HAND CHAIN BLOCK
FROM 250 to 10.000 kg

OWNER'S MANUAL

1. EC DECLARATION OF CONFORMITY :

VERNOUILLET
France

As defined by the EC directive relating
to machinery 98/37/EEC.
Annex II A
Herewith, we declare that the product:

Wire rope hoist	Belt hoist	Electric chain hoist	**Manual chain hoist** ●	Electric trolley	Manual winch
●	●	●	●	●	●
●	●	●		●	
●	●	●		●	
●	●	●		●	
●	●	●		●	
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●			
●	●	●	●	●	●
●	●	●	●	●	
●					
		●	●		
●	●	●		●	
●					
●	●	●			
●	●	●			

Complies with the following provisions applying to it:
- Machinery directive 98/37/EEC.
- Directive 73/23/CEE.
- "EMC" Directive 89/336/EEC

Applied harmonized standards, in particular:
- EN 60204-1,
- EN 292, parts 1 and 2 (safety of the machines).

National regulations, standards and specifications:
- order of June 9, 1993 / circular of September 22, 1993.
- decree no. 92-765, 92-766, 92-767, of July 29, 1992.
- DIN 15400; DIN 15401,

Quality system applied:
- EN29001/ISO9001

Technical standards and specifications complied with, in particular:
- FEM 9.511 "classification of the mechanisms".
- FEM 9.661 "dimensions and quality of the drive and cable lifting block elements for mass-produced lifting devices".
- EN 818 "chain quality, choice criteria and technical requirements".
- FEM 9.683 "choice of motors".
- FEM 9.755 "steps to be taken to determine the operating periods for mass-produced motorized lifting mechanisms (S.W.P.)".
- FEM 9.751 "Motorized lifting mechanism: safety"
- FEM 9.901 "bases of design for the mass-produced lifting devices for travelling cranes equipped with mass-produced lifting devices".

Bernard DELEFOSSE

WARNING

The company reserves the right to modify or improve the material described below and, in this case, to supply the illustrations or specifications which differ from this notice.

2. GUARANTEE OF MANUAL CHAIN HOIST :

Our equipment is guaranteed for a period of 1 year from the date of delivery for manually-operated equipment.

If delivery is delayed for a reason beyond the control of the seller, the difference in date cannot be in excess of 3 months.

If the utilization (installation) of the equipment is delayed, the extension of the guarantee is limited to 3 months, non-cumulative, to be requested with written agreement.

The seller undertakes to remedy any operating vice resulting from a fault in the design, or implementation, of the components or the materials themselves.

The guarantee does not cover wear and tear*, nor accidents resulting from a lack of regular and periodical upkeep, it does not cover deterioration due to a lack of surveillance, incorrect manipulations or poor operation of the equipment in particular overloading, pulling sideways.

The guarantee does not apply each time dismantling, modification or changing of parts is carried out without our agreement or by a non-authorized agent.

The guarantee only applies to original spare parts from the constructor including chains.

During the guarantee period, the seller must, free of charge, replace or repair parts recognized as defective after examination by his qualified and authorized engineering department.

The guarantee excludes all other payment or compensation. Under the guarantee, the repairs are in principle carried out int the workshops of the seller or his agent authorized by the constructor. When work is carried out on the material outside these workshops, the manpower costs related to the dismantling or reassembly of these parts are borne by the seller when these operations are carried out solely by his staff or his agent authorized by the constructor. The replaced parts become the property of the seller and must be returned to him at his charge.

For components of special relative importance and not manufactured by the seller himself, and which carry the trademark of specialized constructors, the guarantee, which can vary depending on the constructor, is that which is issued by the latter.

* The guarantee does not apply to wearing parts defined by the constructor, see the list following:

Lifting chain,
Lifting head,
Hooks,
Friction disc of brake.

IMPORTANT

**Read these instructions carefully,
they will enable you to install and use your equipment correctly,
to maintain it in proper working order and to decrease any risks due to incorrect operation.
The constructor will not accept liability for any accident or damage caused by misuse or operation of the equipment in a manner other than as described below.
Please ensure that the following instructions are properly followed.**

3. DOS :

GENERAL

Read the instruction manual carefully and follow its recommendations at all times. Only use "original parts" during repair or maintenance. Keep the instruction manual and the recommendations for use near the equipment and available to the operator and the maintenance mechanic at all times.

