page 1

Group 20CrNiMo-1 Kind Ave Date 2015-5-7 Time 15:55
Index (链条10-8 镀锌)

C	Si	Mn	P	S	Cu	Ni	Cr	Ti	V	Al	Mo
19914	20472	93230	01345	00602	02979	40444	41818	01023	00000<	03127	00690

Group 20CrNiMo-1 Kind Ave Date 2015-5-7 Time 15:57
Index (链条10-8 原色)

C	Si	Mn	P	S	Cu	Ni	Cr	Ti	V	Al	Mo
19523	19813	91715	01360	00623	03032	40593	41132	01022	00000<	03112	00091R



LIFTING CHAINS

FORMING

Forming

The steel will be formed to the required dimensions, as the specified in EN818-2 (or AS 2321:2014). There is a V notche on the link which shall be in the centre of the weld branch. The links shall not show fissures, notches or similar faults that are detrimental to the chain after welded.

Z2 Self-design bending machine series for 3mm to 25mm chain. All the machines are highly automatic, effective and stable. Adopt PCC control system with automatic-stop function when encounter fault, Reasonable muld design, Low maintenance cost, Efficient production.Z2 bending machine has been exported to Germany, Italy, Japan, India, Romania and etc. Available design according to customer requirements.
Type : HHB-6 HHB-10 HHB-16 HHB-20 HHB-25

WELDING

Welding

The weld was produced using the resistance butt processes and positioned in the centre of one leg of the link. It was smoothly finished all round. The links and welds shall not show fissures, notches or similar faults that are detrimental to the chain after welded. The diamater of the material at the weld was nowhere exceed the dimenstions requirements and not.less than the diameter of the material of the link.
For smooth welded chain, fins caused by welding will be removed and the weld will be smoothly finished all round.
The positioning of the weld at the centre of the straight barrel and the tolerances imposed on protrusions at the weld will provide the required clearances.

Z2 Self-design welding machine series for 3mm to 25mm chain. Adopt German advanced technology. Use resistance butt welding process to weld. Automatically accomplish the transport, spin,weld, forge, get rid of the burr and other procedures. With PCC control technology. Available design according to customer requirements.
Type : HHB-6 HHB-10 HHB-16 HHB-20 HHB-25

CALIBRATING

Calibrating

All links has been calibrated before heat treatment (Also calibrated again if necessary for strict requirements of dimensions tolerence). This is for sure that the chain will be satisfied for making and safe using chain slings.

Z2 self-designed and made calibration machine has a huge continuous production from size 4mm to 16mm. Each Performance indicators and Technical data can reach requirement. Low maintenance cost; Automatic-stop when link breaks; One key to start automatically; Pneumatic marking system which can also mark on two links at the same time; Add Self-weight function for the machine to increase the operational stability. Available design according to customer requirements.
Type : z2-07 z2-10 z2-18

LIFTING CHAINS

HEAT TREATMENT

Heat Treatment

All the chain has been intermediate-frequency heat treated, it was hardened from a temperature above the AC3 point and tempered before being subjected to the manufacturing proof force. The tempering temperature was at least 400℃.
The termpering conditions was at least as effective as a temperature of 400℃ maintained for a period of 1 hour. When proposed for verification, sample chains have to be tested after they have been reheated to and maintained for 1 hour at 400℃ and then cooled to room temperature.
(AS 2321:2014 required the chain to be tempered in temperature at least 200℃ for V200 and 380℃ for V400.)

PROOF TEST

Proof Testing

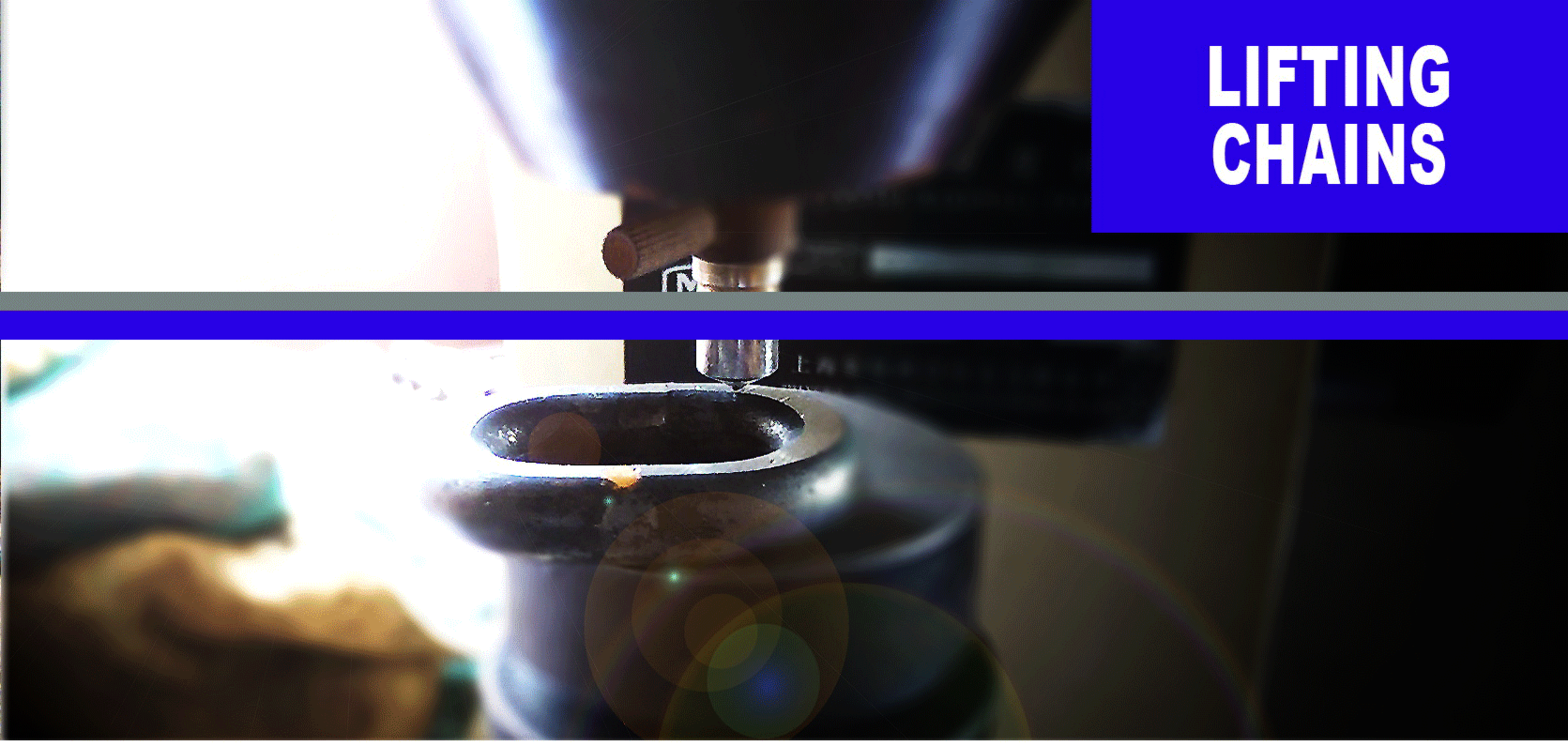
All the chain has been subjected to the manufacturing proof force test specified as standard.requirements, without sustaining damage that could affect its integrity. Any link has been inserted after the application of the manufacturing proof force, then the portion of chain affected by such processing will then be again subjected to the manufacturing proof test and then re-examined.

Z2 self-designed and made proof test machine has a huge continuous production from size 4mm to 16mm. Each Performance indicators and Technical data can reach requirement. Low maintenance cost; Automatic-stop when link breaks; One key to start automatically; Pneumatic marking system which can also mark on two links at the same time; Add Self-weight function for the machine to increase the operational stability. Available design according to customer requirements.
Type : z2-07 z2-10 z2-18

EXAMINATION

Visual Examination

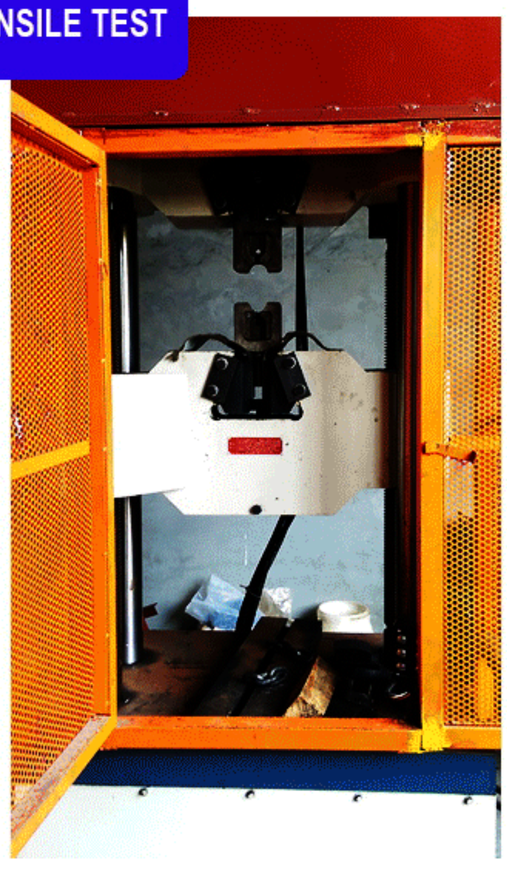
After the manufacturing proof test, the chain will be inspected by a competent person, under suitable lighting and appropriate ergonomic conditions to ensure the links and welds are free from fissures, notches or similar defects that are detrimental to the chain.



Material (Chamical Anaysis, Tensile & Hardness Test)

These anaysis / tests shall be processed and records from every batch of row materials.

