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Chain Sling Care and Use
Safe use of Grade 80 (T) and Grade 100 (V) Chain Slings.



Safe use of Grade 80 (T) and Grade 100 (V) Chain Slings

- Chain slings must only be used in accordance with the SWL's and angles for the configurations specified in AS3775.2 2014. Please refer to the chain tag and applicable load chart.
- All chain slings must be inspected prior to and after each use. Chain slings must also be periodically inspected and recorded by a competent person. Guidance to periodic inspections is included in this document.
- Chain slings must be protected from sharp edges and the appropriate deration applied.
- Ensure chain is free from twists when connected to loads.
- Ensure connections between the chain slings and load are seated and orientated correctly.
- A risk assessment shall be completed for chain slings that will be used in a corrosive environment. Grade 80 (T) and Grade 100 (V) chain slings should not be used in acidic or alkaline environments as this may cause hydrogen embrittlement resulting in failure of the chain sling. The SDS for the solution the chain sling is being exposed to should be consulted.
- Chain slings should be appropriately de-rated for temperature as follows

Temperature Effects for Grade T

Temperature, °C	Reduction of WLL, %
≥-10 ≥200	Nil
>200 ≥300	10
>300 ≥400	25
>400	Not permissible

Temperature Effects for V400

Temperature, °C	Reduction of WLL, %
≥-10 ≥200	Nil
>200 ≥300	10
>300 ≥380	40
>380	Not permissible

Temperature Effects for V200

Temperature, °C	Reduction of WLL, %
≥-10 ≥200	Nil
>200	Not permissible

Storage and Handling.

- Where possible store chains on a properly designed rack.
- Never heat or heat treat chain.
- Lightly oil chain prior to prolonged storage.
- Store chain in dry non-corrosive environments.
- Care must be taken with chain slings that are left on crane hooks to ensure they are not a danger to persons or property and do not become accidentally engaged.
- Avoid dragging chains on hard surfaces

Only persons trained and deemed competent should use this equipment.

A competent person must be able to:

- Assess the mass of the load as accurately as possible.
- Ensure the load will withstand the lifting operation.
- Ensure the lifting appliance is rated to lift the load.
- Select a suitable sling taking into account the following:
  1. The condition of the sling.
  2. The Geometry of the sling including the number of sling legs, the angles of each sling leg.
  3. Each joining device has no more than one load bearing component in use at any one time.
  4. The manner in which the load is attached (i.e straight, reeved or basket configuration). Including the angle in the reeving.
  5. The shape of the load, the centre of gravity and load distribution of the sling.
  6. Determination of the WLL.
  7. Protection of the sling from sharp corners and the use of packing material.
  8. The site where the load is to be landed.
  9. Take into account environmental conditions such as temperature and corrosive atmospheres.
  10. Identify the hazards involved in the task and conduct a risk assessment and control those hazards.

Periodic Inspection.

Periodic recorded inspections performed by a person deemed competent to design, manufacture and inspect chain slings are required.

The recommended periods can be found in the table below but must not exceed 12 months.
The Rigging Shed recommends quarterly inspections for lifting equipment for general frequent use.

Number of lift cycles per week	Inspection monthly	Inspection 3 monthly	Inspection 6 monthly	Inspection 12 monthly
1 to 5	–	–	–	Yes
6 to 25	–	–	Yes	–
26 to 200	–	Yes	–	–
201 plus	Yes	–	–	–

NOTE: The above is a guide and the inspection schedule has to be determined by the end user based on the duty cycle (of M3 as specified in AS 1418.1) and the environmental conditions of use.

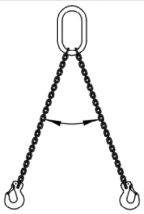
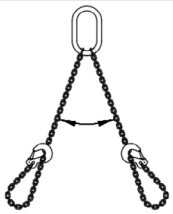
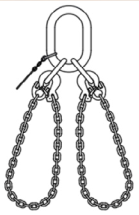
Pre and post-use inspection

- ☐ Ensure tag is present and legible.
- ☐ Ensure periodic inspections have been completed.
- ☐ Check master link for elongation, wear, nicks, cuts, gouges, bending or deformation and corrosive pitting.
- ☐ Check chain connectors for elongation, wear, nicks, cuts, gouges, bending or deformation, corrosive pitting and articulation.
- ☐ Check chain elongation, wear, nicks, cuts, gouges, bending or deformation and corrosive pitting.
- ☐ Check hooks, ensure that there is no excessive opening of the hook and the safety catch is fit for use.
- ☐ Check hooks for elongation, wear, nicks, cuts, gouges, bending or deformation and corrosive pitting.

