

WORKING LOAD LIMIT CHART

This chart applies to general purpose chain slings made of Grade 80 and Grade 100 lifting chain and components manufactured to AS3775.2:2014 or equivalent international standards, and flat web and endless round slings manufactured to AS1353.2-1997 and AS4497:2018 or equivalent international standards. For ratings of special purpose slings consult a Steel & Tube lifting specialist.

The Uniform Method for Rating GRADE 80 Chain Slings

This info is based on the lowest allowable ratings for Grade 80 Chain Slings. Ratings can be higher based on actual manufacturer WLL.

Lifting Mode	1 leg		2 leg			3 & 4 leg – Same ratings		
	Factor 1 @ 0°	Factor 1.7 at 60°	Factor 1.4 at 90°	Factor 1.4 at 120°	Factor 2.6 at 60°	Factor 2.1 at 90°	Factor 1.5 at 120°	
Chain Ø (mm)								
6.00	1.12	1.90	1.60	1.12	2.90	2.36	1.70	
7.00	1.50	2.55	2.12	1.50	3.90	3.15	2.24	
8.00	2.00	3.40	2.80	2.00	5.20	4.25	3.00	
10.00	3.15	5.35	4.25	3.15	8.20	6.70	4.75	
13.00	5.30	9.00	7.50	5.30	13.80	11.20	8.00	
16.00	8.00	13.60	11.20	8.00	20.80	17.00	11.80	
19.00	11.20	19.00	16.00	11.20	29.00	23.60	17.00	
20.00	12.50	21.25	17.00	12.50	32.50	26.50	19.00	
22.00	15.00	25.50	21.20	15.00	39.00	31.50	22.40	
26.00	21.20	36.00	30.00	21.20	55.10	45.00	31.50	
32.00	31.50	53.50	45.00	31.50	81.90	67.00	47.50	

Ratings are in tonnes unless otherwise specified.

If chain is choked WLL must be derated by 20%

The Uniform Method for Rating GRADE 100 Chain Slings

This info is based on the lowest allowable ratings for Grade 100 Chain Slings. Ratings can be higher based on actual manufacturer WLL.

Lifting Mode	1 leg		2 leg			3 & 4 leg – Same ratings		
	Factor 1 @ 0°	Factor 1.7 at 60°	Factor 1.4 at 90°	Factor 1 at 120°	Factor 2.6 at 60°	Factor 2.1 at 90°	Factor 1.5 at 120°	
Grade 100								
6mm	1.40	2.38	1.96	1.40	3.64	2.94	2.10	
7mm	1.90	3.23	2.66	1.90	4.94	3.99	2.85	
8mm	2.50	4.25	3.50	2.50	6.50	5.25	3.75	
10mm	4.00	6.80	5.60	4.00	10.40	8.40	6.00	
13mm	6.70	11.39	9.38	6.70	17.42	14.07	10.05	
16mm	10.00	17.00	14.00	10.00	26.00	21.00	15.00	
19mm	14.00	23.80	19.60	14.00	36.40	29.40	21.00	
20mm	16.00	27.20	22.40	16.00	40.60	33.60	24.00	
22mm	19.00	32.30	26.60	19.00	49.40	39.90	28.50	

Ratings are in tonnes unless otherwise specified.

If chain is choked WLL must be derated by 20%

Flat Web Lifting Slings & Endless Round Slings

Note: Some web slings are manufactured using white (loomstate) webbing. In such cases, refer to manufacturer specifications and product label.

