



Instruction Manual

Manual Hoist

Capacity 0.25t-20ton



NOTE: Owner and Operator must read and understand this instruction manual before using the Manual Hoist.

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THANK YOU VERY MUCH FOR SELECTING OUR MANUAL HOIST!

This instruction manual describes the correct operating method to ensure a prolonged service life. Please read and completely understand this manual before operating the Manual Hoist. Always keep this manual in an appropriate place. If the manual of warning decal is missing, please contact your vendor.

NOTE: All information reported herein is based on the data available at the time of printing. The factory reserves the right to modify its own products at any time without notice or incurring in any sanction. Please verify with the manufacturer for possible updates.

1. PREFACE

This manual hoist is a portable lifting device easily operated by hand chain. It's suitable for use in factories, mines, farms, construction sites, wharves, docks and warehouses for installation of equipment, as well as for loading and unloading goods. It's specially advantageous for lifting work in open air grounds and places where no power supply is available.

The manual hoist can be attached to a trolley of any type as travelling chain block. It is suitable to monorail overhead conveying system, hand travelling crane and jib cranes.

2. SAFETY INSTRUCTION

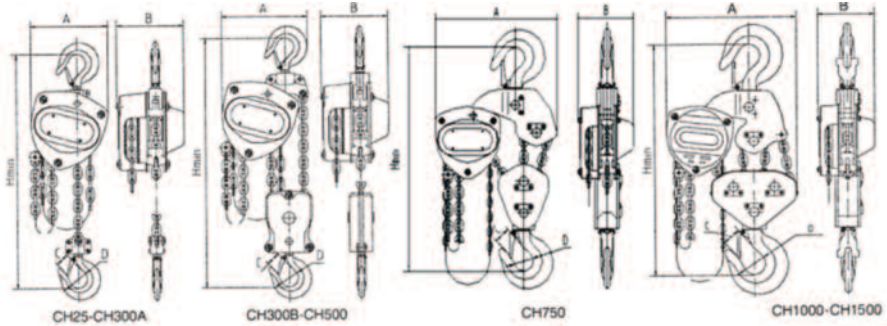


WARNING Be sure each person reads and understands this manual before operating or maintaining the hoist. The manual hoist must be properly operated and maintained at all times. Do not operate this hoist with any power devices.

- All persons involved must read this handbook and be completely familiar with all operating and maintenance procedure.
- Do not exceed the rated load limit. Overloading may cause hoist failure.
- Do not use power devices to operate the hoist, it is designed for manual operation only.
- Do not attempt to repair the chain. Replace it with new steel welded chain the same size and strength.

- Lubricate the chain with good quality light oil or chain oil before use.
- Do not lubricate the internal braking surfaces. The brake must be kept dry.
- Make sure the load chain has no twists in the chain sprocket, guide, and the vertical hanging length. If there is a twist, disassemble and thread the chain through the guide and chain sprocket.
- Make sure the load chain is attached to the loose end pin before each use.
- Stand in the same plane or at the same angle as the wheel when pulling the hand chain. Do not pull at an oblique angle. Keep safe footing at all times.
- Do not lift loads over people. Do not allow anyone to walk under the load. Warn personnel before lifting a load.
- Do not use the hoist to lift people.
- Avoid off-centre loading. Balance the weight evenly.
- Pull the hand chain steadily and smoothly to prevent jerking or tangling.
- Seat the load firmly in the hook. Do not try to lift with the tip of the hook.
- Do not wrap the chain around the load. Balance the load weight evenly.
- Pull the lever handle chain steadily and smoothly to prevent jerking or tangling.
- Raise the load only enough to clear the support surface. Check for any malfunction or obstructions before continuing the lift.
- If the chain jams or the lever handle cannot be pulled any further, stop, inspect and correct the problem. Do not try to force the hoist.
- Do not leave the load suspended in the air.
- Do not lower the load beyond the usable chain length. Pulling the chain tight against the chain sprocket will cause damage.
- Do not allow the load to contact the hoist. This will block the swivel and may cause damage, twisted chains, or a jammed wheel.
- Perform periodic inspection and maintenance. Replace all damaged or malfunctioning parts.
- Test the hoist function thoroughly in both with load or without load situation, before returning it to normal operation.
- Do not touch the selector switch when the hoist is in operation.