TRANSPORT / STORAGE

Handle the equipment by its structure either using the fittings provided for this purpose or in its original packaging.
Store the equipment in a non-aggressive environment away from sources of dust or dampness etc.
Regularly clean and protect from corrosion (oiling etc.).

INSTALLATION / MAINTENANCE / SERVICING

Have the equipment installed by mechanically competent and trained personnel.
Ensure that safety regulations are complied with (safety harness, evacuation of work areas, warning signs, etc.).
Verify the strength of the structure to which the equipment is to be attached.
Scrupulously follow the installation instructions provided in the equipment's instruction manual.
The chain must be fitted in accordance with the instructions and oiled before any load is applied.
Formulate an inspection programme and record details of all maintenance carried out, particularly with regard to hooks, pulley blocks, the chain, the brake, the end stops, etc.
Replace any worn or suspect parts.

Verify that all safety items are in good working order (brake, end stop, etc.) in accordance with the instruction manual.
Regularly check the condition of the chain and hooks (joints, swivels, etc.).
If any distortion or abnormal wear is observed, the parts concerned must be replaced.
Keep the chain permanently clean and correctly oiled.
Periodically check tightness of bolts and assembly fixings.
Check that the chains are not twisted or damaged in any way.

DURING USE

Before any manoeuvre ensure that the load is adequately installed and fixed to the hook. The safety clip on the hook must be correctly closed. Balance the load correctly before moving it. Avoid lifting from a single point, use appropriate accessories (slings, cross struts, etc.). Take the load's centre of gravity into account.
When moving the load, make sure that it is high enough off the ground and sufficiently far away from any nearby machines to avoid collision with any obstacles along its route.
Avoid tipping the load or the hook when using a gantry crab.
Be aware of the safety rules to be observed during the various manoeuvres.
Operate the equipment in normal conditions of use (temperature, ambient atmosphere, etc.).
Equipment used outside should be adequately protected against the weather.
Oil the chain regularly under no-load conditions.
Inform a competent person following any dangerous or doubtful operation of the equipment (strange noise, abnormal behaviour, etc.).

4. DON'TS :

TRANSPORT / STORAGE

Do not put the equipment on anything without suitable support otherwise parts on the underside may become damaged.

INSTALLATION / MAINTENANCE / SERVICING

Never modify the equipment without the constructor's advice and authorisation.
Never modify the values and adjustments of the safety devices beyond the ranges specified in the instruction manual or without the constructors approval.
Never override limiting or safety equipment.

DURING USE

Do not allow the hook to pass over the heads of people below, whether loaded or not.
Never attempt to move a load greater than the maximum safe load indicated on the equipment.
Remember that accidental impacts or snagging of the load being handled with surrounding objects may provoke an overload.
Never remove the safety clips on the hooks.
Never jam, adjust or remove the end stops in order to increase left or right travel to more than would otherwise be possible.
Do not use the equipment for extracting or unjamming purposes or for lateral pulling etc.
Never use the equipment to transport people.
Do not touch any moving parts.
Never use the equipment if it is in bad condition (worn, bent, etc.).
Do not use spare parts of unknown or doubtful origin.
Never intentionally allow the load to tip over.
Do not provoke violent impacts with the equipment.
Do not constantly use the end stops as a means of stopping.
Never use the lifting chain as a sling.
Never attach a sling on the point of the hook (risk of hook being damaged and load falling).
Never use the hook in a slanting position.
Never twist the lifting chain (risk of pulley block turning over, etc.).
Do not leave a load suspended unless absolutely necessary.
Never use the equipment as an earth for welding.
Do not use the equipment for a purpose or in a situation for which it is not designed.
Do not use the safety devices as a means of measuring laden weight.
Do not operate jerkily as this provokes deterioration of the equipment.
Never pull the load sideways, bring the equipment to a position above the load before moving it.