Lifting Mode	Vertical	Choke	Basket Parallel	Basket @ 30°	Basket @ 60°	Basket @ 90°	2 Leg Sling @ 0° to 90°	3-4 Leg Sling @ 0° to 90°
	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg
500	500	400	1,000	950	850	700	700	1,050
1,000	1,000	800	2,000	1,900	1,700	1,400	1,400	2,100
2,000	2,000	1,600	4,000	3,800	3,400	2,800	2,800	4,200
3,000	3,000	2,400	6,000	5,700	5,100	4,200	4,200	6,300
4,000	4,000	3,200	8,000	7,600	6,800	5,600	5,600	8,400
5,000	5,000	4,000	10,000	9,500	8,500	7,000	7,000	10,500
6,000	6,000	4,800	12,000	11,400	10,200	8,400	8,400	12,600
8,000	8,000	6,400	16,000	15,200	13,600	11,200	11,200	16,800
10,000	10,000	8,000	20,000	19,000	17,000	14,000	14,000	21,000
12,000	12,000	9,600	24,000	22,800	20,400	16,800	16,800	25,200

NOTE: Trigonometric Load Method is not a standard lifting practice but can be used for specialised lifts. Consult your Steel & Tube lifting specialist.

USE OF CHAIN SLINGS:

- Keep a register of all slings in use
- Never lift with a twisted chain
- Chain slings should be shortened with a shortening hook, never by knotting
- Protect the chain against sharp edges by sufficient padding
- Never point load a hook – the load should always seat correctly in the bowl of the hook
- Always use the correct sized sling for the load, allowing for the included angle and the possibility of unequal loading
- The master link should always be able to move freely on the crane hook
- Avoid shock loading at all times
- Avoid severe sling angles, and use protection over sharp or rough edges

MAINTENANCE OF CHAIN SLINGS:

- Chains should be inspected prior to use.
- Periodic thorough examination must be carried out at least every 12 months or more frequently according to statutory regulations, type and frequency of use.
- Chains with bent links or with cracks or gouges in the link should be replaced, as should deformed components such as bent master links, opened up hooks and any fitting showing signs of damage.

BASIC RULES FOR SAFE LIFTING:

- Always know the weight of the load you are going to lift
- Select the correct sling or slings for the lift
- Avoid severe sling angles, and use protection over sharp or rough edges
- Make sure area and destination for load are clear before lifting
- Always use dunnage so that slings are removed without damage
- Report any damage
- Store slings in clean dry areas correctly.

INSPECTION & CARE OF SYNTHETIC LIFTING SLINGS:

- Inspect slings for any damage before use
- Protect slings from sharp or abrasive edges
- Do not use slings above their W.L.L.
- Position load on dunnage to ensure easy removal of slings
- Do not twist or knot slings to shorten
- Do not use when temperatures exceed 90°C
- Do not snatch or shock load slings when lifting
- Check with manufacturer before using slings in or near Alkalis and Acids.

Contact us now for mobile testing and inspection, available nationwide.

0800 100 260

chain&rigging@steelandtube.co.nz



PRODUCT SUPPORT & MARKETING APPROVAL FORM

MARCH 2022

The purpose of this document is to ensure that all Steel & Tube product support and marketing material is accurate, current and complies with relevant laws (including the Fair Trading Act 1986). This checklist and approval form will ensure product support and marketing material is subject to a rigorous review process before being approved for use.

Product support and marketing material must be checked by a team of people to ensure the information is accurate, factually correct, consistent with our brand, in accordance with trade mark requirements and up-to-date. Responsibility for each area is assigned in accordance with this form.

Where an area of responsibility has been assigned to you, it is very important that you read, check and confirm the matters that have been assigned to you. By signing this document, you are confirming that a full check has been completed and the item/document/content is correct and accurate.

Product support and marketing material cannot be released for use until it has been signed off in accordance with this form, including the final sign off by the National Manager – Marketing.

NOTE: It is a breach of the Fair Trading Act for Steel & Tube to issue marketing material that contains inaccurate information, or information that is false or misleading. This could lead to a fine of up to \$600,000.

Steel & Tube can be held liable for a breach of the Fair Trading Act if it makes representations (eg, in its product catalogues and on its website) that are incorrect or unsubstantiated, even if the representations are based on information provided by third parties. The Fair Trading Act risk will generally be lower when Steel & Tube merely passes on information from a supplier (eg, provides a supplier-branded catalogue to a customer or links to the supplier's website) and makes it clear to customers that it is only a conduit, unless Steel & Tube knew or should reasonably have known that the representations on such material were misleading and nevertheless continued to supply (or link to) the material.