3. SPECIFICATION



Model		CH25	CH50	CH100	CH150	CH200	
Capacity	KG	250	500	1000	1500	2000	
Standard lift	m	205	2.5	2.5	2.5	2.5	
Load chain falls		1	1	1	1	1	
Load chain	mm	ø 4 X 12	ø 5 X 15	ø 6 X 18	ø 7 X 21	ø 8 X 24	
Effort force	N	235	240	250	265	335	
Dimensions	A	mm	121	147	172	196	210
	B	mm	114	132	151	173	175
	C	mm	21	23	27	33	35
	D	mm	31	35	40	45	50
	Hmin	mm	280	345	376	442	470
Net Weight	KG	6.2	11	12.5	17.8	19.5	

Model		CH300A	CH300B	CH500	CH750	CH1000	CH1500	CH2000	
Capacity	KG	3000	3000	5000	7500	10000	20000	20000	
Standard lift	m	3	3	3	3	3	3	3	
Load chain falls		1	2	2	3	4	6	8	
Load chain	mm	ø 10 X 30	ø 7 X 21	ø 10 X 30	ø 10 X 30	ø 10 X 30	ø 10 X 30	ø 10 X 30	
Effort force	N	372	290	365	370	385	390	390	
Dimensions	A	mm	255	230	280	463	463	420	630
	B	mm	205	176	189	189	189	208	220
	C	mm	39	39	45	54	54	82	82
	D	mm	55	55	65	75	75	106	106
	Hmin	mm	548	565	688	690	700	950	1100
Net Weight	KG	35	29	41.3	62	78.5	135	190	

(Table 1)

4. Installation and Operation

Installation the support (structure such as buildings) on which the hoist body is to bear 4 times of the rated load

4.1 Proper Handling and cautions for slinging methods

(1) How to apply a load to the hook Incorrect singling (Avoid the examples below):



※ Correct slinging: the load coincides with the axle of the hook



※ A supporting structure or the sling is set on an improper point of the hook



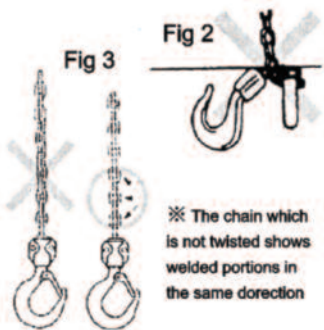
※ too wide slinging angle, it should be within 60 degree



The safety latch does not properly function



※ Only the tip of hook cannot bear a load

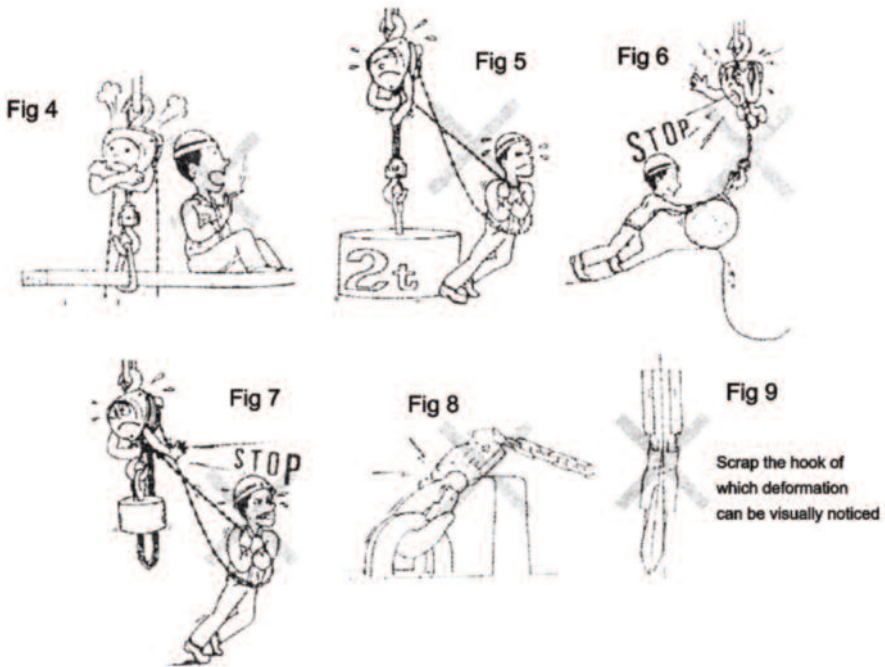


※ The chain which is not twisted shows welded portions in the same direction

- (2) Never wind a load chain directly around a load regardless of its weight. It is quite dangerous, since the load chain may be broken. (fig.1)
It is dangerous to wind the load chain around the hook of a chassis etc. because the strength of the chain will be reduced to 1/3 to 1/5 of the normal value. (Fig.2)
- (3) The load chain should not be loaded when twisted. As the bearing capacity of the chain will be reduced in a twisted state.
- (4) Be sure to bring the load chain into straight before applying a load (Fig.3)