TENSILE TEST



Breaking Test & Elongation Measurement

The Tensile test was carried out using an autographic recorder to produce a force/extension diagram.
Three times of tensile tests will be carried out for every lot:
First sampled happend after chain welded and before heat treatment, which tensile strength shall be equal to the strength of heat-treated material as hardened and tempered. For sure that the chain welded will be satisfactory.
The second sampled after heat-treated. Their breaking force shall comply with the acceptance criteria specified in EN818 or AS2321. And re-test shall be applied if one failed. The final sampled will be carried out under “finished” condition. A consist of a mixnimum five links will be sampled from each lot for Tensile test and Elongation measurement. The breaking force shall comply with the acceptance criteria specified in EN818 or AS2321. And Total ultimate elongation shall be based on the total extension at fracture, shown in the force/extension diagram, which shall be 20% in minimum or Plastic elongation shall be 17% in munimum for T8 chain and 20% in minimum for V10 chain.
The re-test shall be applied if one sample fail to individual requirements of the standard, two further samples shal be selected from the same lot. When a re-test is carried out the lot shall be deemed to conform to the individual test requirements only if both the additional tests are satisfactory.

LIFTING CHAINS

HARDNESS CHECK

Hardness Check

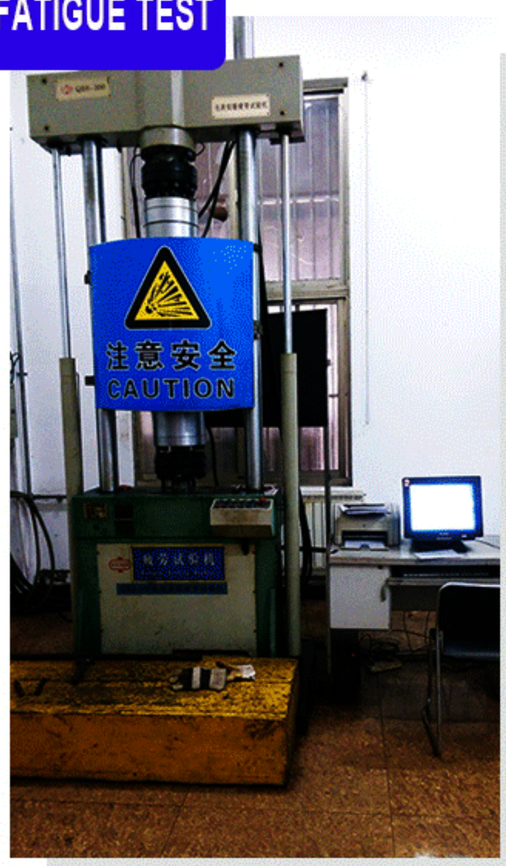
The Hardness is a very important data which can indicated the machinery purposes of the material. It is one of indicater of the heat treatment quality control. Six simmetrical points shall be checked and recorded from each single link.

Bend Test

The minimum bend deflection of sample links of chain in the finished condition shall be as specified in the part of EN 818 or AS 2321:2014 for particular type and grade of chain.
Each single link shall be bent in a shock-free manner as shown in right picture.
The bend test equipment inculded a angle of the V-block shall be 90° and the diameter of the mandrel shall be twice that of the norminal size of chain (Dn) to be tested.

BEND TEST

FATIGUE TEST



Fatigue Test

Samples of the chain T8/V10 shall be fatigue tested under working load at least 20000 cycles. The maximum force applied during each cycle shall be equivalent to 1.5 times the working load limit. The minimum force in each cycle shall be positive and less than ot equal to 3 kN. The frequency of force applications shall be not greater than 25 Hz.

LIFTING CHAINS

LIFTING CHAIN

FOR T8 SHORT LINK CHAIN

(Dia. Range From 25mm to 45mm)

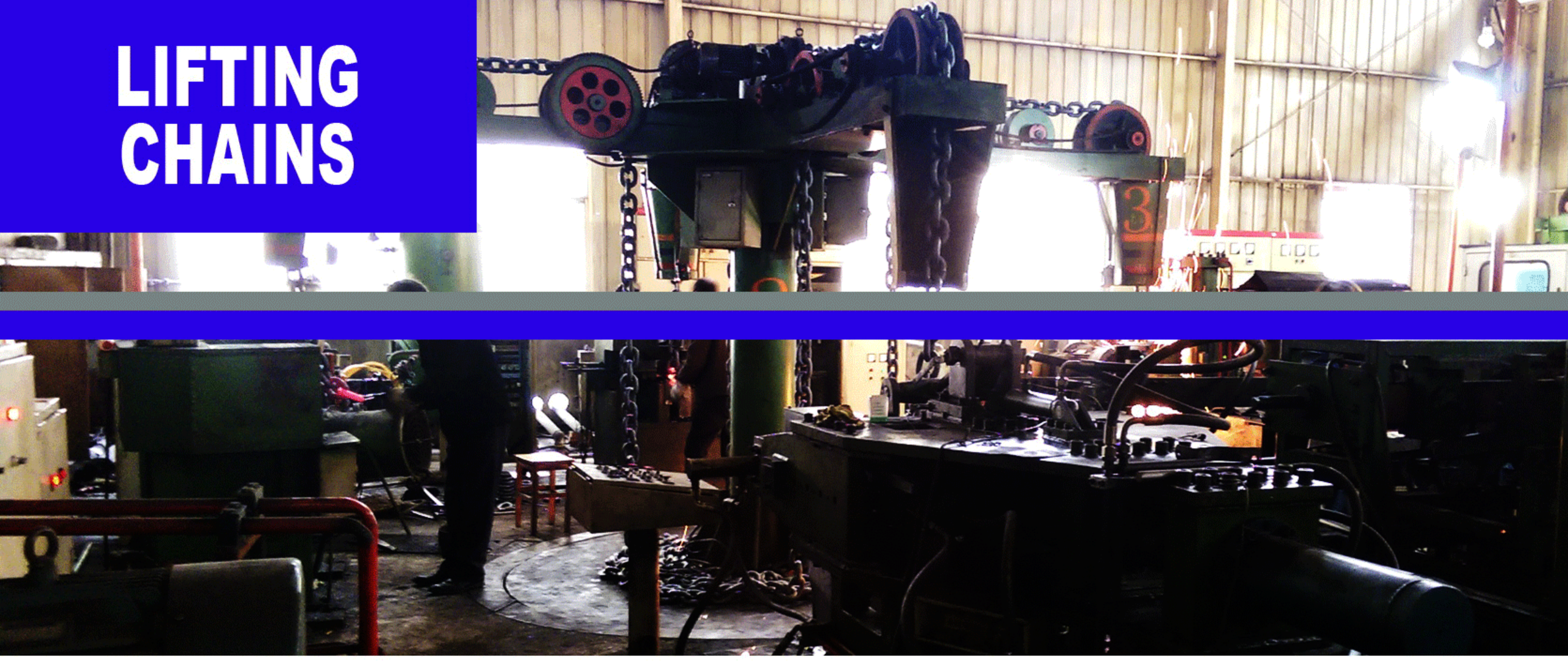
DIMENSIONS IN MILLIMETERS

PRODUCT CODE	NOMINAL SIZE Dn	MATERIAL DIAMETER TOLERANCE	WELD DIAMETER Ds MAX	PITCH Pn	PITCH P MAX	PITCH P MIN	INTERNAL WIDTH AWAY FROM WELD W1 MIN	EXTERNAL WIDTH OVER THE WELD W2 MAX
Z818-2C25	25	±1.3	27.5	75	77.3	72.8	32.5	92.5
Z818-2C26	26	±1.3	28.6	78	80.3	75.7	33.8	96.2
Z818-2C28	28	±1.4	30.8	84	86.5	81.5	36.4	104
Z818-2C32	32	±1.6	35.2	96	98.9	93.1	41.6	118
Z818-2C36	36	±1.8	39.6	108	111	105	46.8	133
Z818-2C40	40	±2.0	44	120	123.6	116.4	52	148
Z818-2C45	45	±2.25	49.5	135	139	131	58.5	167

WORKING LOAD LIMITS & TEST REQUIREMENTS

PRODUCT CODE	NOMINAL SIZE Dn mm	WORKING LOAD LIMIT WLL t T8/V10	MANUFACTURING PROOF FORCE MPF kN T8/V10	BREAKING FORCE BF kN MIN T8/V10	BEND DEFLECTION f mm MIN
Z818-2C25	25	20	491	785	20
Z818-2C26	26	21.2	531	849	21
Z818-2C28	28	25	616	985	22
Z818-2C32	32	31.5	804	1290	26
Z818-2C36	36	40	1020	1630	29
Z818-2C40	40	50	1260	2010	32
Z818-2C45	45	63	1590	2540	36

LIFTING CHAINS



Material

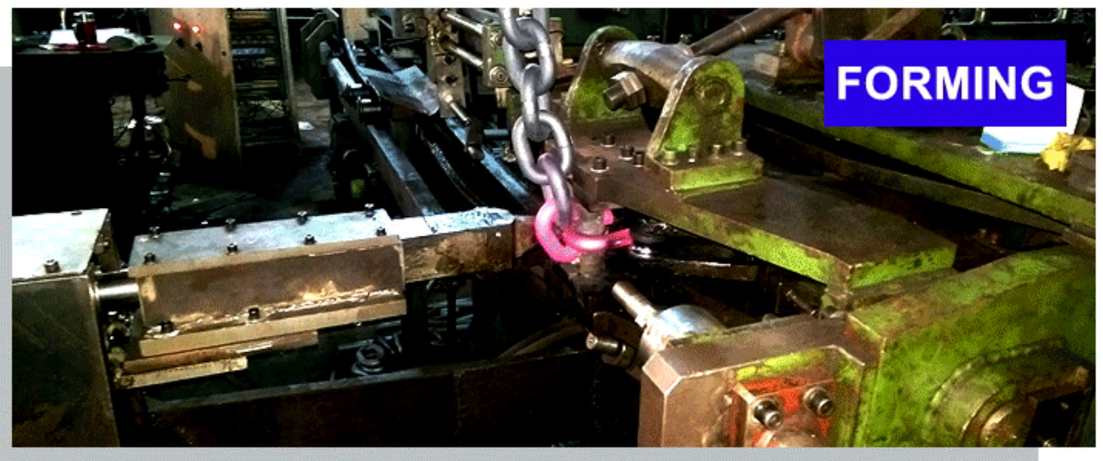
The type of steel has been fully killed and fine-grained and heat-treated as hardened and tempered.
The steel contain alloying elements in sufficient quantities according to EN818-2 standard, Nickel 0.40% minimum, at least one of the Chromium 0.40% minimum or Molybdenum 0.15% minimum, and Aluminium 0.025% minimum to 0.05% Maximum and no more Sulphur and Phosphorous content than the limits which is 0.025% maximum for T8 and V10 lifting chains. (V400 refer to grade V10 Chain that has minumum elements of Ni 0.70%, Cr 0.50% and Mo 0.30% as requirements of AS 2321:2014 standard.)
Normally, we use 23MnCrNiMo54 or other type of steel which meet the intent of the standard.
Economic type of steel available upon request.

