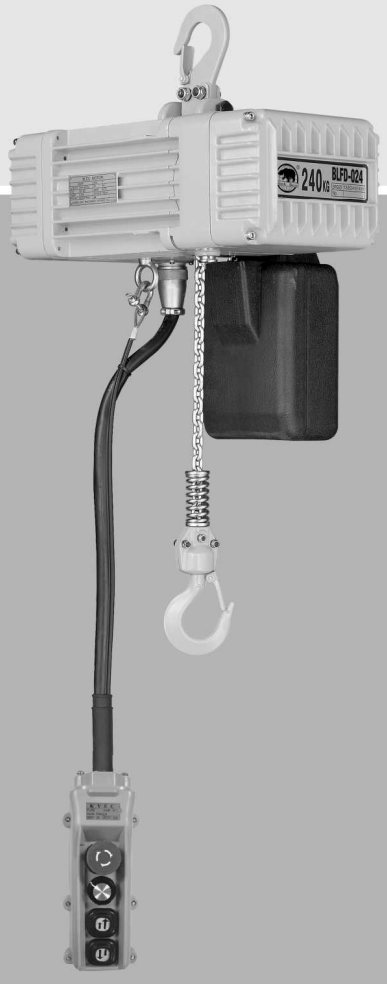
Black Bear ®

Electric Chain Hoist



Operation Manual
&
Parts List

Series

- ☐ BLFD-008-1
- ☐ BLFD-012-1
- ☐ BLFD-016-1
- ☐ BLFD-024-1
- ☐ BLFD-032-2
- ☐ BLFD-048-2

CE

CHENG DAY MACHINERY WORKS CO., LTD.

SAFETY-IMPORTANT

The use of any hoist and trolley presents some risk of personal injury or property damage.

That risk is greatly increased if proper instructions and warnings are not followed. Before using this hoist, each user should become thoroughly familiar with all warnings, instructions and recommendations herein.

THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS.
READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL AND ANY PROVIDED WITH THE EQUIPMENT BEFORE ATTEMPTING TO OPERATE YOUR "Black Bear" ELECTRIC CHAIN HOIST.

CONTENTS

1.FOREWORD

This manual contains important information to help you properly install, operate and maintain the Black Bear electric chain hoist for maximum performance, economy and safety.

Please study its contents thoroughly before putting the electric Chain hoist into operation. By practicing correct operation, procedures and by carrying out the preventative maintenance recommendations, you will be assured of dependable service. In order to help us to supply correct spare parts quickly, please always specify,

(1) Hoist model

(2) Serial number

(3) Part number, plus the description.

We will have your trust of Cheng Day's long term satisfactory service as our belief.

Should you have any queries, please contact:

(Please ask for a company's stamp from your local agent)

2. MAIN SPECIFICATIONS

2.1 Specifications

The following specifications are common to all Black Bear electric chain hoists.

Table 2-1 Specifications

Item		Detail	
Working temperature range (℃)		-5 to +40	
Working humidity range (%)		85 or less	
Protection	Hoist	IP 55	
	Push button Switch	IP 65	
Electric power supply		Single phase,90V~270V,50Hz/60Hz	
Noise level (dB)		81	
Series No.	WLL (working load limit) (kg)	Nominal diameter (mm)	Pitch (mm)
BLFD-008	80kg	4.0	12
BLFD-012	120 kg	4.0	12
BLFD-016	160 kg	4.0	12
BLFD-024	240 kg	4.0	12
BLFD-032	320 kg	4.0	12
BLFD-048	480 kg	4.0	12

Remarks: (1) Contact an authorized Black Bear dealer for information on using the hoist outside the working temperature or humidity range.

(2) Intended use : This hoist has been designed for vertically lifting and lowering load under normal atmospheric conditions of work place.

(3) Noise levels were measured at a distance of 1m horizontally from the hoists during normal operation.

2.2 Mechanical Classification (Grade) and Lift

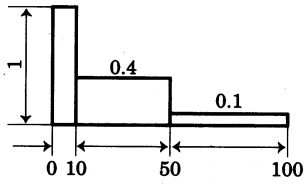
Safety and life for electric chain hoists are guaranteed only when the said equipment is operated in accordance with the prescribed grade.

Black Bear BLFD single phase electric chain hoists have been designed for grade 1Am in the FEM regulations (FEM 9.511).Details are provided in Table 2-2.

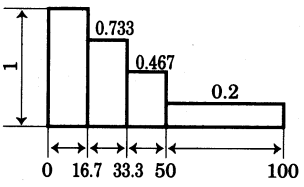
Average daily operating time and total operating time are determined by load distribution.