Cautions during operation:-

- (5) Do not get on a load that is to be lifted and do not stay under a load lifted.
- (6) It is prohibited by law to get on a load lifted by the chain hoist. (Fig.4)



- (7) Do not apply an overload to the chain hoist, that is, do not apply a load exceeding the number of tons (rated load) indicated on the nameplate. (Fig.5)
- (8) Do not give an impact to the chain hoist. Severe accidents may happen, if a Load suddenly falls regardless of the height and gives a shock to the chain hoist. (Fig.6)
- (9) Do not perform over-winding (Fig.7)
- (10) Do not apply a bending force to the hook of the chain hoist. Such handling ways as shown in Fig. 8 are very dangerous and should be absolutely avoided. The hook clearly deformed as shown in Fig. 9 should be scrapped and exchanged with a new and genuine one.
- (11) Notice about the manipulation of the hand chain. It should be avoided that the hand chain will be abruptly jammed when it is manipulated with or without a load or a load is lifted by means of another power. In this case, the hand chain will be partially deformed or damaged.

5. Inspection and Maintenance

5.1 Daily Inspection

- **For daily operation, be sure to carry out the following check prior to operation.**
- **In case of any abnormality, stop operating the hoist until and take proper counter-measures by a specialist possessing enough knowledge of the unit or by a dealer of our products.**
- **Do not allow continuous running under abnormal condition as it is very dangerous and might lead to a severe accident.**

- (1) Check if the end of the load chain without hook (chain stopper pin) is fixed correctly. Check to see if the chain stopper pin is not deformed and rotates smoothly.
- (2) Are firm connections made between the top hook and the hoist body, the body and the load chain, and the load chain and the bottom hook respectively?
- (3) Are visually no deformations of the top and bottom hooks noticed?
- (4) Are no parts missing? Are no severely deformed portions noticed?
- (5) Is the load chain well lubricated? Does it show any remarkable damages or deformations?
- (6) Check whether the hand chain runs easily and smoothly on operation and smooth ratchet sound is heard during lifting.

- **Immediately stop operating the chain hoist and make a full repair of it, when such abnormalities as mentioned above (item 1 through 6) are found.**

5.2 Periodic inspection

In case of troubles and/or any abnormality, stop operating the hoisting unit and take proper counter-measures by a specialist possessing enough knowledge of the unit or by a dealer of our products. It may happen that the load chain and the hooks fall in a dangerous state even if they show no remarkable changes in their function. It is therefore indispensable to make a periodic measuring check based on “the Methods for Maintenance and Inspection” as stated on page 8. The periodic inspection should be normally made once a month. Exchange damaged or deformed parts with new ones.

6. The Methods for Maintenance and Inspection

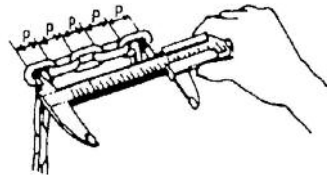
- Do not use parts and the chain hoist over the limit of use.
- If any wearing parts are found in excess of the standard limit of use as stated below in carrying out the daily and periodic voluntary inspections, they should be replaced.
- When replacing load chains, be sure to use the load chain manufactured by us. Load chains manufactured by any others are not applicable with this unit.

6.1 Checking the load chain and its lifetime.

It is important to carefully inspect the whole chain. For checking the elongation, measure the inner length of 5 links with a vernier caliper as the sketch shows. It is normally sufficient to check the links in a distance of approx. every 50cm but check them by making the measuring distance shorter when the elongation of the chain is close to the limitation for use stated in Table 2 so that none of them will exceed the limitation for use. Exchange the load chain with a new one, which is found by visual checks to be clearly influenced by higher temperatures or to be clearly deformed. Furthermore, do not weld a load chain to the original one by users themselves.