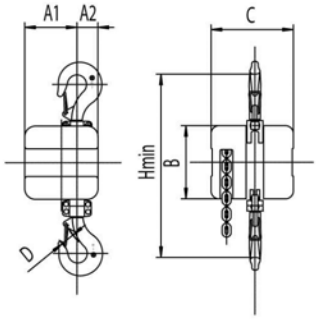
Check that the equipment corresponds with the details on the
delivery note attached to the packaging.

5. BRIEF DESCRIPTION OF HOIST

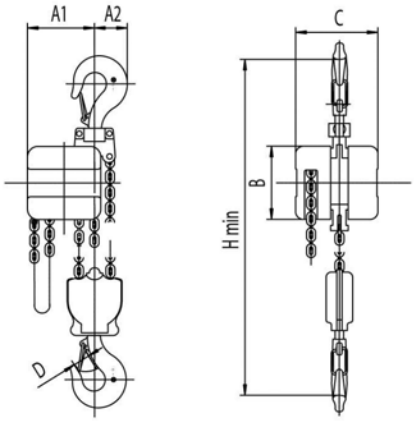
The manual chain hoist for 250 to 10 000 kg is a new concept in which esthetics have been associated with reliability. It offers high security, with lower weight and less upkeep.

The hoist is composed of :
- a chain guide case which guides the chain, maintains it in the correct position and protects the chain wheel,
- treated steel mechanisms : shafts, cogs, sprockets,
- a lifting pulley
- lifting and suspension hooks in treated steel alloy with safety clips,
- an automatic self locking brake,
- a lifting chain,
- an galvanised manoeuvring chain.

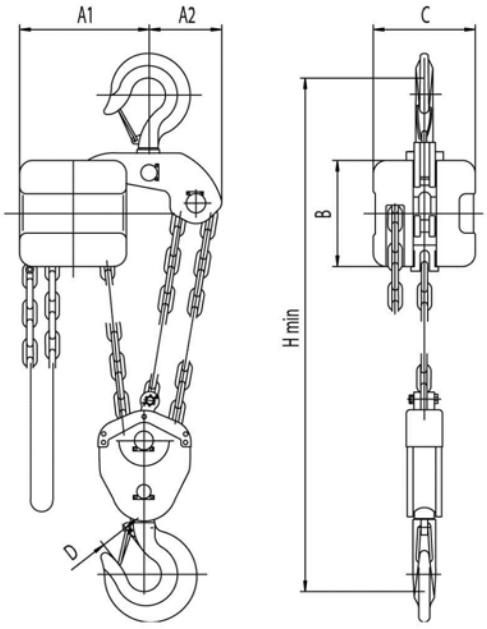
5.1 - GENERAL CHARACTERISTICS AND DIMENSIONS