Table 2-2 Mechanical classification

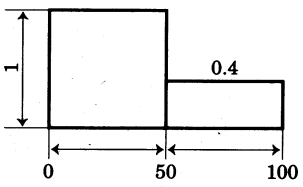
Load Spectrum (Load distribution)	Definitions	Cubic mean value	Average daily operating time(h)	Total operating time(h)
1 (light)	Mechanisms or parts thereof, usually subject to very small loads and in exceptional cases only to maximum loads.	k≦0.50	2 - 4	6300
2 (medium)	Mechanisms or parts thereof, usually subject to small loads but rather often to maximum loads.	0.50<k ≦0.63	1 - 2	3200
3 (heavy)	Mechanisms or parts thereof, usually subject to medium loads but frequently to maximum loads.	0.63<k ≦0.80	0.5 - 1	1600
4 (very heavy)	Mechanisms or parts thereof, usually subject to maximum of almost maximum loads.	0.80<k ≦1.00	0.25 - 0.5	800



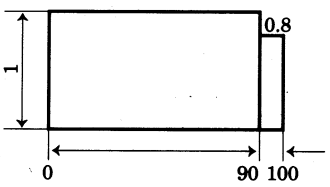
% operating time
Load spectrum 1



% operating time
Load spectrum 2



% operating time
Load spectrum 3



% operating time
Load spectrum 4

2.3 Safety Devices

(1) Mechanical load brake

The mechanical load brake can hold a full capacity load independent of motor brake. This brake assures that load does not accelerate while being lowered.

(2) Hook and hook latch

The hook is drop-forged from high tensile steel and heat treated for strength and toughness.

The button hook is capable of 360° swivel and fitted with safety latch to ensure safe lifting.

(3) Limit Switches

Upper and lower limit switches are fitted for switching off power automatically in case of over lifting or over lowering.

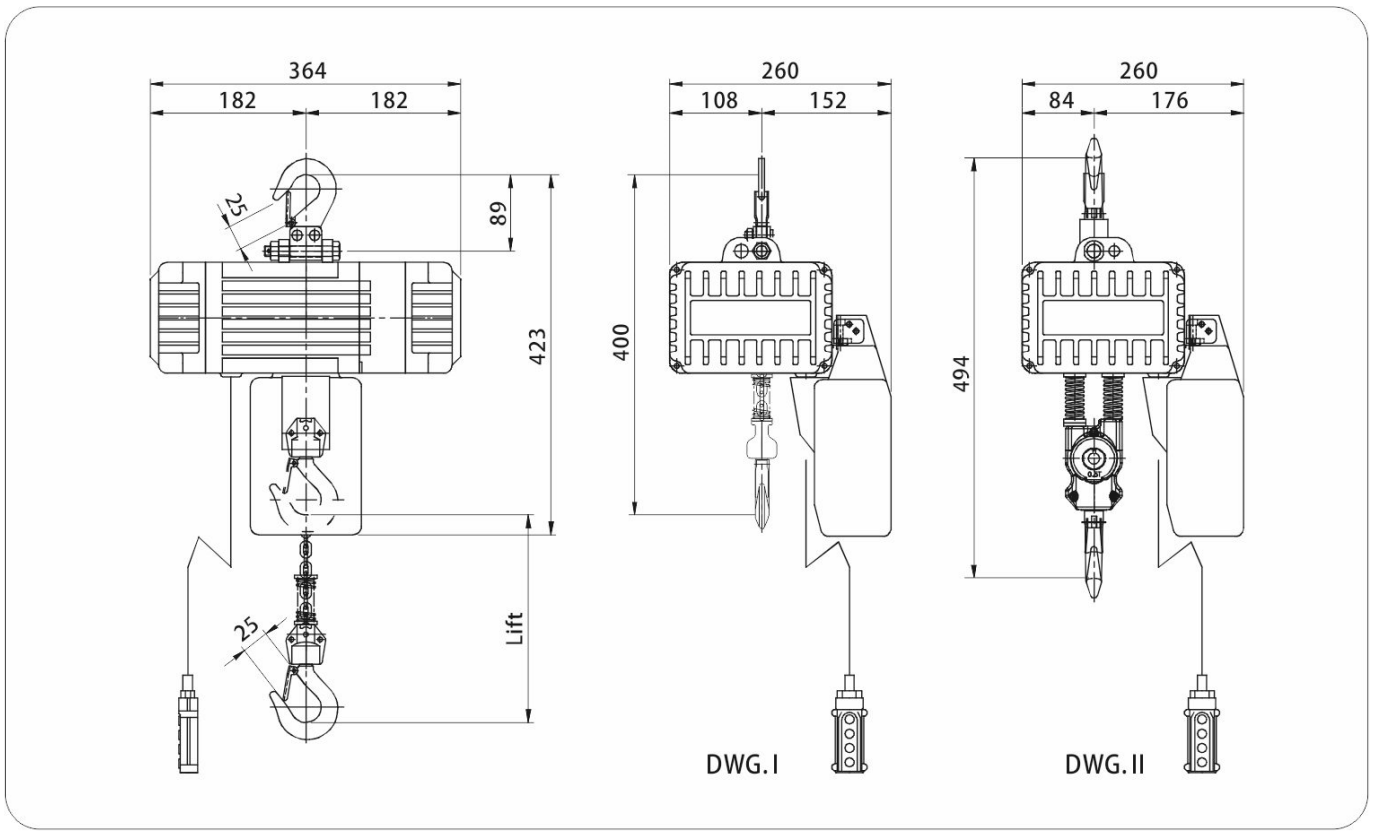
(4) Emergency stop device

This button is used to stop the hoist in an emergency situation. It is red, mushroom type button, located in the uppermost position on the pendant. When pressed, power to the equipment is switch off and button locks automatically. Turning it to the right will release the lock and to enable re-starting.