Heat Treatment

All the chain has been intermediate-frequency heat treated, it was hardened from a temperature above the AC3 point and tempered before being subjected to the manufacturing proof force. The tempering temperature was at least 400℃. The termpering conditions was at least as effective as a temperature of 400℃ maintained for a period of 1 hour. When proposed for verification, sample chains have to be tested after they have been reheated to and maintained for 1 hour at 400℃ and then cooled to room temperature.(AS 2321:2014 required the chain to be tempered in temperature at least 200℃ for V200 and 380℃ for V400.)

Forming & Welding

The steel has to be heated to a red form, then forming and welding has been processed before the steel cool down.
The weld was produced using flash butt processes and positioned in the centre of one leng of the link. It was smoothly finished all round. The diamater of the material at the weld was nowhere exceed the dimenstions requirements.



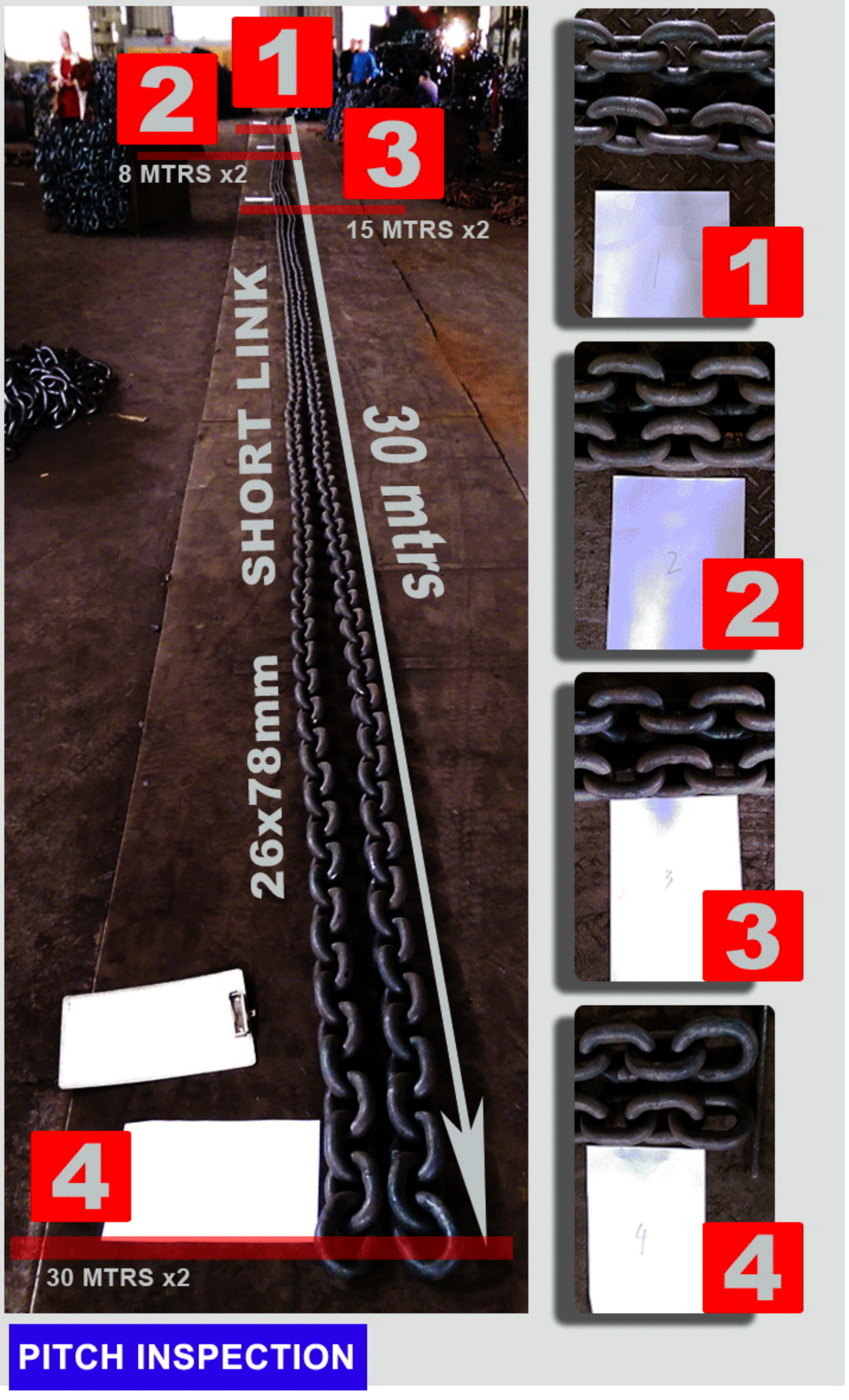
LIFTING CHAINS

Calibrating

All links has been calibrated before heat treatment (Also calibrated again if necessary for strict requirements of dimensions tolerence). This is for sure that the chain will be satisfied for making and safe using chain slings.

Proof Testing

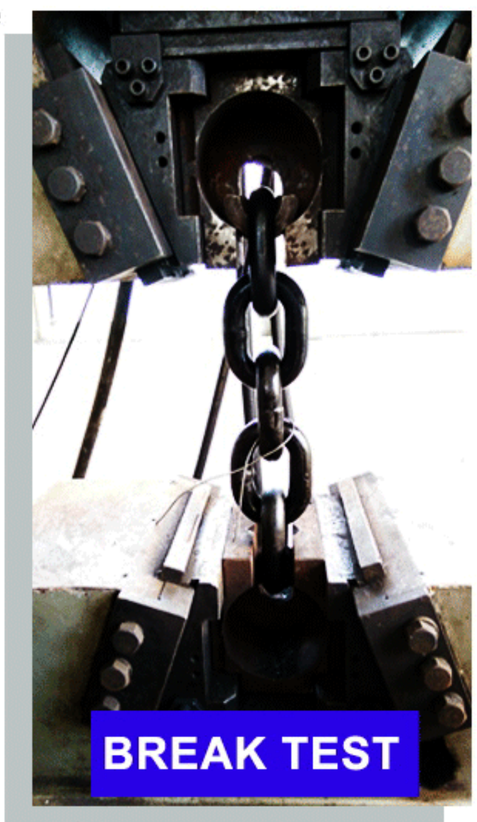
All the chain has been subjected to the manufacturing proof force test specified as standard.requirements, without sustaining damage that could affect its integrity. After the manufacturing proof force test, the chain was inspected, under suitable lighting and appropriate ergonomic conditions to ensure the links and welds are free from fissures, notches or similar defects that are detrimental to the chain.
Any link has been inserted after the application of the manufacturing proof force, then the portion of chain affected by such processing will then be again subjected to the manufacturing proof test and then re-examined.



PITCH INSPECTION

Breaking Force & Total Elongation

A breaking force and total ultimate elongation test has been undertaken on one tensile test sample for every lot, which breaking force shall be at least equal to the minimum requirements and total ultimate elongation shall not be less than 20%.
If one failed, two more samples from same lot shall be re- tested and both additional tests shall be satisfactory.
The chain shall not be broken at welded.
The individual test report with extension diagram alwasy be supplied.



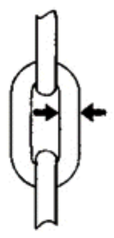
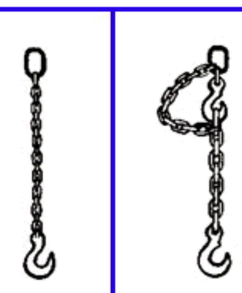
200 tonnes tensile test machine

Bending Test

Single link samples shall withstand the minimum deflection and free visible defects.

CHAIN SLING

ALLOY GRADE 80 (T8) CHAIN SLING WORKING LOAD LIMITS (WLL)

CHAIN SIZE (mm)	WORKING LOAD LIMIT UNDER GENERAL CONDITION OF USE (t)												
	SINGLE LEG SLINGS			SLINGS OF 2, 3 OR 4 LEGS						ENDLESS SLINGS			
													
	Straight or adjustable slings with no deration	Adjustable sling with deration	Reeved sling	Straight sling			Reeved sling			Basket sling			Reeved sling
Loading Factors	x1	x0.75	x0.75	x1.73	x1.41	x1	x1.3	x1.06	x0.75	x1.3	x1.06	x0.75	x1.5
6	1.1	0.8	0.8	1.9	1.6	1.1	1.5	1.2	0.8	1.5	1.2	0.8	1.7
8	2.0	1.5	1.5	3.5	2.8	2.0	2.6	2.1	1.5	2.6	2.1	1.5	3.0
10	3.2	2.4	2.4	5.5	4.5	3.2	4.1	3.4	2.4	4.1	3.4	2.4	4.8
13	5.3	4.0	4.0	9.2	7.5	5.3	6.9	5.6	4.0	6.9	5.6	4.0	8.0
16	8.0	6.0	6.0	13.8	11.3	8.0	10.4	8.5	6.0	10.4	8.5	6.0	12.0
19	11.2	8.4	8.4	19.4	15.8	11.2	14.6	11.9	8.4	14.6	11.9	8.4	16.8
20	12.5	9.4	9.4	21.6	17.6	12.5	16.3	13.3	9.4	16.3	13.3	9.4	18.8
22	15.0	11.3	11.3	26.0	21.2	15.0	19.5	15.9	11.3	19.5	15.9	11.3	22.5
26	21.2	15.9	15.9	36.7	29.9	21.2	27.6	22.5	15.9	27.6	22.5	15.9	31.8
32	31.5	23.6	23.6	54.5	44.4	31.5	41.0	33.5	23.6	41.0	33.4	23.6	47.3

Safety factory 4 to 1 as standard

Single leg Chain Sling c/w Oblong Links

Single leg Chain Sling c/w Self Locking Hook & Shortener

Four Leg Chain Sling with Sling hooks

Safety Tag

Two Leg Chain Sling c/w Self Locking Hooks & Shorteners

Endless Chain Sling

Two Leg Endless Chain Sling

- We can manufacture chain slings to your requirements in any configuration and length.
- All slings are manufactured, tested and certified to **EN / AS** Standard requirements.
- WLL tags are fitted to all of our chain slings.