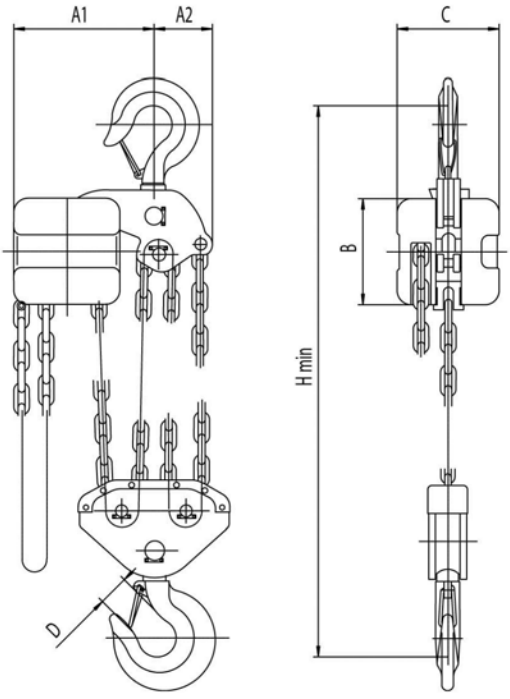
0,25T - 0,5T - 1T - 1,5T



2T - 3T - 5T



6,3T - 7,5T

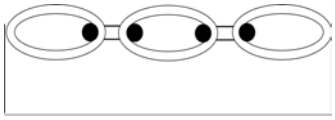


10T

Cap. Kg	Lifting chain		Weight with 3m lifting chain	Hand Force	Dimensions					
	Falls	•×pitch			A1 mm	A2 mm	B mm	C mm	D mm	H mm
250	1	4x12	4	33	70	32	102	117	21	245
500	1	5x15	11	30	85	42	122	155	25	310
1000	1	6x18	12	40	93	53	138	155	30	350
1500	1	8x24	19	40	119	62	176	176	33	420
2000	2	6x18	18	40	123	63	138	155	35	480
3000	2	8x24	30	40	158	77	176	176	40	570
5000	2	9x27	40	40	180	90	200	182	48	615
6300	3	9x27	56	40	250	140	200	192	52	756
7500	3	9x27	56	40	250	140	200	192	52	756
10000	4	9x27	79	40	264	115	200	192	60	763

5.2 - LIFTING CHAIN CERTIFICATE

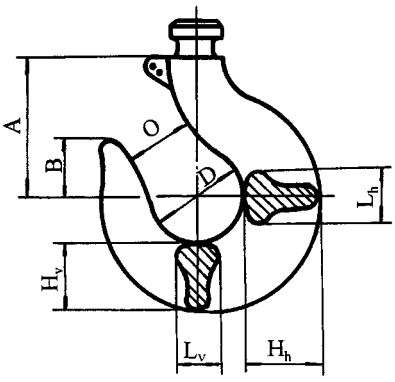
Type of chain selected					
Chain Ø x pitch	4x12	5x15	6x18	8x24	9x27
Class	T	T	T	T	T
Minimum breaking strain (N/mm2)	900	900	900	900	900
Standard	DIN 5684-8	DIN 5684-8	DIN 5684-8	DIN 5684-8	DIN 5684-8
Safe load limit on 1 trace (kg)	250	500	1000	1500	2500
Breaking load (kN)	20	31,36	49	73,5	105
Min. total elongation over 7 links	10%	10%	10%	10%	10%
Dimension over 5 links + 2 diameters	68(+0.25,-0.15)	85(+0.33,-0.16)	102(0,-0.6)	136(+0.12,-0.66)	153(+0,45,-0,25)
Weight per meter (kg)	0,35	0,55	0,78	1,39	1,72



Dimensions over 5 links

5.3 - LIFTING HOOK CERTIFICATE

Load Kg	Testing Load Kg	Nb. of falls	Breaking Load Kg	Marking	D	O	B	Hh	Lh	Hv	Lv	A
250	500	1	1000	13S	26.5	21.2	17	20	12.1	17	10.9	40
500	1000	1	2000	16S	31.5	25	20	25.7	16	21.8	14	47.5
1000	2000	1	4000	19S	37.5	30	23.6	33.5	20.6	28	18.5	58
1500	3000	1	6000	21S	42.5	33.5	26.5	40	24.3	33.5	21.8	64
2000	4000	2	8000	22S	45	35.5	28	43.7	26.5	36.5	23.6	67
3000	6000	2	12000	24S	50	40	31.5	51.5	31.5	43.7	28	75
5000	10000	2	20000	26S	59	47	45	61	36	54	31	90
6300	12600	3	25200	27T	-	-	65	68	47	59	44	110
7500	15000	3	30000	27T	-	-	65	68	47	59	44	110
10000	20000	4	40000	28T	-	-	-	77	47	64	49	-



6. HANDLING - TRANSPORT - STORAGE (see § 3 and 4)

The various models are delivered either packed in cardboard boxes, in boxes on pallets or on film wrapped pallets.

7. INSTALLATION - COMMISSIONING

The hoist you have just acquired must only be used for a maximum load equal to the nominal load indicated on the apparatus.

- Provide fixed anchoring points whenever possible.
- Oil the chains copiously along their entire length and make sure they are not twisted.
- Carry out several raising and lowering operations using the entire length of the chain with no load.
- Grease the hook swivel joints.
- Ensure that the mechanical stop is fitted at 15 cm from the end of the chain.

Carry out a dynamic test before commissioning :

This test consists of using the hoist with load at all working positions. Check that the hoist functions correctly and that there is no distortion. Carry out a complete manoeuvre, lifting a load corresponding to the hoist's maximum safe load multiplied by a coefficient of 1.1.

