

Operating Instructions with Parts List

Hand Chain Hoist



**BEFORE OPERATING THIS PRODUCT, READ
THIS MANUAL AND FOLLOW ALL SAFETY
RULES AND OPERATING INSTRUCTIONS**

Save these instructions for future reference

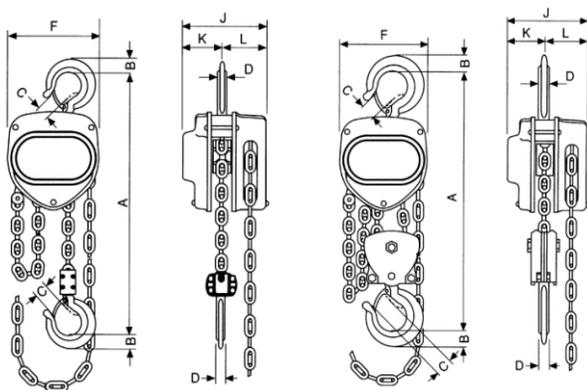
1. General

This manual contains important information for the correct installation, operation, and maintenance of the equipment described herein. All persons involved in such installation, operation and maintenance should be thoroughly familiar with the contents of this manual. To safeguard against the possibility of property damage or personal injury follow the recommendations and instructions of this manual and keep it for further reference.

The hand chain hoists are highly versatile tools that can be used in any position to efficiently lift or lower.

All chain hoists comply to the safety specifications from the German trade association, and have been manufactured in accordance with the Machinery Directive 98/37/EEC. They are type-tested 4 to 1 against breakage. Each unit is proof-tested 1.5 times of the rated load.

2. Specification



Model	HSB05	HSB10	HSB20/1	HSB20/2	HSB30/1	HSB30/2	HSB50	HSB100	HSB150	HSB200	
Capacity	kg	500	1000	2000	2000	3000	3000	5000	10000	20000	
Standard lift	m	3	3	3	3	3	3	3	3	3	
Proof test load	Kn	7.3	14.7	29.4	29.4	44	44	73.5	147	294	
Headroom (drawn close up) Amin.	mm	295	345	450	440	530	530	620	735	1000	
Effort required to lift rated load	kg	16	32	33	32	34	33	42	45	2×35	
No. Of columns of load chain		1	1	1	2	1	2	2	4	8	
Load chain	mm	6×18	6×18	8×24	6×18	10×30	8×24	10×30	10×30	10×30	
Dimensions	mm	Amin	295	345	450	440	560	530	620	735	1000
		B	16	21	37	27	46	35	45	60	85
		C	22	27	37	30	46	37	46	52	74
		D	11	15	25	20	29	24	30	40	56
		F	125	147	183	147	215	183	215	360	590
		J	111	125	142	125	163	142	163	163	198
		K	52	57	68	67	79	68	79	79	99
L	59	68	74	68	84	74	84	84	99		
Net weight	Kg	9	11	18	15	28	24	39	70	158	

3. Assembly instructions.

Assembly and disassembly is to be carried out in the same order as shown on the assembly drawings.

a) Assembly of the hooks:

Hook and hook crosshead are equipped with an annular groove which is filled with steel balls through the bore in the hook crosshead, secured by means of a threaded pin and punch locked (see Item. No. 42).

b) Assembly of gearing:

During assembly of the gearing be sure that the two O-marks on the gears are aligned in the same direction as shown in Fig. C.

c) Load sheave bearing:

The roller bearings may be stuck with grease to the two journals situated on the load sheave. After installation of the other components, the two side plates are pushed over the rollers (see Item. No. 20).

d) Assembly of load brake with hand chain wheel:

Components of the load brake are installed according to the assembly drawing. The disc hub is screwed onto the driving pinion. Then mount friction disc, ratchet disc and second friction disc.

Attention: Ensure the ratchet disc is installed according to Fig. A. Now screw hand chain wheel onto the driving pinion until all brake components are brought into contact. Then adjust the brake by turning the hand chain wheel back by a maximum of 15° . Install slotted nut and secure to driving pinion by means of cotter pin. (Attention: The brake thread should be slightly greased).

e) Load chain:

Feed chain over the load sheave with the weld on the standing link facing away from sheave. The two end links are attached as per Fig. B making sure the chain is not twisted.

f) Function testing:

After every maintenance or repair the hoist should be tested for proper function with at least the rated load or in accordance to local regulations.