Limitation of the deformed load chain for use (Table 2)

Rated load (kg)	Link diameter- Px5mm (new chain)	Limitation of Px5(mm) for use
250	Ø4x60	61.2
500	Ø5x75	76.5
1,000	Ø6x80	81.6
1,500	Ø7x105	107
2,000	Ø8x120	122
3,000	Ø10x140	142.8
3,000	Ø7x105	107
5,000	Ø10x150	152
7,500		
10,000		
15,000		
20,000	Ø10x150	152



6.2 Checking the hook and its lifetime

- When the dimension shown by “A” in the sketch has exceeded the limitation specified in Table 3, the hook should be replaced with a new

Rated load (kg)	Value A on new hook (mm)	Limit value A (mm)
250	21	22
500	23	24.15
1,000	27	28.35
1,500	33	34.65
2,000	35	40.9
3,000	39	47.7
5,000	45	47.25
7,500	54	56.7
10,000	54	56.7
15,000	82	84
20,000	82	84



genuine one. Do not forget to set the split pin on re-assembling the stop bolt.

7. Criteria for Using and Checking Chain Hoists

7.1 Criteria for use

- (1) Make sure that the class of the chain hoist is fit for conditions of its use.
- (2) The chain hoist should not be used to lift a load exceeding the rated load except for testing purpose.
- (3) Do not use a bottom hook which is not equipped with a safety latch or of which latch has no safety effect.
- (4) Do not use chain block on which chain stoppers are missing.
- (5) Do not wind the load chain directly around a load.
- (6) Do not quickly pull the hand chain on lifting and lowering operation.
- (7) Do not perform over-lifting and over-lowering.
- (8) Avoid an operation of so-called earth lifting.
- (9) Before operation check the load chain for twisting or tangling.
- (10) The chain hoist can be used only after such twisting and tangling are corrected.
- (11) When the chain hoist is used in special conditions such as lower or higher temperatures, or corrosive atmosphere, etc., consult us before use.

- (12) The chain hoist should not be modified by the users.
- (13) Do not leave the chain hoist for many hours with a load suspended.
- (14) Make a routine inspection before use.
- (15) Immediately stop operating the chain hoist when an abnormally big pulling force for the hand chain is required.
- (16) Apply a lubricant to the load chain before use.
- (17) Use the chain hoist, applying lubricants to its gears, bearings, which are liable to wear.
- (18) Consult us whenever special usage of the chain hoist is required/