8. UTILISATION (see § 3 and 4)

Before lifting a load, check :

- that the lifting chain is in perfect condition and properly oiled,
- that the lifting chain is correctly fitted and not twisted, especially on equipment fitted with pulley blocks,
- that the load is not greater than the limit marked ont he plate fitted by the Constructor,
- that no overload is likely to be caused by adhesion to the ground, jamming, etc.

During lifting, it is advisable :

- to initially lift the load with caution to check that the slings are adequate and correctly positioned,
- to not stand in a position where breakage of the chain may result in personnal injury,

to limit loads to half of the nominal load capacity during periods of cold weather (-15 ° C),
to stop the manoeuvre if the effort required on the chain is greater than normal as the equipment is almost certainly overloaded.

9. PRECAUTIONS

The use of the hoists for horizontal or oblique traction is forbidden as the chain guides and the posi-tioning of other parts are not designed for this type of operation. Such use is particularly unsuitable for block and pulley type equipment.
Since the simultaneous use of several hoists to lift the same load is a particularly dangerous manoeuvre, it should only be carried out in the presence of a specially qualified person able to accept full responsability unless the devices used have been approved by your supplier or by a representative of a Quality Control Organisation.

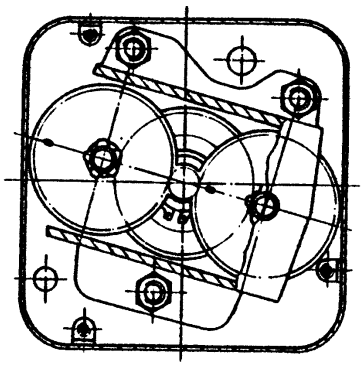
10. MAINTENANCE (see § 3 and 4)

INTERVAL	TYPE OF CHECK	INSPECTION / UPKEEP
1 month	Visual examination	- External condition - Condition of mechanism - Check that the loading chain and attachments are in good condition (1) - Check the hooks are in good conditions - Check the condition of accessories - Check that there is no dust - Check the greasing 1°- With a rag, oil the loading chain (oil grade SAE 80) 2° - Use an oil-can to grease the heads of the hooks at the top and bottom, and also the hoist of the block (for blocks and pulleys)
6 months	In-depth examination	- Correct operation of the brake - See that the sheave is in good condition - Change spare parts and check for wear

(1) : Always keep the chain clean and free of debris. Clean as necessary with paraffin or diesel, drain and re-oil. Do not clean the chain with thinners or degreasing agents under any circumstances.

10.1 - REPLACING THE BRAKE LININGS

1- Remove the three screws, chain wheel flange side
2- Remove the chain wheel case
3- Remove the split pin from the castellated nut
4- Remove the chain from the chain wheel
5- Unscrew the chain wheel
6- Remove the ratchet sub-assembly and the two linings
7- Remove the brake plate



10.2 - CLEANING

- Using a wire brush, clean :

  . the threaded section of the cog shaft
  . the brake plate
  . the threated bore of the chain wheel

- Clean the brake plate
- Change or degrease the linings

10.3 - REASSEMBLY

1- Refit the brake plate and completely tighten the bolts whilst exerting upward pressure on the shaft
2- Fit the first lining.
3- Slightly separate the two pawls an fit the ratchet
4- Ensure that the two pawls are both correctly positioned in the teeth of the ratchets
5- Fit the second lining
6- Bolt on the large chain wheel, machined face towards linings
7- Completely tighten the bolt, lining up the split pin hole with a castellation
8 - Fit the split pin and bend both ends
9 - Refit the chain on the chain wheel
10 - Fit the chain wheel case, use a large screwdriver to ease the fixing tabs over, line up the three tabs with the holes on the flange
11 - Fit and tighten the 3 screws
12 - Test the brake under load conditions

11. CHECKS (see table in § 5.2)

Check the condition of the chain regularly, it should be changed immediately if any of its links are cracked or deformed. Link wear must not exceed 10 % of the diameter of the steel. Dimension X depends on chain type (new chain).

All checks must be carried out by a qualified person. We recommend that you number each hoist and keep a maintenance register.