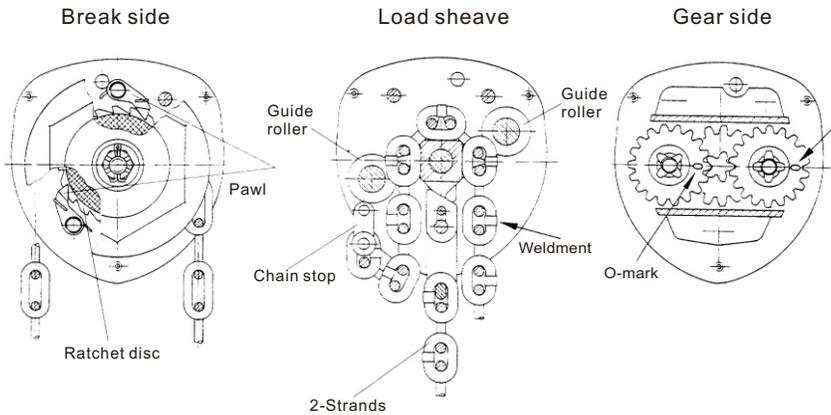


Fig. A

Fig. B

Fig. C

Chain Reeving

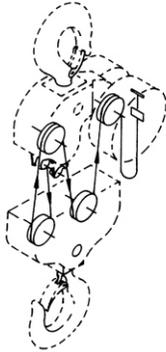


Fig. D

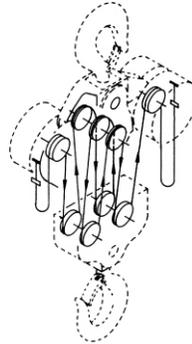


Fig. E

4. Operation

1. Read and understand the operating instruction.
2. Estimate the load that is to be lifted or moved and make sure it does not exceed the rated load of the hoist.
3. Make sure that the support to which the upper hook is attached is strong enough to hold several times the weight of the load. Be sure the hoist is solidly held in the uppermost part of the upper hook, the latch is closed and the latch does not contact the support.
4. Make sure that the hoist is rigged so that the upper and lower hooks will form a straight line when the hoist is operated and the frame is free to swivel and will not come in contact with any object.



WARNING

Failure to use as directed herein may cause injury to you or others and could result in property damage.

- DO NOT exceed the rated capacity of the hoist.
- DO NOT use the hoist to lift people or loads over people.
- DO NOT use a damaged or malfunctioning hoist.
- DO NOT use if the load chain is twisted, kinked, worn, stretched or damaged.
- DO NOT use unless the hoist's frame and chain form a straight line between hooks.
- DO NOT use if the hoist's frame is in contact with any object.
- DO NOT leave a suspended load or hoist under tension unattended.
- DO NOT use an extension on the handle. Operate using hand power only.
- DO NOT apply loads to the tip of hooks or to the hook latches.
- NEVER operate the hoist when flammable materials or vapors are present. Contact between metal parts may produce sparks that can cause a fire or explosion.

5. Maintenance

a) Lubrication:

The gearing should be greased with Shell Fd2 or equivalent at reassembly and as needed.

Lubricate load chain before initial operation and regularly as required by the operating conditions with Shell Fluid 12 or equivalent.

Attention: Do not lubricate hand chain wheel, friction discs, ratchet and disc hub.
The load brake operates dry.

b) Inspection:

The unit should be inspected for faultless operation and at least annually investigated by an expert. Load chain to be inspected to national standards.

Wear limits for load chain and hooks are given in the following tables.

Inspect chain sheave pockets for wear. Inspect hooks for flaws, cracks, distortion, wear and freedom of rotation.

Wear limits for hooks and chain

	HSB05	HSB10	HSB20	HSB30	HSB50	HSB80-HBS100	HSB150-HBS200
Hook	a nom. (mm)	22	27	30	37	46	74
	a max. (Mm)*	24,2	29,7	33,0	40,7	50,6	81,4
Chain	d nom. (Mm)	6		8	10		
	d min. (mm)*	5,4		7,2	9,0		
	t nom. (Mm)	18		24	30		
	t max. (mm)*	18,9		25,2	31,5		
	11t nom. (mm)	198		264	330		
	11t max. (Mm)*	203,9		271,9	339,9		

Attention: When reaching the wear limits (max. Resp. Min. values) the hook and/or chain has to be replaced.