CHAIN SLING

CONDITIONS OF USE

Heat treatment: Grade T chain slings shall not be heat treated subsequent to the completion of thier manufacture, except by the manufacturer of the component.

Galvanizing: Grade T chainslings shall not be hot-dip galvanised or electroplated, except by the manufacturer of the component, as these processes may be detrimental to the sling.

Corrosive environments: Grade T chain slings and fittings should not be used in acid of other corrosive environments, due to the possibility of hydrogen embrittlement and corrosion.

Temperature effects: Temperatures at which the sling is used could affect it's stength. Slings should not be used at temperatures colder than minus 10°C, prior to checking with the manufacturer to ensure it's stability at such a temperature. Under no circumstances should Grade T chain slings be used if it's temperature has exceeded 400°C. Any sling that has been exposed to a temperature exceeding 400°C should be immediatly withdrawn from service and destroyed.

The strength of Grade T chain is adversely affected by excessively elevated temperatures. It may be difficult to determine in practice the actual temperature involved, but underestimation must be avoided. Where subjected to elevated temperatures up to 400°C, the following reductions to the WLL will apply:

Temperature (°C)	Reduction of WLL (%)
> -10 < 200	Nill
> 200 < 300	10
>300 < 400	25

RECOMMENDATIONS

- Ensure the sling has a metal tag showing the WLL for it's varous configuations.
- Packing (such as wooden blocks) may be required where a chain comes into contact with a load, to protect the chain and the load from damage. Sharp corners of metal or other hard materials can bend of damage chain links.
- Where one of more legs of a multi-leg sling are not being used, ensure they are hooked back to the master link or intermediate link during operations.
- Chain slings shall not be subject to shock loading. When loads are accelerated and decelerated suddenly, high dynamic forces occur, which increase stresses in the chain. Such situations arise from snatch of shock loading (eg. from not taking up the slack chain before starting to lift or by the impact of arresting falling loads).
- When landing, avoid the possibility of crushing or trapping the sling by ensuring the load does not land on the sling. Suitable damage should not be used to enable the sling to be readily removed by hand.

INSPECTION

In-service: Prior to each use, chain slings shall be visually inspected. Ensure that slings are free of any significant damage or wear and a WLL tag is fitted. If any defects are detected, the sling shall immediatly be withdrawn from service.

Periodic: It is important for slings to be periodically inspected by a competant person, and the following apply:

- Sling inspections shall be undertaken in an adequately lit location.
- Where necessary, the sling should be cleaned before it is inspected.
- Every individual chain link should be inspected for any signs of wear, nicks, cracks, gouging, twisting, stretching of lack of articulation between the links. Particular attention should be given to links that have been reeved, due to the possibility of bending or twisting of the engaged link.
- Any worn components should be measured to determine the degree of wear, which shall not exceed that allowed. Wear may be tolerated until the thickness of any worn section has been reduced by 10% of the nominal section in any plane. Wear by contact with other objects usually occurs on the outside of the straight portions of the links where it is easily seen and measured. Wear between adjoining links is hidden. The chain should be slack and adjoining links rotated to expose the inner end of each link.
- Upper and lower terminal fittings should be inspected for any signs of wear at their load-bearing points, nicks, cracks, gouging, stretching or distortion.
- Connecting devices shall be inspected for any signs of wear at their load-bearing points, any excessive play of the load pin within the body halves, nicks, cracks, gouging, distortion of any impaired rotation of the body halves around the load pin.

A sling inspected record should be provided for each sling. Regulatory requirements may require results to be entered on a sling inspection record.

ASSEMBLY & TEST

CHAIN SLING ASSEMBLY SERVICE

We offer a comprehensive assembly service on chain sling lifting equipment accordance with relevant international standard or customer's available requests.

LOAD CELL

Z2 test bed will be always calibrated at regular intervals and non-scheduled if necessary, to make sure the test bed to be always correct.

TEST SERVCE & CERTIFICATION

We offer a complete testing / certification service for the chain slings. Tests are performed in accordance with relevant international standards, with test facilities of up to 50 tonne available.

TESTING TAGS

Chain Sling working load tags are availbale for single and multi-leg sling in sizes 6mm to 32mm. Aluminium tags for working load limit, identification or other purposes. Also available in materials upon request.

GRADE 70 TRANSPORT CHAIN (AS4344)

Grade 70 Tansport chain and fitting, gold coloured. Complies to AS4344

99ASGH

57ASCLL

PRODUCT CODE	Chain Size mm	Lashing Cap. tonnes	S mm	R mm	F mm	Links per metre	Metres per 100kg
Z4344C06-7	6	2.3	6.0	18.0	22.0	55.0	116.0
Z4344C08-7	8	3.8	8.0	23.8	27.0	42.0	68.9
Z4344C10-7	10	6.0	10.0	29.6	34.3	33.8	45.5
Z4344C13-7	13	9.0	13.0	38.0	42.5	26.3	29.6

LOAD RESTRAINT KIT

LASHING CAPACITY: 3800KG

9mtrs (effective length) x 8mm Grade 70 transport chain in Zinc-Dichromatic (gold) finish, complete with Grade 70 Clevis Cradle type Grab Hooks at each end, contained in a handy carry box.
Test Certificate included (Complies to AS/NZS 4344)

TIE DOWN CHAIN

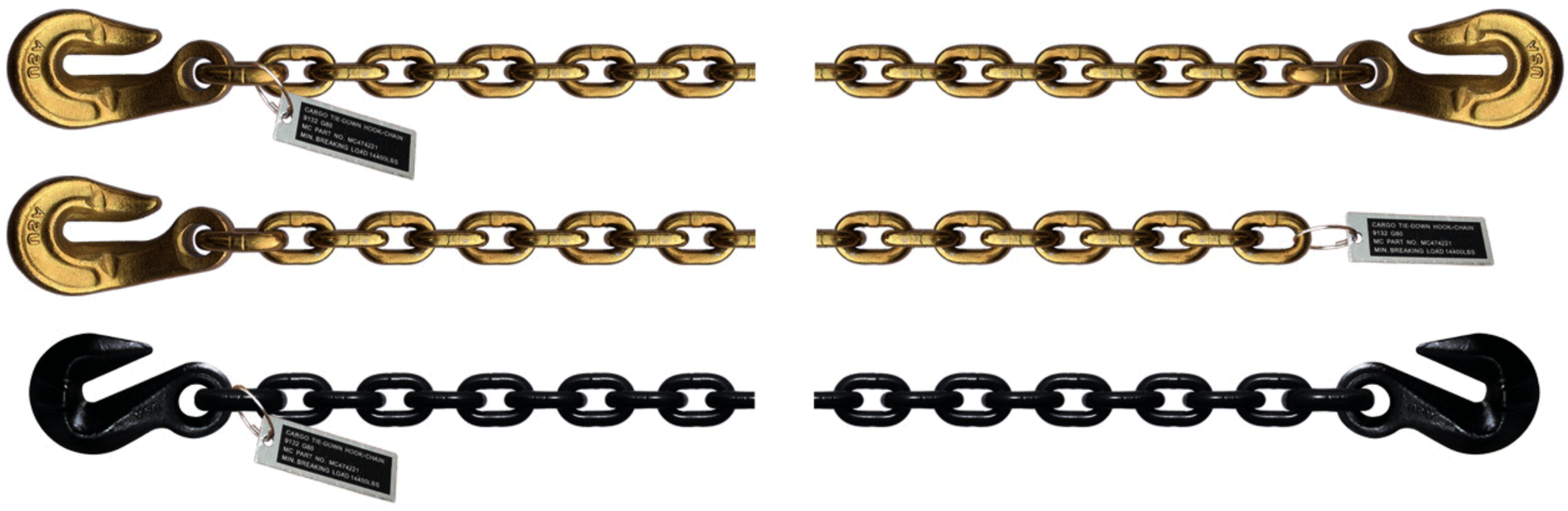
CARGO TIE DOWN HOOK CHAIN

- Z2 grade 80 used for transport systems of the type whereby trolleys or such are driven, via a drive pin provided on such trolleys, by a carrier element provided on the chain with is drawn in a rail provided in the transport floor
- 2.5 times of Working Load Limit proof tested, with safety factor 4 to 1
- Regular Marks(stamp): ”G80 ZM07” Grade marks +ID Marks + Batch No.
- Designation to be used when ordering:

100LGTH x 6m x ZTDC7-8B C/W 2 x 85SGH78-8E

100 lengths x 6mtrs effective length x ZTDC series chain size 7.1mm - grade 80

Blacken with 85SGH series Shorten Grab Hook size 7/8-8 eye type at each end



PRODUCT CODE	SIZE mm	WLL Ton	PROOF LOAD kN	BREAKING LOAD kN	CHAIN SIZE mm	ENLARGE LINK SIZE mm
ZTDC7-8	1/4’’	1.5	38.5	61.6	7.1X21	8X24
ZTDC8-8	5/16’’	2	50.3	80.4	8X24	10X30
ZTDC10-8	3/8’’	3.15	78.5	126	10X30	13X39
ZTDC13-8	1/2’’	5.3	133	212	13X39	16X48
ZTDC6-8	5/8’’	8	201	322	16X48	18X54