Setting up the chain :
- Take a flexible electric wire of about 50 cm.
- Insert it into the aluminium chain-guide and push until it comes out on the other side of the chain-guide.
- Hook the chain onto the end of the wire on the load side.
- Pull the wire to bring the chain in contact with the sheave
(at the same time check its position : the soldering of the
vertical links must be on the inside).
- Fix the end-of-run stop ensemble correctly.

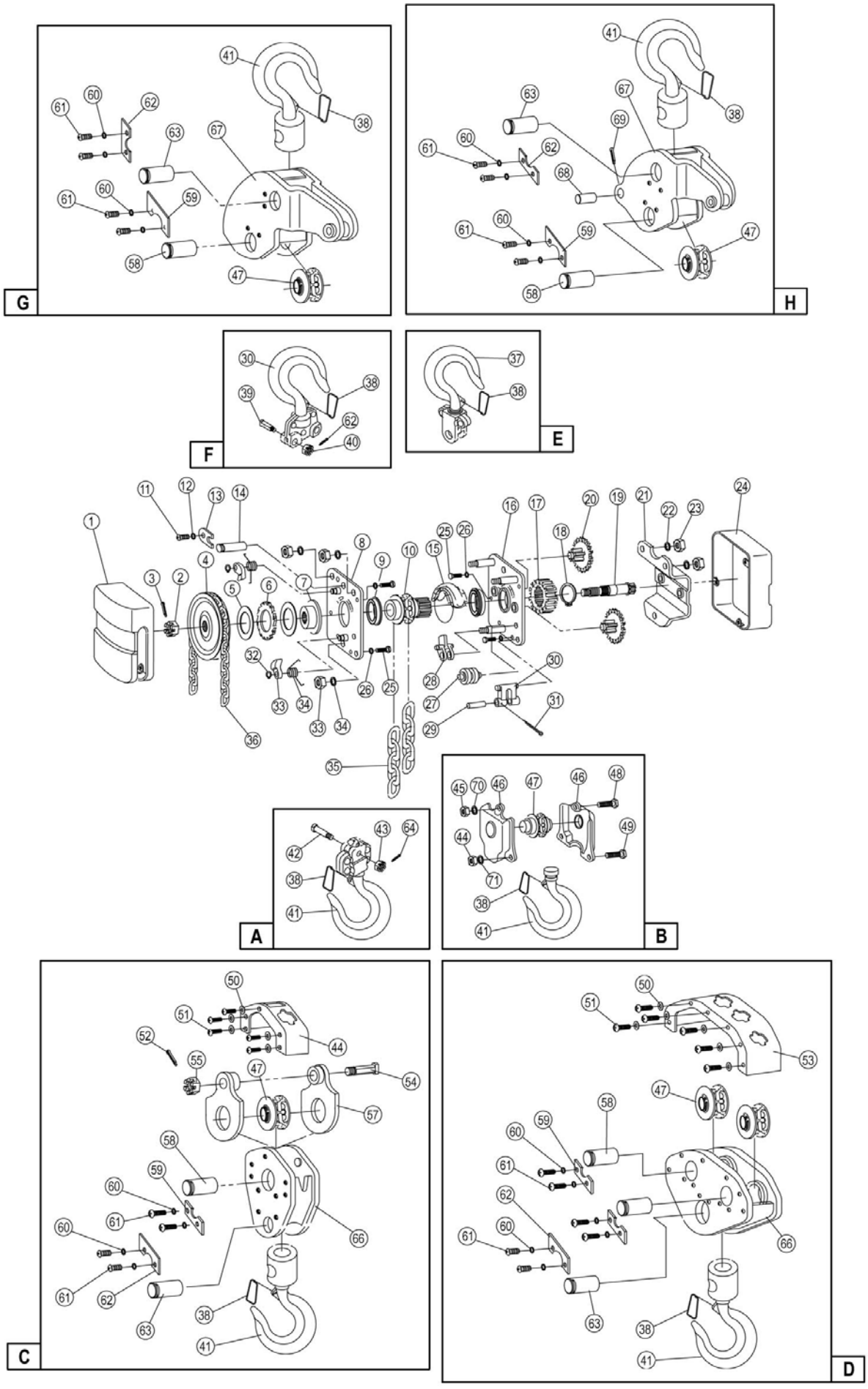
12. DECOMMISSIONING - DISMANTLING - SCRAPPING

If the equipment is decommissioned, remove the used grease for appropriate disposal before scrapping.