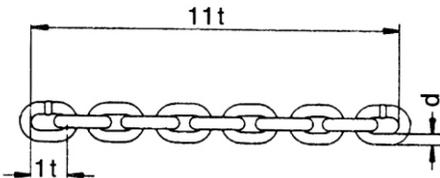


Fig. F

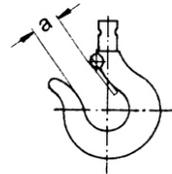
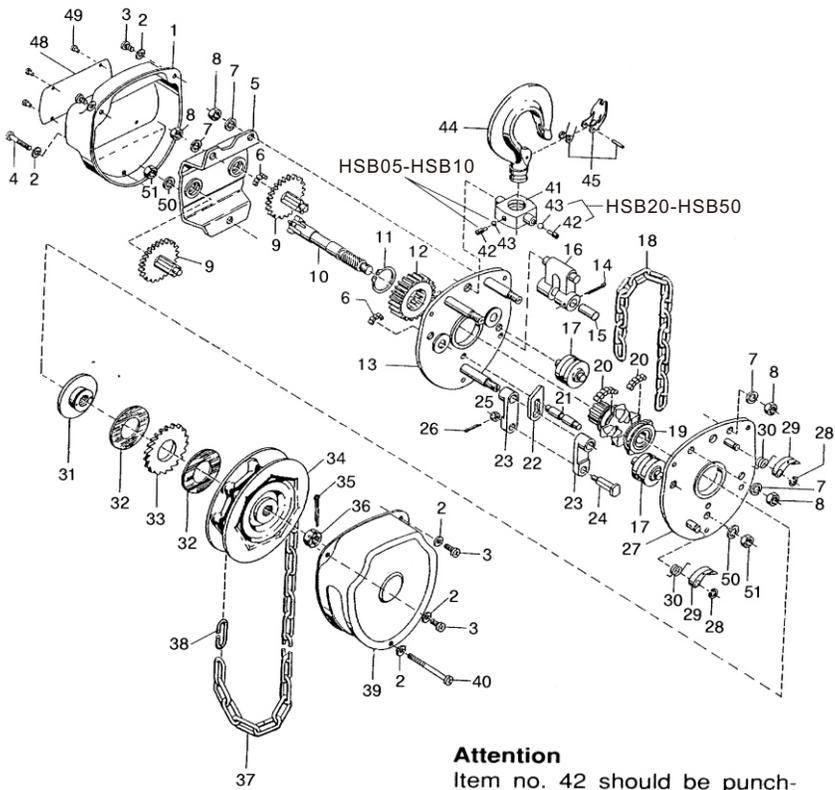


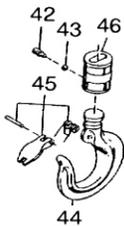
Fig. G

6. Parts List



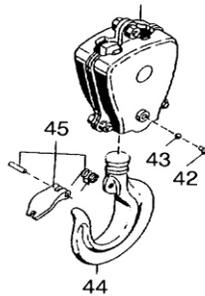
Attention

Item no. 42 should be punch-locked always.



