LOAD CHART & RIGGING PRACTICE QUIZ (PDF)

These are the same quiz questions as the electronic quiz but in pdf format.

You will need to reference the *Load Charts & Rigging Charts* to answer these questions. There is an answer key at the back.

CraneSafe Certification

Tower Crane TABLES
LCR.TC.LH200HC.CMCTT56120.WLWT200e.LCR1

5 May 2025

CraneSafe CERTIFICATION

CraneSafe + Fulford Certification
Tel: 604.398.5230 | www.fulford.ca

Load Chart Questions

Note

1 tonne (t, metric ton) = 1,000 kilograms (kg)

1 ton (short) = 2,000 pounds (lbs)

Part 1: Liebherr 200 HC

1. Determine the maximum radius that the load can be placed.

   - Jib length – 142 foot
   - Load weight – 13,500 pounds
   - Rigging –150 pounds

   Answer: _____ feet

2. Determine the highest hoist gear that can be used to perform this lift.

   - Load weight – 3,780 pounds
   - Rigging weight – 370 pounds

   Answer: _____

3. Determine the difference in gross capacity between these two jib lengths.

- Radius – 27.4 metres
- Jib length – 60 metres
- Jib length – 31.7 metres

Answer: _____ kg

Part 2: Comedil CTT 561-20

4. Determine the weight of the tip trip test block.

- 2 parts of line
- Jib length – 70 metres
- Hook radius – 70 metres
- Trip test block 5% of test block weight

Answer: _____ kg

5. Determine the difference in gross capacity using 2 parts of line versus 4 parts of line.

- Jib length – 85 metres
- Hook radius – 55 metres

Answer: _____ kg

6. Determine the highest hoist gear that can be used to perform this lift.

- 147 hp (110kW) DC hoist unit installed
- 2 parts of line
- Load weight – 10,677 pounds
- Rigging weight – 419 pounds

Answer: _____

Part 3: Wilbert WT 200e.tronic

7. Calculate the change (reduction) in capacity based on the following configuration:

- Jib length – 65 metres
- Hook radius – 57.5 metres
- Hook lowered 100 metres

Answer: _____

8. Determine the maximum trolley speed allowable for this lift.

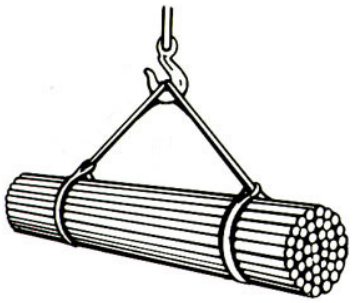
- Load weight – 6 tonnes

Answer: _____ metres / minute

Part 4: Rigging

9. What is the minimum size of synthetic web sling required to lift a load of 7,500 pounds?

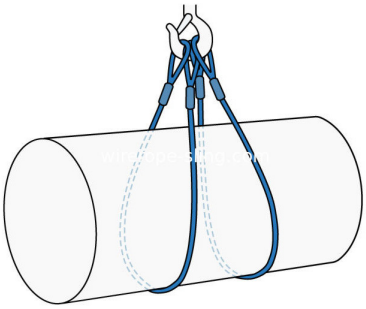
   The 2-leg bridle sling is in a choked configuration at an angle of 70 degrees.



   Answer: _____ inches

10. What is the minimum size of wire rope slings required to lift a load 17,500 pounds?

    The sling is in a double basket hitch configuration at an angle of 35 degrees.



    Answer: _____ inches

LOAD CHART & RIGGING
PRACTICE EXERCISES – ANSWER KEY

CraneSafe Certification

Tower Crane ANSWER KEY
LCR.TC.LH200HC.CMCTT56120.WLWT200e.AK1

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Answer Key

Part 1: Liebherr 200 HC

1. Answer: **110 feet**

   The gross capacity at a radius of 110 feet with 2 parts of line is 13,650 lbs.

2. Answer: **Gear 2**

   The maximum hoisting gear for a load of 4,150 lbs with 2 parts of line is 2.

3. Answer: **3,540 kg**

Jib length 31.7m	9,490 kg
Jib length 60.0m	5,950 kg
Difference in capacity	3,540 kg

Part 2: Comedil CTT 561-20

4. Answer: **310 kg**

   The capacity of a 70 metre jib at a 70 metre hook radius is
   6,200 kg x 0.05 = 310 kg.

5. Answer: **950 kg**

The capacity of an 85 metre jib at a radius of 55 metres with 2 parts of line is 4,430 kg.

The capacity of an 85 metre jib at a radius of 55 metres with 4 parts of line is 3,480 kg.

4,430 – 3,480 = 950 kg

6. Answer: **Gear 2**

Gross Load	
Rigging	419 pounds
Load	10,677 pounds
	11,096 pounds

The capacity of Gear 3 is 11,025 pounds.

Part 3: Wilbert WT 200e.tronic

7. Answer: **156 kg**

The capacity of a 65 metre jib at a 57.5 metre hook radius is 2.0 tonnes (with a maximum hook travel of 40 metres).

The capacity reduction per metre for each metre travelled over 40 metres is 2.6 kg per metre.

100 metres – 40 metres = 60 metres

60 metres x 2.6 kg / metre = 156 kg

8. Answer: **80 metres / minute**

Part 4: Rigging

9. Answer: **5 inches**

The capacity of a 5 inch synthetic web sling in a 2-leg bridge hitch at an angle of 70 degrees is 10,400 lbs.

10.400 x 0.75 = 7,800 lbs (in a choked configuration)

The capacity of a 4 inch synthetic web sling in a 2-leg bridle hitch at an angle of 70 degrees is 8,300 lbs.

8,300 x 0.75 = 6,225 lbs (in a choked configuration – too small)

10. Answer: **3/4 inch**

The capacity of a 3/4 inch wire rope sling in a double basket hitch at an angle of 35 degrees is: 10,200 x 2 = 20,400 lbs (in a double basket configuration)

The capacity of a 5/8 inch wire rop sling in a double basket hitch at an angle of 35 degrees is: 7,100 x 2 = 14,200 lbs (in a double basket configuration – too small)