APPROVAL GUIDELINES

All marketing material that is drafted will either require a formal sign off as per this form or from an official email from the marketing department that expresses its consent to the publication of the material.

The following prompts below have been drafted in order to provide guidance on whether a marketing material requires a full legal sign off:

Things which indicate that material should be referred for full sign off

- a. Lengthy text
- b. Third party trademarks / brands / logos or slogans
- c. Named / pictured construction projects
- d. Images of people (ie staff members)
- e. Technical product descriptions or specifications or technical drawings
- f. Claims about a product quality, origin or suitability for a particular purpose
- g. Competitions / prize draws
- h. Product or brand "celebrity" endorsements

If you are unclear on whether your material requires a full legal sign off, please contact the marketing team.

**COLLATERAL NAME
AND DESCRIPTION**

1. MARKETING AND COMMUNICATIONS REVIEW

Required for all marketing material that goes through the approval process on this form

REVIEWER NAME

ROLE

1.1	Use of brand: logo, design and colours	Approved	Not approved	N/A
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1.2	Consistency of language for general information only, inclusion of general information, sequence of info	Approved	Not approved	N/A
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1.3	Reproduction quality of images	Approved	Not approved	N/A
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1.4	Spell checked except for specific product and industry names (GPM/Product Specialist)	Approved	Not approved	N/A
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1.5	Professional proof reading requirement	Yes	No	N/A
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If YES, do not sign off until professional proof reading has been completed and received.

I confirm that I have read and answered the above questions, and that I have answered the questions accurately to the best of my knowledge after having made due and relevant enquiries.

Insert Signature here

Date checked and approved 19/6/24



Comments

2. SUBJECT MATTER/PRODUCT REVIEW

Required for - but not limited to - catalogues, spec sheets, flyers, adverts and website pages that references or states any statements regarding S&T's products and references to standards.

Where adverts, brochures and catalogues are provided by a supplier this content must also be reviewed.

REVIEWER NAME

ROLE

Supplier provided adverts, brochures and catalogues

Please only fill out sections 2.1 to 2.3 if the advert, brochure or catalogue has been supplied by a third-party supplier.

In the event that the third-party supplier document contains any references to Steel & Tube products, please ensure sections 2.4 to 2.17 is filled out as well.

2.1	The material has been reviewed to consider if it contains anything that is outlandish or that simply doesn't ring true.	Yes	No	N/A
2.2	Internal supplier due diligence has been completed and there is confidence that the supplier is "reputable" (consider if there have been any recent or historic issues with this supplier or these types of products).	Yes	No	N/A
2.3	The supplier has seen and approved the logo placement and contact information.	Yes	No	N/A

2.4	Are all the statements and claims about the product in the document accurate and correct?	Yes	No	N/A
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You should pay particular attention to statements about the nature, standard, quality, grade, strength, load capacity, safe working load, composition, manufacturing process, place of origin, testing carried out (independent or otherwise), dimensions, pressure rating, price, endorsements and/or certification from professional bodies or industry associations, and comparisons with other products or competitors.

2.5	Describe below the information that supports, substantiates or verifies any statements and/or claims about the product. You should pay particular attention to statements about the nature, standard, quality, grade, strength, load capacity, safe working load, composition, manufacturing process, place of origin, testing carried out (independent or otherwise), dimensions, pressure rating, price, endorsements and/or certification from professional bodies or industry associations, and comparisons with other products or competitors.
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NOTE: Include any documents and emails with this form that support the statements and claims.

Supporting documents are still required if the source of the information is a third party document.

If the supporting document is typically a test certificate for the product, enclose an example test certificate(s).

2.6	Is all relevant information about the product included in the document ie there is nothing missing that a customer would want to know/needs to know?	Yes	No	N/A
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2.7	Are any standards referred to in the document?	Yes	No	N/A
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If yes, do the products meet that standard?

Yes No N/A

Describe below how you have confirmed that the product meets the standard.