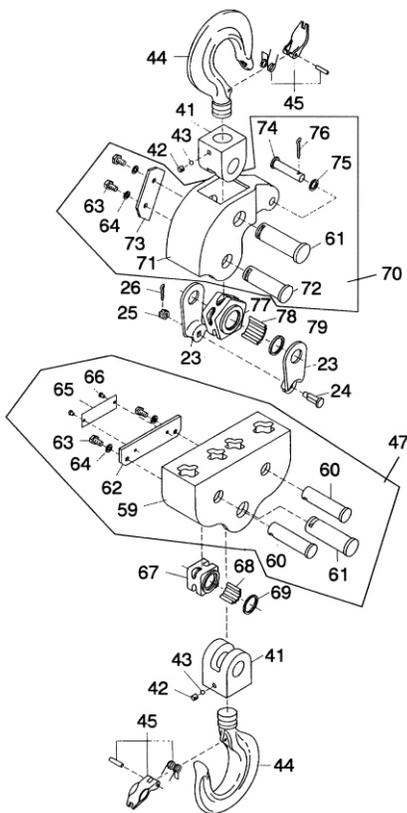
HSB05-HSB10

1-strand bottom block

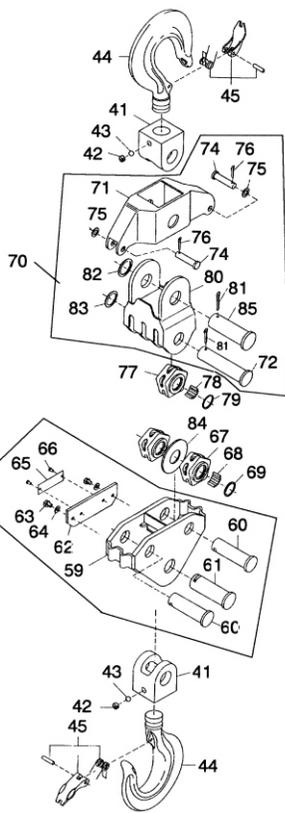


HSB20-HSB50

2-strand bottom block



HSB80-HSB100



HSB150-HSB200

★

Quantity and Diameter (mm) per set							
Item No.	HSB05	HSB10	HSB20	HSB30	HSB50	HSB80-HSB100	HSB150-HSB200
6	11 \dot{a} ϕ 3 \times 5	12 \dot{a} ϕ 3 \times 5	12 \dot{a} ϕ 3 \times 5	12 \dot{a} ϕ 4 \times 6	11 \dot{a} ϕ 5 \times 6	11 \dot{a} ϕ 5 \times 6	11 \dot{a} ϕ 5 \times 6
20	29 \dot{a} ϕ 3 \times 5	30 \dot{a} ϕ 4 \times 6	30 \dot{a} ϕ 4 \times 6	30 \dot{a} ϕ 5 \times 6	35 \dot{a} ϕ 5 \times 8	35 \dot{a} ϕ 5 \times 8	35 \dot{a} ϕ 5 \times 8
43	9 \dot{a} ϕ 4	9 \dot{a} ϕ 5	13 \dot{a} ϕ 5	15 \dot{a} ϕ 5	16 \dot{a} ϕ 6	13 \dot{a} ϕ 10	14 \dot{a} ϕ 12,7
68						29 \dot{a} ϕ 3 \times 39,5	30 \dot{a} ϕ 4 \times 29,5
78						25 \dot{a} ϕ 4 \times 39,5	30 \dot{a} ϕ 4 \times 29,5

Item No.	Description
1-4	Gear cover assy
2	Lockwasher
3	Screw
4	Screw
5	Bearing plate with bearing races
6*	Roller set
7	Lockwasher
8	Hex. nut
9	Gear assy
10	Driving pinion
11	Retaining ring
12	Gear
13	Side plate assy. With space bolts and bearing races
14	Cotter pin
15	Chain bolt
16	Chain stop
17	Guide roller
18	Load chain (specify length)
19	Load sheave
20*	Roller set
21-22	Chain stripper assy
23	Fastening link
24-16	Shoulder bolt assy
27	Sideplate assy. With bearing race and 2 pawl studs
28	Retaining ring
29	Pawl
30	Pawl spring
31	Disc hub
32	Friction disc
33	Ratchet disc
34	Hand chain wheel
35	Cotter pin
36	Castle nut
37	Hand chain (specify length)
38	Connecting pin
39+40,2+3	Chain wheel cover assy
40	Screw
41-42	Crosshead assy
42	Threaded pin
43*	Ball set
44-45	Hook assy
45	Safety latch kin
46	Coupling assy with chain bolt, threaded pin and locking rings

Item No.	Description
47	Coupling assy
48	Name plate
49	Grooved nail
50	Lockwasher
51	Hex. nut
52-58	Slip clutch assy
52	Hub
53	Fitting key
54	Friction disc
55	Hand chain wheel
56	Disc hub
57	Cup spring
58	Slotted nut
59	Coupling frame
60	Idler sheave shaft
61	Load hook bolt
62	Axle support
63	Hex. screw
64	Lockwasher
65	Capacity plate
66	Grooved nail
67-69	Idler sheave assy
68-69*	Roller set
69	Washer
70	Supporting frame assy
71	Supporting frame
72	Idler sheave bolt
73	Axle support
74	Supporting bolt
75	Washer
76	Cotter pin
77-79	Idler sheave assy
78-79*	Roller set
79	Washer
80	Idler sheave housing
81	Cotter pin
82	Washer
83	Washer
84	Washer
85	Suspension bolt