CHAIN TAILS - GRADE 70

DIMENSIONS

PRODUCT CODE	RING SIZE IN	CONNECT LINK SIZE IN	CHAIN LINK SIZE IN*LINKS	HOOK SIZE IN	WORKING LENGTH IN	M.B.S LBS	WEIGHT KG	PACK PCS/BAG
Z18R2C8H8	2	3/8	5/16*11	5/16	18	10000	1.2	50
Z18R2C8H10	2	3/8	5/16*11	3/8	18	10000	1.2	50
Z18R3C8H8	3	1/2	5/16*10	5/16	18	16200	1.38	35
Z18R3C10H10	3	1/2	3/8*9	3/8	18	16200	1.54	35
Z12R3C10H10	3	1/2	3/8*5	3/8	12	16200	1.34	35
Z18R4C10H10	4	1/2	3/8*9	3/8	18	20000	1.86	35

T8 & V10 LOAD CHAIN FOR HOISTS

DIMENSIONS IN MILLIMETERS

PRODUCT CODE	NOMINAL SIZE Dn	MATERIAL DIAMETER TOLERANCE	WELD DIAMETER Ds MAX	PITCH Pn	PITCH P MAX	11 x Pn Pn	11 x Pn Pn MAX	INTERNAL WIDTH AWAY FROM WELD W1 MIN	EXTERNAL WIDTH OVER THE WELD W2 MAX
ZJB/T8C03	3	±0.2	3.3	9	9.18	99	99.5	3.6	10.2
ZJB/T8C04	4	±0.2	4.3	12	12.25	132	132.6	4.8	13.6
ZJB/T8C05	5	±0.2	5.4	15	15.3	165	165.8	6	17
ZJB/T8C63	6.3	±0.2	6.5	19	19.4	209	210	7.2	20.4
ZJB/T8C71	7.1	±0.3	7.6	21	21.4	231	232.1	8.4	23.8
ZJB/T8C08	8	±0.3	8.6	24	24.5	264	265.3	9.6	27.2
ZJB/T8C09	9	±0.4	9.7	27	27.5	297	298.4	10.8	30.6
ZJB/T8C10	10	±0.4	10.8	30	30.6	330	331.6	12	34
ZJB/T8C112	11.2	±0.4	11.9	34	34.7	374	375.8	13.2	37.4
ZJB/T8C125	12.5	±0.5	13	38	38.8	418	420	14.4	40.8
ZJB/T8C13	13	±0.5	14	39	39.8	429	431.1	15.6	44.2
ZJB/T8C14	14	±0.6	15.1	42	42.8	462	464.4	16.8	47.6
ZJB/T8C16	16	±0.6	17.3	48	48.9	528	530.5	19.2	54.4
ZJB/T8C18	18	±0.9	19.4	54	55	594	596.9	21.6	61.2
ZJB/T8C20	20	±1.0	21.6	60	61.2	660	663.2	24	68
ZJB/T8C22	22	±1.1	23.8	66	67.3	726	729.5	26.4	74.8

WORKING LOAD LIMITS & TEST REQUIREMENTS

PRODUCT CODE	NOMINAL SIZE Dn mm	WORKING LOAD LIMIT WLL t T8/V10	MANUFACTURING PROOF FORCE MPF kN T8/V10	BREAKING FORCE BF kN MIN T8/V10	BEND DEFLECTION f mm MIN
ZJB/T8C03	3	0.28/0.35	7.1/8.9	11.3/14.1	2.4
ZJB/T8C04	4	0.5/0.63	12.6/15.7	20.1/25.1	3.2
ZJB/T8C05	5	0.8/1.0	19.6/24.5	31.4/39.3	4.0
ZJB/T8C63	6.3	1.2/1.5	31.2/39	49.9/62.4	5.0
ZJB/T8C71	7.1	1.6/2.0	39.6/49.5	63.3/79.1	5.7
ZJB/T8C08	8	2.0/2.5	50.3/62.8	80.4/101	6.4
ZJB/T8C09	9	2.5/3.2	63.6/79.8	102/128	7.2
ZJB/T8C10	10	3.2/4.0	78.5/98.1	126/157	8
ZJB/T8C112	11.2	4.0/5.0	98.5/123	158/198	9
ZJB/T8C12.5	12.5	5.0/6.3	123/154	196/245	10
ZJB/T8C13	13	5.3/6.7	133/166	212/265	10
ZJB/T8C14	14	6.0/7.5	154/193	246/308	11
ZJB/T8C16	16	8/10	201/251	322/402	13
ZJB/T8C18	18	10/12.5	254/318	407/509	14
ZJB/T8C20	20	12.5/16	314/393	503/628	16
ZJB/T8C22	22	15/19	380/475	608/760	18

LONG LINK CHAINS

T8 MID LINK CHAIN FOR LASHING & FISHING

- Manufactured in a middle link 4d (pitch = 4x diameter)
- Hightest quality lower tensile steel available for lashing/fishing etc purposes with a design factor of 4:1.
- Manufacturing proof force = 2 times WLL. Non-Calibrated and tested.

DIMENSIONS IN MILLIMETERS

PRODUCT CODE	NOMINAL SIZE	WELD DIAMETER	MASS	PITCH			INTERNAL WIDTH AWAY FROM WELD	EXTERNAL WIDTH OVER THE WELD	PROOF FORCE	BREAKING FORCE
	D	Ds MAX	KG/M ≈	Pn	P MAX	P MIN	W1 MIN	W2 MAX	MPF kN	BF kN MIN
Z4DC10-8	10 -0.2/+0.4	10.8	2	40	42	38	14	35	63	126
Z4DC13-8	13 -0.26/+0.52	14	3.4	52	54.6	49.4	18.2	45.5	106	212
Z4DC16-8	16 -0.32/+0.64	17.2	5.1	64	67.2	60.8	22.4	56	161	322
Z4DC19-8	19 -0.38/+0.76	20.4	7.1	76	79.8	72.2	26.6	66.5	227	454
Z4DC20-8	20 -0.4/+0.8	21.5	8	80	84	76	28	70	251	503
Z4DC22-8	22 -0.44/+0.88	23.7	9.5	88	92.4	83.6	30.8	77	304	608
Z4DC28-8	28 -0.56/+1.12	30.1	15.4	112	117.6	106.4	39.2	98	493	985
Z4DC30-8	30 -0.6/+1.2	32.3	17.8	120	126	114	42	105	565	1131

T8 LONG LINK CHAIN FOR LASHING & FISHING

- Manufactured in a middle link 6d (pitch = 6x diameter)
- Hightest quality lower tensile steel available for lashing/fishing etc purposes with a design factor of 4:1.
- Manufacturing proof force = 2 times WLL. Non-Calibrated and tested.

DIMENSIONS IN MILLIMETERS

PRODUCT CODE	NOMINAL SIZE	WELD DIAMETER	MASS	PITCH			INTERNAL WIDTH AWAY FROM WELD	EXTERNAL WIDTH OVER THE WELD	PROOF FORCE	BREAKING FORCE
	D	Ds MAX	KG/M ≈	Pn	P MAX	P MIN	W1 MIN	W2 MAX	MPF kN	BF kN MIN
Z6DC09-8	9 -0.1+0.4	9.6	1.5	53	55	52	14	34	51	102
Z6DC11-8	11 -0.2/+0.5	11.8	2.2	64	67	63	17	42	76	152
Z6DC13-8	13 -0.2/+0.6	13.9	3	80	84	79	21	50	106	212
Z6DC16-8	16 -0.3/+0.7	17.1	4.8	80	84	79	30	67	161	322
Z6DC16L-8	16 -0.3/+0.7	17.1	4.45	100	104	98	30	67	161	322
Z6DC22-8	22 -0.4/+0.1.1	23.6	8.7	120	126	118	34	84	304	608

AS2321 CHAINS

GRADE L CHAIN TO AS2321

- Manufactured in a short link configuration meeting the requirements of Australian Standard AS2321.
- Hightest quality lower tensile steel available for lifting purposes with a design factor of 5:1.
- Also recommended for use in fathom chain and mooring applications and is available with an increased Maximum Working Load (MWL) based on design factor of 4:1.

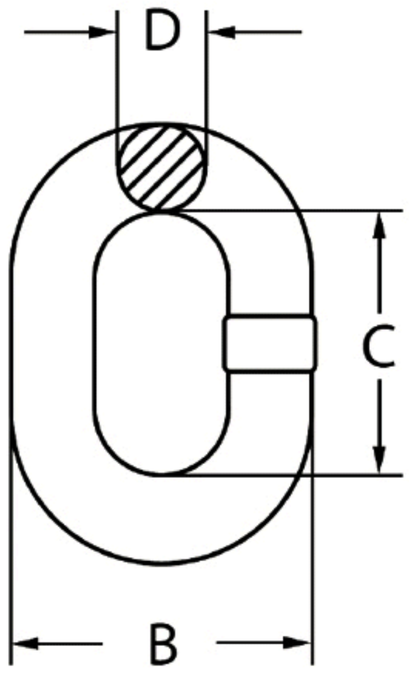
DIMENSIONS IN MILLIMETERS

PRODUCT CODE	NOMINAL SIZE	WORKING LOAD LIMIT		MASS	PITCH	EXTERNAL WIDTH OVER THE WELD	MANUFACTURING PROOF FORCE	BREAKING FORCE
	D	5:1(LIFTING) WLL tonnes	4:1(MOORING) MWL tonnes	KG/M ≈	C NOMINAL	B NOMINAL	MPF kN	BF kN MIN
Z2321C06-L	6.3	0.4	0.5	0.32	18.8	21.6	7.9	19.8
Z2321C07-L	7.1	0.5	0.63	1.1	21	22.4	9.8	24.3
Z2321C08-L	8	0.65	0.8	1.4	24	27	12.7	31.7
Z2321C10-L	10	1	1.25	2.2	30	34.3	19.8	49.5
Z2321C13-L	13	1.7	2.1	3.8	39	43	33.5	83.7
Z2321C16-L	16	2.58	3.2	5.7	48	54.9	50.7	127
Z2321C20-L	20	4.03	5	9	60	68.5	79.2	198
Z2321C22-L	22	4.89	6.1	10.7	66	77	95.8	240

REGULAR PROOF COIL CHAIN

- Commercial grade hardware chain is available in a wide range of sizies in regular and long link formations. These chain is supplied untested and unstamped for the most economical solution to a variety of general purpose use.