If damage is suspected please tag the sling out of service and return to The Rigging Shed for inspection, repair and testing.

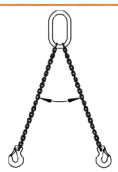
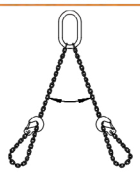
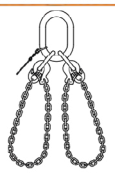
Grade T/80 Chain Sling WLL

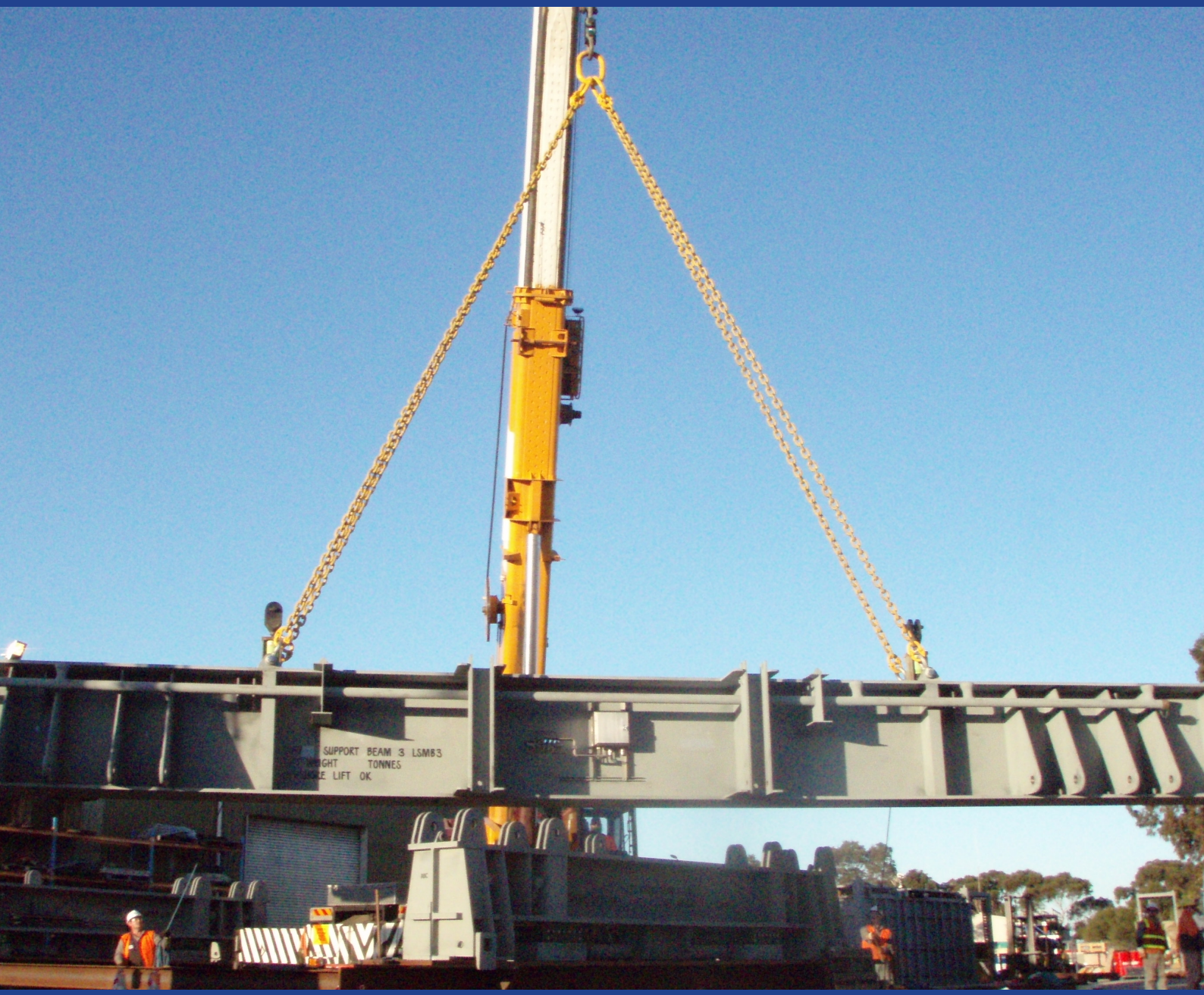
SPECIFICATIONS

Chain Size (mm)	WORKING LOAD LIMIT (TONNES)								
	SINGLE LEG SLINGS				SLINGS OF 2, 3 OR 4 LEGS				2 LEG SLINGS
	 Straight or Adj. Sling No Deration	 Adj. Sling with Deration	 Reeved Sling	 Basket Sling Max 60°	 Straight Sling 60°	90°	120°	 Reeved Sling Max 60°	 Basket Sling Max 60°
Loading factors	1	0.75	0.75	1.3	1.73	1.41	1	1.3	2.25
6	1.1	0.8	0.8	1.5	1.9	1.6	1.1	1.5	2.5
7	1.5	1.1	1.1	2	2.6	2.1	1.5	2	3.4
8	2	1.5	1.5	2.6	3.5	2.8	2	2.6	4.5
10	3.2	2.4	2.4	4.1	5.5	4.5	3.2	4.1	7.2
13	5.3	4.0	4.0	6.9	9.2	7.5	5.3	6.9	11.9
16	8	6.0	6.0	10.4	13.8	11.3	8	10.4	18.0
19	11.2	8.4	8.4	14.6	19.4	15.8	11.2	14.6	25.2
20	12.5	9.4	9.4	16.3	21.6	17.6	12.5	16.3	28.1
22	15	11.3	11.3	19.5	26.0	21.2	15	19.5	33.8
26	21.2	15.9	15.9	27.6	36.7	29.9	21.2	27.6	47.7
32	31.5	23.6	23.6	41	54.5	44.4	31.5	41	70.9

Grade V/100 Chain Sling WLL

SPECIFICATIONS

Chain Size (mm)	WORKING LOAD LIMIT (TONNES)								
	SINGLE LEG SLINGS				SLINGS OF 2, 3 OR 4 LEGS				2 LEG SLINGS