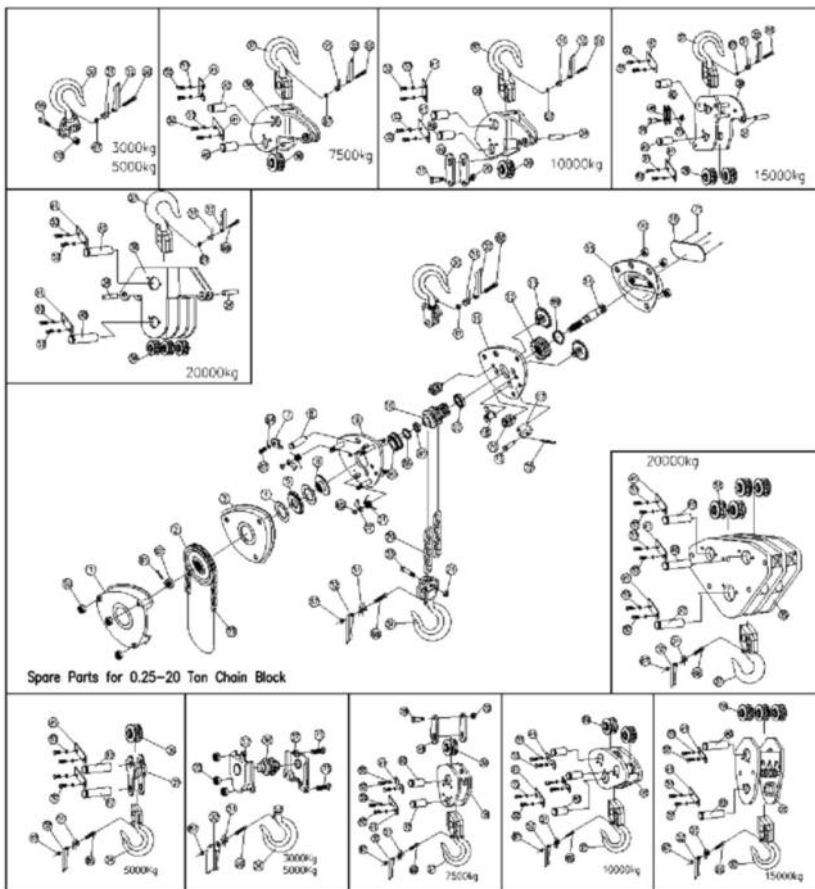
7.2 Criteria for check

- (1) Use the chain hoist by checking it daily⁽¹⁾ and periodically⁽²⁾.
- (2) Refer to Table 4 which gives check items, check methods and check criteria to be used in the daily check. However, items other than those specified should be also checked, when the chain hoist is frequently used, or in special cases.
- (3) When the chain hoist is repaired, check it on periodic check items given in Table 4 after its repair, and make notes.

Note: ⁽¹⁾ Refer to checking before use.

⁽²⁾ Periodic check is usually made at intervals of six months or one year depending on the frequency of use.

- (4) Check the items with the mark “√” in table 4.



Part list for chain block:

No.	Description	0.25t	0.5t	1t	1.5t	2t	3t	3t(S)	5t	7.5t	10t	15t	20t
1	Hand wheel cover assembly	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	Hand wheel	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	Brake cover	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	Friction plate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

No.	Description	0.25t	0.5t	1t	1.5t	2t	3t	3t(S)	5t	7.5t	10t	15t	20t
5	Ratchet disc	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	Brake seat	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	Lock plate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	Top pin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	Side plate assembly B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	Chain sprocket	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	Side plate assembly A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	Splined gear	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13	Driven shaft assembly	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	Driving shaft	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	Gear case assembly	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16	Name plate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17	Suspension plate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18	Stripper	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
19	Guide roller	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
20	Load chain	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
21	Pawl spring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
22	Pawl	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
23	Hand chain	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
30	Top hook assembly	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-
31	Double spring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

No.	Description	0.25t	0.5t	1t	1.5t	2t	3t	3t(S)	5t	7.5t	10t	15t	20t
32	Safety latch	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
33	Chain pin	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
34	Bottom hook assembly	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-
34	Chain pin	-	-	-	-	-	-	-	-	✓	✓	-	-
35	Chain pin	-	-	-	-	-	-	✓	✓	-	-	-	-
35	Hook hanger component	-	-	-	-	-	-	-	-	✓	✓	✓	✓
36	Idle sheave assembly	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
37	Hook hanger component	-	-	-	-	-	-	✓	✓	-	-	-	-
37	Hook assembly	-	-	-	-	-	-	-	-	✓	✓	✓	✓
38	Bottom hook assembly	-	-	-	-	-	-	✓	✓	-	-	-	-
38	Beam assembly	-	-	-	-	-	-	-	-	✓	✓	✓	✓
40	Idle sheave pin	-	-	-	-	-	-	-	-	✓	✓	✓	✓
41	Idle sheave pin plate	-	-	-	-	-	-	-	-	✓	✓	✓	✓
42	Hook pin	-	-	-	-	-	-	-	-	✓	-	✓	✓
52	Screw	-	-	-	-	-	-	-	-	✓	✓	✓	✓
53	Spring washer	-	-	-	-	-	-	-	-	✓	✓	✓	✓
60	Prevailing torque type nut	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
61	Split pin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
62	Hexagonal castle nut	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
63	Screw	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-
64	Spring washer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
65	Snap ring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

No.	Description	0.25t	0.5t	1t	1.5t	2t	3t	3t(S)	5t	7.5t	10t	15t	20t
66	Snap ring	–	–	–	–	✓	✓	–	✓	✓	✓	✓	✓
67	Prevailing torque type nut	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
68	Screw	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
69	Snap ring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
70	Prevailing torque type nut	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
71	Rivet	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
72	Split pin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
73	Pin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
74	Prevailing torque type nut	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–
75	Hexagonal Screw	–	–	–	–	–	–	✓	✓	–	–	–	–
90	Bearing A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
91	Pin bearing	–	–	–	–	✓	✓	–	✓	✓	✓	✓	✓
92	Bearing B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
93	Bearing C	–	–	–	–	✓	✓	–	✓	✓	✓	✓	✓

George Taylor & Co. Lifting Gear (Midlands) Ltd

Contact your local distributor