DIMENSIONS IN MILLIMETERS



PRODUCT CODE	NOMINAL SIZE	PACKAGE LENGTH		PITCH	EXTERNAL WIDTH OVER THE WELD
	D	50KG PAIL MTR	500KG DRUM MTR	C NOMINAL	B NOMINAL
ZASC03M	3	249	2490	15.7	13.1
ZASC04M	3.8	153	1525	18.6	16
ZASC05M	4.75	96.5	965	22	19.4
ZASC06M	6	60	600	26	23.5
ZASC08M	7.6	37	370	32	29.5
ZASC10M	9.5	23.3	235	39	36
ZASC13M	12	13.8	138	49	46
ZASC16M	16	9	91	60	56
ZASC20M	20	-	60	73.3	71
ZASC24M	24	-	42	87	84.8

LONG LINK PROOF COIL CHAIN

- Generous link dimension providing more length per weight and suited to agricultural, fencing and barrier purposes.

DIMENSIONS IN MILLIMETERS

PRODUCT CODE	NOMINAL SIZE	PACKAGE LENGTH		PITCH	EXTERNAL WIDTH OVER THE WELD
	D	50KG PAIL MTR	500KG DRUM MTR	C NOMINAL	B NOMINAL
ZASC05L	4.75	90	900	29.8	21.5
ZASC06L	6	55	550	35.8	26
ZASC08L	7.6	32	320	43.2	31.5
ZASC10L	9.5	21	210	52.6	39.7

DIN766 CHAINS

GRADE 3 ROUND STEEL LINK CHAINS
CALIBRATED & TESTED DIN766

- The chains which was calibrated and tested grade 3 round steel link chains as specified are used in all branches of industry.
- Finish: the standard surface finish shall be bright (bk). Other type of finish shall be subject to agreement.
- Safety requirements: the chain shall be heat treated and shall meet the requirements specified in DIN685 Part 2.The dimensions of the chain shall be within the tolerance given in below table. Diameter ds(diameter of welded) of the area affected by welding shall not be less than the size (d) and shall not exceed the latter by more than 7.5%. The weld points shall be positioned in the centre of the legs of the chain link, and shall not exceed a length a corresponding to the size. The chain shall reach the values given in below table with regard for load-bearing capacity (Working load limit), manufacturing proof force and deflection f, and those minimum total ultimate elongation shall not less than 15%.
- Mean stress at working load limit = 80N/mm²; Stress at manufacturing proof force = 200N/mm²; Stress at a specified breaking force = 320N/mm²; Ratio of mean stress at working load limit to stress at manufacturing proof force to stress at a specified breaking force = 1:2.5:4; Deflection f ≈ 0.8d.
- Acceptance inspection: if agreed upon, acceptance inspection may include the dimensional check, tensile test and bending test as specified in DIN 685 Part 3.
- Identification marking: In addition, the chains of each unit supplied shall be provided with a white triangular tag with Test stamp of chain manufacturer as specified in DIN 685 Part 4 and Size of chain in mm.
- Test certificate conforming to DIN 685 Part 4 shall be supplied as always.

DIMENSIONS IN MILLIMETERS

PRODUCT CODE	NOMINAL SIZE d	MATERIAL DIAMETER TOLERANCE	MASS KG/M ≈	PITCH t		GAUGE LENGTH 11 x t1		INTERNAL WIDTH AWAY FROM WELD b1 MIN	EXTERNAL WIDTH OVER THE WELD b2 MAX
				t	TOLERANCE	t1	TOLERANCE		
Z766C04-3	4	±0.2	0.32	16	+0.3/-0.2	176	+0.8/-0.4	4.8	13.6
Z766C05-3	5	±0.2	0.5	18.5	+0.4/-0.2	203.5	+0.9/-0.5	6	17
Z766C06-3	6	±0.2	0.8	18.5	+0.4-0.2	203.5	+0.9/-0.5	7.2	20.4
Z766C07-3	7	±0.3	1.1	22	+0.4/-0.2	242	+1.1/-0.5	8.4	23.8
Z766C08-3	8	±0.3	1.4	24	+0.4/-0.2	264	+1.2/-0.6	9.6	27.2
Z766C09-3	9	±0.4	1.8	27	+0.5/-0.3	297	+1.3/-0.7	10.8	30.6
Z766C10-3	10	±0.4	2.3	28	+0.5-0.3	308	+1.4/-0.7	12	36
Z766C11-3	11	±0.4	2.7	31	+0.5/-0.3	341	+1.5/-0.8	13.2	40
Z766C13-3	13	±0.5	3.9	36	+0.5/-0.3	396	+1.7/-0.9	15.6	47
Z766C14-3	14	±0.6	4.4	41	+0.7/-0.4	451	+2/-1	16.8	50
Z766C16-3	16	±0.6	5.8	45	+0.8/-0.4	495	+2.2/-1.1	19.2	58

WORKING LOAD LIMITS & TEST REQUIREMENTS

PRODUCT CODE	NOMINAL SIZE d mm	WORKING LOAD LIMIT WLL kg	MANUFACTURING PROOF FORCE MPF kN	BREAKING FORCE BF kN MIN	BEND DEFLECTION f mm MIN
Z766C04-3	4	200	5	8	3
Z766C05-3	5	320	8	12.5	4
Z766C06-3	6	400	10	16	5
Z766C07-3	7	630	16	25	6
Z766C08-3	8	800	20	32	7
Z766C09-3	9	1000	25	40	7
Z766C10-3	10	1250	32	50	8
Z766C11-3	11	1600	40	63	9
Z766C13-3	13	2000	50	80	11
Z766C14-3	14	2500	63	100	12
Z766C16-3	16	3200	80	125	13

LONG-LINK ROUND STEEL CHAINS
TESTED, NON-CALIBRATED DIN763

● The chains which was tested, long-link round steel link chains that are not calibrated. Such chain are not suitable for use with lifting appliances.
● Finish: Unless otherwise agreed, the chain finish shall be natural black.
● Safety requirements: the chain dimensions shall be lie within deviations specified in below table. The chain shall be heat treated and shall meet the requirements specified in DIN685 Part 2. The chain shall comply with the values for proof force and breaking force specified in below table with and the elongation at fracture shall not less than 25%.
● Mean stress at working load limit = 40N/mm²; Stress at manufacturing proof force = 100N/mm²; Stress at a specified breaking force = 250N/mm²; Ratio of mean stress at working load limit to stress at manufacturing proof force to stress at a specified breaking force = 1:2.5:6.3.
● Acceptance inspection: if agreed upon, acceptance inspection may include the dimensional check, tensile test as specified in DIN 685 Part 3. The heat treatment condition may be verified on the basis of a longitudinal microsection of the material (crystalline structure) in the weld zone. In the case of blank chains or those provided with corrosion protection, the values specified for breaking force and elongation at fracture shall be deemed to have been attained where the breaking load is at least 90%, and the elongation at fracture is at least 20%, of those specified for a natural black chain of the same nominal thichness. Determination of any additional properties shall be the subject of agreement.
● Identification marking: In addition, the chains of each unit supplied shall be provided with a white triangular tag with Test stamp of chain manufacturer as specified in DIN 685 Part 4 and Size of chain in mm.
● Test certificate conforming to DIN 685 Part 4 shall be supplied as always.

DIMENSIONS IN MILLIMETERS

PRODUCT CODE	NOMINAL SIZE d	MATERIAL DIAMETER TOLERANCE	MASS KG/M ≈	PITCH t		INTERNAL WIDTH AWAY FROM WELD b1 MIN	EXTERNAL WIDTH OVER THE WELD b2 MAX
				t	TOLERANCE		
Z763C04-3	4	±0.2	0.27	32	±1	7.2	16.8
Z763C05-3	5	±0.25	0.43	35	±1.1	9	21
Z763C06-3	6	±0.3	0.63	42	±1.3	10.8	25.2
Z763C07-3	7	±0.35	0.86	49	±1.5	12.6	29.4
Z763C08-3	8	±0.4	1.1	52	±1.6	14.4	33.6
Z763C10-3	10	±0.5	1.75	65	±2	18	42
Z763C13-3	13	±0.65	2.95	82	±2.5	23.4	54.6
Z763C16-3	16	±0.8	4.45	100	±3	28.8	67.2

WORKING LOAD LIMITS & TEST REQUIREMENTS

CODE	NOMINAL SIZE	WORKING LOAD LIMIT	MANUFACTURING PROOF FORCE	BREAKING FORCE
Z763C04-3	d mm	WLL kg	MPF kN	BF kN MIN
Z763C05-3	4	100	2.5	6.3
Z763C06-3	5	160	4	10
Z763C07-3	6	200	5	12.5
Z763C08-3	7	300	7.5	19
Z763C10-3	8	400	10	25
Z763C13-3	10	630	16	40
Z763C16-3	13	1000	25	63
	16	1600	40	100

DIN764 CHAINS

Designation to be used when ordering:
100m of chain DIN764 - 2 A 18X63 (100m of grade 2 chain of tolerance class A with nominal size 18mm and pitch 63mm);
200 lengths of chain DIN764 - 2 A 18X63 - 9E (200 lengths of chain of case-hardened (E) grade 2, each with 9 links (9), of tolerance class A, with a nominal size 18mm and pitch 63mm.)