NOTE: Include any documents and emails with this form that support the statements and claims.

2.8	If there is there any fine print/footnotes in the document, is it consistent with the general message about the products?	Yes	No	N/A
2.9	Proprietary brands have seen and approved the applicable representation and product data.	Yes	No	N/A
2.10	Do we use any other person's trade names, product names, logos or trademarks? If yes, have we got their consent to use those names or trademarks?	Yes	No	N/A
2.11	Is there a reference to another party or any suggestion that another person endorses or supports the product? Are we using any information taken from a third party's documents or website? If yes, have you got written consent from that person to name them in the document or use that information?	Yes	No	N/A
2.12	Is there any reference to testing of the product? If yes, describe below that testing, including who conducted it, when it was conducted and the results of those tests.	Yes	No	N/A
2.13	Are the products that are referred to products that are in our current product range?	Yes	No	N/A
2.14	Are the products referred to readily available for sale?	Yes	No	N/A
2.15	Are any product names used the correct and current product names?	Yes	No	N/A
2.16	If technical information is used in the document (eg tables, diagrams, measurements, and performance characteristics) is the information accurate and correct?	Yes	No	N/A
2.17	Are any technical terms used the current industry-accepted language?	Yes	No	N/A
<p>I confirm that I have read and answered the above questions, and that I have answered the questions accurately to the best of my knowledge after having made due and relevant enquiries.</p> <p>Insert Signature here Date checked and approved</p> <p>Comments</p>				

From Andrew Foy 13/6/24

I have already checked the chain capacity values for grade 80 and 100 lifting chains against those of lifting chain manufacturers that include Gunnebo and Pewag.

Chain ratings in the grade 80 and grade 100 capacity tables were found to be equal to or less than those provided by large lifting chain manufacturers.

The statement under each chain capacity table states "This info is based on the lowest allowable ratings for grade XX chain slings, ratings can be higher based on actual manufacturer's WLL".

This means that the chain capacities listed in the grade 80 and grade 100 tables are conservative rather than optimistic and err on the side of safety.

I will endeavour to provide some snips of lifting chain manufacturers chain capacity tables, these will demonstrate the conservative chain capacities that have been included in the WLL Wall chart.

3. TECHNICAL QUALITY SPECIALIST

Required for all marketing material with technical statements and reference to standards.
This includes - but is not limited to - catalogues, spec sheets, flyers, adverts and website pages.

REVIEWER NAME

ROLE

3.1 The product specifications and standards are correct. Approved Not approved
If not approved, please indicate amendments required:

3.2 The test certificates are available and valid. Approved Not approved
If not approved, please indicate amendments required:

3.3 All technical statements and supporting documents are properly verified Approved Not approved
If not approved, please indicate amendments required:

I confirm that I have read and answered the above questions, and that I have answered the questions accurately to the best of my knowledge after having made due and relevant enquiries.

Insert Signature here



Date checked and approved

Comments

4. LEGAL REVIEW

Required for all marketing material that goes through the approval process on this form

REVIEWER NAME

ROLE

I confirm that:

- I have read the attached document, and considered the answers to the questions above;
- having regard to:
 - the information in the document
 - the answers to the questions above
 - all other information known to me, including the answers to any additional questions I have asked the technical reviewer, the attached document is accurate, is not misleading or deceptive and is able to be made available to Steel & Tube's customers without undue risk to Steel & Tube.

Insert Signature here

Date checked and approved

Comments

5. NATIONAL MANAGER, MARKETING

Required for all marketing material that goes through the approval process on this form

REVIEWER NAME

ROLE

I confirm that:

- I have read the attached document, and considered the answers to the questions in the marketing, technical and legal review sections;
- having regard to:
 - the information in the document
 - the answers to the questions above
 - all other information known to me, including the answers to any additional questions I have asked the technical reviewers, the attached document is accurate, not misleading or deceptive and is able to be made available to Steel & Tube's customers without undue risk to Steel & Tube.

Insert Signature here

Date checked and approved

Comments