13. INSTRUCTIONS FOR EMERGENCY SITUATIONS

Stop the lifting manoeuvre if the brake shows any sign of slipping and have the installation checked by the maintenance department.

14. SPARE PARTS LIST



RECOMMENDED SPARES

Item	Designation	250 kg	500 kg	1000 kg	1500 kg	2000 kg
1	cover side hand wheel	52291750	52291751	52291752	52291753	52291752
4	Hand wheel	52291682	52291683	52291684	52291837	52291684
5	Brake lining	52291686	52291687	52291688	52291638	52291688
6	Ratchet disc	52291690	52291691	52291692	52291839	52291692
7	Brake seat	52303196	52303197	52303198	52303199	52303198
10	Load wheel	52291674	52291675	52291676	52291835	52291676
11+12+13+14	Top pin set	52307245	52307246	52307247	52307248	52307247
15	Chain guide	52303247	52303248	52303249	52303250	52303249
24	Gear side hand wheel	52291754	52291755	52291756	52291757	52291756
27	Guide roller	52291678	52291679	52291680	52291836	52291680
28	Stripper	52307253	52307254	52307255	52307256	52307255
38	Safety latch	52303200	52303201	52303202	52303203	52303204
29+30+31	Suspension pin set	52303453	52303454	52303455	52303456	52303455
35	Lifting chain	52288022	820151	900545	900546	900545
36	Hand chain	52292623	52265127	52265127	52265127	52265127
47	Return wheel	-	-	-	-	52303222
A	Lower hook assy 1 fall	52291694	52291695	52291696	52291697	-
B	Lower hook assy 2 falls	-	-	-	-	52291698
C	Lower hook assy 3 falls	-	-	-	-	-
D	Lower hook assy 4 falls	-	-	-	-	-
E	Upper hook assy 1 fall	52291702	52291703	52291704	52291705	-
F	Upper hook assy 2 falls	-	-	-	-	52291706
G	Upper hook assy 3 falls	-	-	-	-	-
H	Upper hook assy 4 falls	-	-	-	-	-

Item	Designation	3000 kg	5000 kg	6300 kg	7500 kg	10000 kg
1	cover side hand wheel	52291753	52307042	52307042	52307042	52307042
4	Hand wheel	52291837	52307029	52307029	52307029	52307029
5	Brake lining	52291838	52307030	52307030	52307030	52307030
6	Ratchet disc	52291839	52307031	52307031	52307031	52307031
7	Brake seat	52303199	52307272	52307272	52307272	52307272
10	Load wheel	52291835	52307026	52307026	52307026	52307026
11+12+13+14	Top pin set	52307248	52307280	52307281	52307281	52307282
15	Chain guide	52303250	52307277	52307277	52307277	52307277
24	Gear side hand wheel	52291757	52307043	52307043	52307043	52307043
27	Guide roller	52291836	52307027	52307027	52307027	52307027
28	Stripper	52307256	52307287	52307287	52307287	52307287
29+30+31	Suspension pin set	52303456	52307278	52307278	52307278	52307278
35	Lifting chain	900546	52298372	52298372	52298372	52298372
36	Hand chain	52265127	52265127	52265127	52265127	52265127
38	Safety latch	52303205	52307273	52307274	52307274	52307275
47	Return wheel	52303223	52307276	52307276	52307276	52307276
A	Lower hook assy 1 fall	-	-	-	-	-
B	Lower hook assy 2 falls	52291699	52307032	-	-	-
C	Lower hook assy 3 falls	-	-	52307033	52307033	-
D	Lower hook assy 4 falls	-	-	-	-	52307036
E	Upper hook assy 1 fall	-	-	-	-	-
F	Upper hook assy 2 falls	52291707	52307037	-	-	-
G	Upper hook assy 3 falls	-	-	52307038	52307038	-
H	Upper hook assy 4 falls	-	-	-	-	52307040