ROUND STEEL LINK CHAIN FOR CONTINUOUS COVEYORS CALIBRATED & TESTED DIN764 CLASS A & B

- The chains which was calibrated and tested grade 2 round steel link chains with 3,5d pitch for use with chain conveyors.
- Dimensions A Tolerance class A, for use with chain wheels; Dimensions B Tolerance class B, for use with rollers.
- Diameter ds(diameter of welded) of the area affected by welding shall not be less than the size (d) and shall not exceed the latter by more than 7.5%. The weld points shall be positioned in the centre of the legs of the chain link, and shall not exceed a length a corresponding to the size. Where chains are intended for use in double-strand flight conveyors, the limit deviations for the multiple pitch length of all units (strands) of a consignment shall be +0,4/-0,15% for case-hardened chains and +0,3/-0,1% for chains which have not been case-hardened. For chain comprising up to 11 links, the length tolerance for lengths of chain to be used together shall be 1,5mm. For greater lengths, 0,5mm per meter maybe added for sizes up to 26mm and 1mm for sizes exceeding 26mm. For case-hardened chains, the maximum chain length for each norminal size shall be the suject of agreement. The minimum total ultimate elongation shall not less than 15%. For case-hardened chains, only the requirement regarding breaking force shall apply.
- The surface hardness of case-hardened chains shall be at least 700 HV 30. The case depth of carburization shall be equal to 10% of the chain size, with limit deviations of ±0,01xd for sizes up to 26mm and +0,01xd/-0,02xd above 26mm.

DIMENSIONS IN MILLIMETERS

PRODUCT CODE	NOMINAL SIZE d	MATERIAL DIAMETER TOLERANCE	MASS KG/M ≈	PITCH t	t TOLERANCE	GAUGE LENGTH t1 (11 x t)	t1 TOLERANCE CLASS A	t1 TOLERANCE CLASS B	INTERNAL WIDTH AWAY FROM WELD b1 MIN	EXTERNAL WIDTH OVER THE WELD b2 MAX
Z764C10-2	10	±0.4	2	35	+0.6/-0.3	385	+1.7/-0.9	+2.7/-1.5	14	36
Z764C13-2	13	±0.5	3.5	45	+0.7/-0.4	495	+2.2/-1.1	+3.5/-2	18	47
Z764C16-2	16	±0.6	5.2	56	+0.9-0.5	616	+2.8/-1.4	+4.3/-2.5	22	58
Z764C18-2	18	±0.9	6.5	63	+1/-0.5	693	+3.1/-1.6	+4.9/-2.8	24	65
Z764C20-2	20	±1	8.2	70	+1.1/-0.6	770	+3.5/-1.8	+5.4/-3.2	27	72
Z764C23-2	23	±1.2	11	80	+1.3/-0.7	880	+4/-2	+6.2/-3.5	31	83
Z764C26-2	26	±1.3	14	91	+1.5-0.8	1001	+4.5/-2.3	+7/-4	35	94
Z764C28-2	28	±1.4	16.5	98	+1.6/-0.9	1078	+4.8/-2.5	+7.6/-4.3	36	101
Z764C30-2	30	±1.5	19	105	+1.7/-0.9	1155	+5.2/-2.7	+8.1/-4.6	39	108
Z764C33-2	33	±1.7	22.5	115	+1.9/-1	1265	+5.7/-2.9	+8.9/-5.1	43	119
Z764C36-2	36	±1.8	26.5	126	+2.1/-1.1	1386	+6.3/-3.2	+9.7/-5.5	47	130
Z764C39-2	39	±2	31	136	+2.2/-1.2	1496	+6.7/-3.4	+10.5/-6	51	140
Z764C42-2	42	±2.1	36	147	+2.4/-1.3	1617	+7.3/-3.7	+11.3/-6.5	55	151

WORKING LOAD LIMITS & TEST REQUIREMENTS

PRODUCT CODE	NOMINAL SIZE d mm	WORKING LOAD LIMIT WLL kN	MANUFACTURING PROOF FORCE MPF kN	BREAKING FORCE BF kN MIN	BEND DEFLECTION f mm MIN
Z764C10-2	10	10	20	40	10
Z764C13-2	13	16	32	63	13
Z764C16-2	16	25	50	100	16
Z764C18-2	18	32	63	125	18
Z764C20-2	20	40	80	160	20
Z764C23-2	23	50	100	200	23
Z764C26-2	26	63	125	250	26
Z764C28-2	28	75	150	300	28
Z764C30-2	30	85	170	340	30
Z764C33-2	33	100	200	400	33
Z764C36-2	36	125	250	500	36
Z764C39-2	39	140	280	560	39
Z764C42-2	42	170	340	680	42

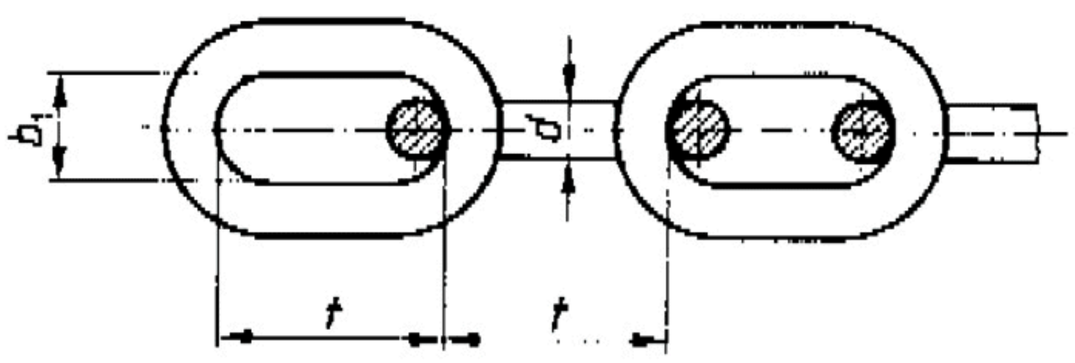
LONG OR MEDIUM-LINK ROUND STEEL CHAINS UNTESTED, DIN5685 TYPE G & X

● The round steel chains with long or medium-length links that are neither calibrated nor tested. Such chain are not suitable for use with lifting appliances, nor for being subjected to static loads.

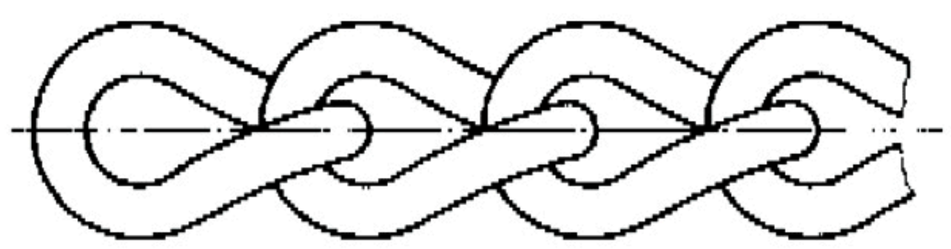
● Finish: Unless otherwise agreed, the chain finish shall be blank. To prevent mistaking them for DIN763 chains, it shall not be natural black finish.

The values specified for elastic limit are design values for which no guarantee can be given. Should chains of a particular strength be required. DIN763 chains, which are tested , shall be used instead of those specified here.

TYPE G (straight links)



TYPE X (egg-shaped links)



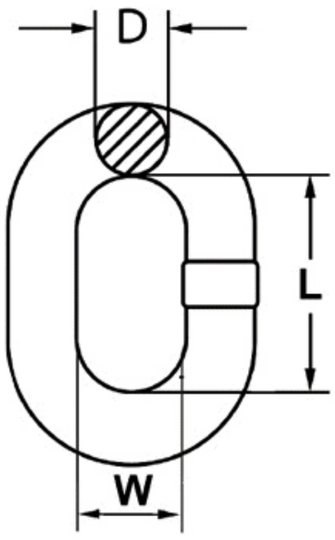
Dimensions prior to being twisted as for type G. 1)

DIMENSIONS IN MILLIMETERS

PRODUCT CODE	NOMINAL SIZE d	MATERIAL DIAMETER TOLERANCE	MASS OF TYPE G KG/100M ≈ A	MASS OF TYPE G KG/100M ≈ C	PITCH t A t	PITCH t A TOLERANCE	PITCH t C t	PITCH t C TOLERANCE	INTERNAL WIDTH AWAY FROM WELD b1 MIN	APPROX. ELASTIO LIMIT kN
Z5685C02A/C	2	±0.1	7	6	12	±0.6	22	±1.1	3.6	0.2
Z5685C25A/C	2.5	±0.12	11	10	14	±0.7	24	±1.2	4.5	0.32
Z5685C03A/C	3	±0.15	16.5	15	16	±0.8	26	±1.3	5.4	0.45
Z5685C35A/C	3.5	±0.2	22.4	20	18	±0.9	28	±1.4	6.3	0.63
Z5685C04A/C	4	±0.2	30	27	19	±1	32	±1.6	7.2	0.8
Z5685C45A/C	4.5	±0.23	39.5	35	20	±1	34	±1.7	8.1	1
Z5685C05A/C	5	±0.25	50	43	21	±1.1	35	±1.8	9	1.25
Z5685C06A/C	6	±0.3	73	63	24	±1.2	42	±2.1	10.8	1.6
Z5685C07A/C	7	±0.35	100	86	28	±1.4	49	±2.5	12.6	2.5
Z5685C08A/C	8	±0.4	130	110	32	±1.6	52	±2.6	14.4	3.2
Z5685C10A/C	10	±0.5	205	175	40	±2	65	±2.5	18	5
Z5685C12A/C	12	±0.6	290	255	48	±2.4	78	±3.9	21.6	7.1
Z5685C13A/C	13	±0.65	345	295	52	±2.6	82	±4.1	23.4	8

1) Due to the twist of type X chains. dimensions t and b1 are somewhat smaller, which means an increase in mass of about 6%.