	 Straight or Adj. Sling No Deration	 Adj. Sling with Deration	 Reeved Sling	 Basket Sling Max 60°	 Straight Sling 60°	90°	120°	 Reeved Sling Max 60°	 Basket Sling Max 60°
Loading factors	1	0.75	0.75	1.3	1.73	1.41	1	1.3	2.25
4	0.63	0.5	0.5	0.8	1.1	0.9	0.63	0.8	1.4
5	1	0.8	0.8	1.3	1.7	1.4	1	1.3	2.3
6	1.4	1.1	1.1	1.8	2.4	2.0	1.4	1.8	3.2
7	1.9	1.4	1.4	2.5	3.3	2.7	1.9	2.5	4.3
8	2.5	1.9	1.9	3.3	4.3	3.5	2.5	3.3	5.6
10	4	3.0	3.0	5.2	6.9	5.6	4	5.2	9.0
13	6.7	5.0	5.0	8.7	11.6	9.4	6.7	8.7	15.1
16	10	7.5	7.5	13.0	17.3	14.1	10	13.0	22.5
18	12.5	9.4	9.4	16.3	21.6	17.6	12.5	16.3	28.1
19	14	10.5	10.5	18.2	24.2	19.7	14	18.2	31.5
20	16	12.0	12.0	20.8	27.7	22.6	16	20.8	36.0
22	19	14.3	14.3	24.7	32.9	26.8	19	24.7	42.8
23	21	15.8	15.8	27.3	36.3	29.6	21	27.3	47.3
26	26.5	19.9	19.9	34.5	45.8	37.4	26.5	34.5	59.6
28	31.5	23.6	23.6	41.0	54.5	44.4	31.5	41.0	70.9
32	40	30.0	30.0	52.0	69.2	56.4	40	52.0	90.0



Alpha Rigging Service provides services in inspecting, repairing and testing of all Aspects of Lifted, Lifting and Height Safety Equipment. We have a vast Hire Fleet as well.
The Alpha Rigging Service also offers NATA Endorsed testing & Inspection, with our technicians using Onsite mobile devices to capture asset Data that is stored and retained and kept
updated our online database, so you have access to the test results on completion of the Event carried out.

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