NACM96 CHAINS



WELDED CARBON STEEL CHAIN TO NACM96

- Manufactured from carbon steel complies with American Standard NACM96:2010
- The steel meet the criteria: Carbon, 0.35% max; Phosphorous, 0.040% max; Sulfur, 0.050% max
- **G30 Proof Coil Chain** for general purpose. Used in a wide range of applications
- **G43 High Test Chain** widely used in industry, construction, agricultural and lumbering operations
- **G70 Transport Chain**, a high quality, high strength carbon steel chain used for load securement
- Maximum Working Load (MWL) based on design factor of 4:1 and 2x times MWL proof tested MPF
- Elongation shall not be less than 15%
- Grade marks embossed example G30, G43 or G70 on each 3ft
- Not to be used in overhead lifting application. Golden Galvanised, Hot dip Galvanised upon request

GRADE 30 PROOF COIL CHAIN

PRODUCT CODE	NOMINAL SIZE D in	NOMINAL SIZE D mm	WORKING LOAD LIMIT MAX MWL lbs	MASS KG/M ≈	PITCH L NOMINAL L MAX mm	INSIDEL WIDTH W MIN mm	MANUFACTURING PROOF FORCE MIN MPF kN	BREAKING FORCE BF kN MIN lbs	BREAKING FORCE BF kN MIN kN
ZN96C1/8-3	0.156	4	400	0.277	23.9	6.4	3.6	1600	7.2
ZN96C3/16-3	0.217	5.5	800	0.56	24.8	7.7	7.2	3200	14.4
ZN96C1/4-3	0.276	7	1300	0.92	31.5	9.8	11.6	5200	23.2
ZN96C5/16-3	0.331	8.4	1900	1.5	32.8	11.2	16.9	7600	33.8
ZN96C3/8-3	0.394	10	2650	2.09	35	14	23.6	10600	47.2
ZN96C7/16-3	0.488	11.9	3700	2.91	41.6	16.6	32.9	14800	65.8
ZN96C1/2-3	0.512	13	4500	3.47	45.5	18.2	40	18000	80
ZN96C5/8-3	0.630	16	6900	5.18	56	20	61.3	27600	122.6
ZN96C3/4-3	0.787	20	10600	8.09	70	25	94.3	42400	188.6
ZN96C7/8-3	0.866	22	12800	9.79	77	27.5	114.1	51200	228.2
ZN96C1-3	1.020	26	17900	13.64	90.9	31.7	159.1	71600	318.2

GRADE 43 HIGH TEST CHAIN

PRODUCT CODE	NOMINAL SIZE D in	NOMINAL SIZE D mm	WORKING LOAD LIMIT MAX MWL lbs	MASS KG/M ≈	PITCH L NOMINAL L MAX mm	INSIDEL WIDTH W MIN mm	MANUFACTURING PROOF FORCE MIN MPF kN	BREAKING FORCE BF kN MIN lbs	BREAKING FORCE BF kN MIN kN
ZN96C1/4-4	0.276	7	2600	0.92	31.5	9.8	17.3	7800	34.6
ZN96C5/16-4	0.343	8.7	3900	1.5	32.8	11.2	26	11700	52
ZN96C3/8-4	0.406	10.3	5400	2.09	35	14	36	16200	72
ZN96C7/16-4	0.468	11.9	7200	2.91	41.6	16.6	48	21600	96
ZN96C1/2-4	0.531	13.5	9200	3.47	45.5	18.2	61.3	27600	122.6
ZN96C5/8-4	0.630	16	13000	5.18	56	20	86.5	39000	173
ZN96C3/4-4	0.787	20	20200	8.09	70	25	134.7	60600	269.4
ZN96C7/8-4	0.866	22	24500	9.79	77	27.5	163.3	73500	326.6

GRADE 70 TRANSPORT CHAIN

PRODUCT CODE	NOMINAL SIZE D in	NOMINAL SIZE D mm	WORKING LOAD LIMIT MAX MWL lbs	MASS KG/M ≈	PITCH L NOMINAL L MAX mm	INSIDEL WIDTH W MIN mm	MANUFACTURING PROOF FORCE MIN MPF kN	BREAKING FORCE BF kN MIN lbs	BREAKING FORCE BF kN MIN kN
ZN96C1/4-7	0.281	7	3150	0.92	31.5	9.8	28	12600	56
ZN96C5/16-7	0.343	8.7	4700	1.5	32.8	11.2	41.8	18800	83.6
ZN96C3/8-7	0.406	10.3	6600	2.09	35	14	58.7	26400	117.4
ZN96C7/16-7	0.468	11.9	8750	2.91	41.6	16.6	77.8	35000	155.4
ZN96C1/2-7	0.531	13.5	11300	3.47	45.5	18.2	100.4	45200	200.8
ZN96C5/8-7	0.630	16	15800	5.18	56	20	140.4	63200	280.8
ZN96C3/4-7	0.787	20	24700	8.09	70	25	219.6	98800	439.2

NACM96 CHAINS

WELDED ALLOY CHAIN TO NACM96

- Manufactured from high strength alloy steel complies with American Standard NACM96:2010
- The alloy steel elements shall be following the criteria: Carbon, 0.35% max; Phosphorous, 0.025% max; Sulfur, 0.025% max. Nickel must be present not less than 0.40%; contain either of min.0.40% Chromium or min.0.15% Molybdenum for G80 Alloy Chain, for G100 Alloy Chain, shall present the both Cr & Mo
- **G80 Alloy Chain,** premium quality, heat treated, used in a variety of sling and tie down applications
- **G100 Alloy Chain,** premium quality, heat treated, used in a variety of sling and tie down applications
- Maximum Working Load (MWL) based on design factor of 4:1 and 2x times MWL proof tested MPF
- Elongation shall not be less than 20%
- Grade marks embossed example G80, G100 on each 3ft
- Used in overhead lifting application. Blacken for G80 and Blue for G100

GRADE 80 & 100 ALLOY CHAIN SPECIFICATIONS

	NOMINAL SIZE D		WORKING LOAD LIMIT MWL lbs MAX	MASS	PITCH L NOMINAL L MAX	INSIDEL WIDTH W MIN	MANUFACTURING PROOF FORCE MPF kN MIN	BREAKING FORCE BF kN MIN	
	in	mm	G80/G100	KG/M ≈	mm	mm	G80/G100	lbs G80/G100	kN G80/G100
ZN96C7/32	0.217	5.5	2100/2700	0.68	17.6	7.14-8.25	19/23.8	8400/10800	38/47.6
ZN96C9/32	0.276	7	3500/4300	1.1	22.9	9.53-10.92	30.8-38.5	14000/17200	61.6/77
ZN96C5/16	0.315	8	4500/5700	1.4	26.4	10.92-12.7	40.3/51	18000/22800	80.6/102
ZN96C3/8	0.394	10	7100/8800	2.2	32	13-15.2	63/79	28400/35200	126/158
ZN96C1/2	0.512	13	12000/15000	3.8	41.6	17.48-19.5	107/134	48000/60000	214/268
ZN96C5/8	0.630	16	18100/22600	5.7	51.2	20.63-24	161/201	72400/90400	322/402
ZN96C3/4	0.787	20	28300/35300	9	64	25-30	252/315	113200/141200	504/630
ZN96C7/8	0.866	22	34200/42700	10.9	70.4	27.5-33	305/381	136800/170800	610/762
ZN96C1	1.020	26	47700/59700	15.2	83.2	32.5-39	425/531	190800/238800	850/1062
ZN96C1-1/4	1.260	32	72300/90400	23	102.4	40-48	644/805	289200/361600	1288/1610

STAINLESS STEEL CHAIN

GRADE 60 & 50 SUS316 STAINLESS STEEL SHORT LINK CHAIN FOR LIFTING PURPOSES

- Manufactured from corrosion resistant stainless steel SUS316
- Proof load tested to 2.5 x W.L.L in manufacturing
- Safety factory 4 to 1
- Chain link are embossed with manufacturers mark and batch number every 1m
- Nitric acid passivated and polished finished.

PRODUCT CODE	NOMINAL SIZE Dn	PITCH Pn	PITCH P max	PITCH P min	INTERNAL WIDTH AWAY FROM WELD W1 min	EXTERNAL WIDTH OVER THE WELD W2 max
SS818C06-G5/6	6	18	18.5	17.5	7.8	22.2
SS818C07-G5/6	7	21	21.6	20.4	9.1	25.9
SS818C08-G5/6	8	24	24.7	23.3	10.4	29.6
SS818C10-G5/6	10	30	30.9	29.1	13	37
SS818C13-G5/6	13	39	40.2	37.8	16.9	48.1

PRODUCT CODE	NOMINAL SIZE Dn	WORKING LOAD LIMIT WLL t G50/G60	MANUFACTURING PROOF FORCE MPF kN G50/G60	BREAKING FORCE BF kN min G50/G60
SS818C06-G5/6	6	0.7/0.84	17.7/21.2	28.3/33.9
SS818C07-G5/6	7	0.95/1.14	24.1/28.9	38.5/46.2
SS818C08-G5/6	8	1.25/1.5	31.4/37.6	50.5/60.6
SS818C10-G5/6	10	2/2.4	49.1/58.9	78.5/94.2
SS818C13-G5/6	13	3.35/4	83/99.6	133/159

G50 SUS316 STAINLESS STEEL PUMP CHAIN

NOMINAL DIA. mm		5	6	8	9	11	13
WORKING LOAD LIMIT	t	0.17	0.68	1.21	1.53	2.27	3.14
BREAKING LOAD	t	2	3	4	5	9	12

G30 & G40 STAINLESS STEEL CHAIN

Welded round link chains, Manufacutured from stainless steel SUS316 & SUS304, Dimension manufactured in accordance with international standard, such as short link with DIN766 (page 18, long link with DIN764(page 20), DIN763 (page 19), DIN5685 (page 21), U.S. standard (page 22), JAPANESE, KOREAN standard also available on requests.

SWING CHAIN

SWING CHAIN manufactured from SUS316 or SUS304 stainless steel, by welded round link chain dia. 6mm (pitch 18.5mm x 7.2mm inside width), with Dia.6mm x 25mm Round Ring and M8 eye nuts.