(5) Shock protection

It cannot run, when you push the button for anti-direction in "UP" or "DOWN" running. You must wait over 1 second.

2.4 Specification and Dimensions



Rated Power Source	Single Phase , 90V~ 270V, 60Hz / 50Hz											
Model	DWG.	Capacity (kg)	Motor Output (W)	Intermittent Duty		Rated Current (A)	Lifting Speed (m/min)		Standard Lift (m)	Load Chain Diameter (mm)	Fall no.	N.W. / G.W. (kg)	
				%ED	Max.Starting Frequency (times/hr)		Low	High				3m	6m
BLFD - 008	I	80	300	30	180	6.0 (110V) 3.0 (220V)	1.8- 4.8	18	3	4X12	1	16.5/ 19.5	17.5/ 20.6
BLFD - 012	I	120					1.25-3.2	12.5			1		
BLFD - 016	I	160	600	30	180	10.0 (110V) 5.0 (220V)	1.8 - 4.8	18	3	4X12	1	16.5/ 19.5	17.5/ 20.6
BLFD - 024	I	240					1.25-3.2	12.5			1		
BLFD- 032	II	320	600	30	180	10.0 (110V) 5.0 (220V)	0.9 -2.4	9	3	4X12	2	19.4/ 22.4	21.5/ 24.5
BLFD - 048	II	480					0.63-1.6	6.3			2		

※Packing (L x W x H) : 500 x 390 x 205 (mm) ※ Maximum Push Button Cable Length 20m

3. SAFETY RULES

⚠ DANGER

The hoist herein is not designed for, and should not be used for, lifting, supporting, or transporting personnel. Any modifications to upgrade, re-rate, or otherwise alter the hoist equipment must be authorized by either the original manufacturer or a qualified professional engineer.

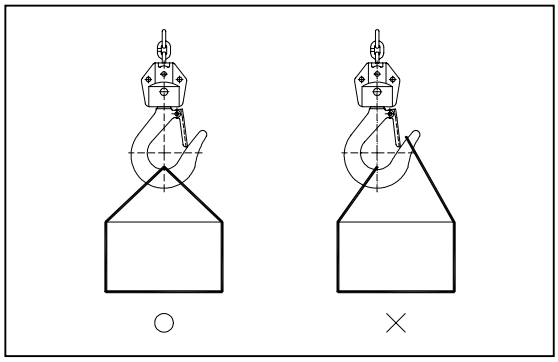
⚠ DANGER

Do not use the hoist in explosive atmosphere.

(1) Prior to each lifting operation, it is essential to make sure that:

(a) The correct lifting sling is being used.

(b) The lifting sling is located in the hook as shown below (Illust. 2) and that a safety latch has been fitted.



Illust. 2

(c) The object to be hoisted is well secured for direct lifting (a proper lifting frame or apparatus is strongly recommended for direct lifting .)

(2) Firm and steady button operation is required, never push the button switch intermittently.

(3) Always avoid excessive inching operation.

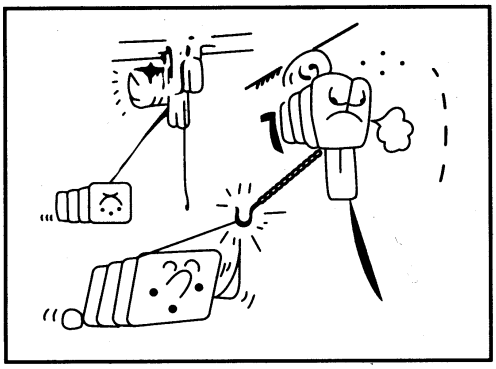
(4) Always make sure the hoist motor completely stops before reversing.

(5) Always leave the pendant button switch cable and bottom hook load chain vertically static after completion of operation, never leave them at any position, which may allow them swing or slip.

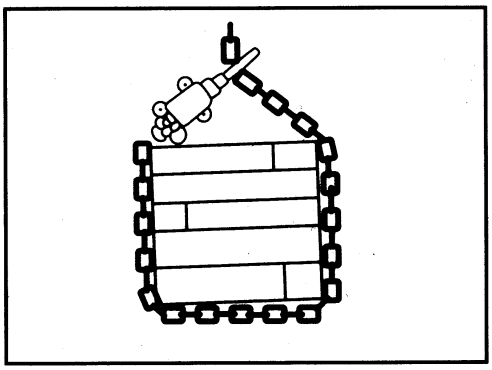
(6) Sling must be applied to load evenly and centrally to ensure correct balance.
Never lift any object which is insecure or out of balance.

(7) Never use hoist to end or side pull a load. (Illust. 3)

(8) Never wrap around and hook back the load chain as a sling to lift a load. (Illust. 4)



Illust. 3



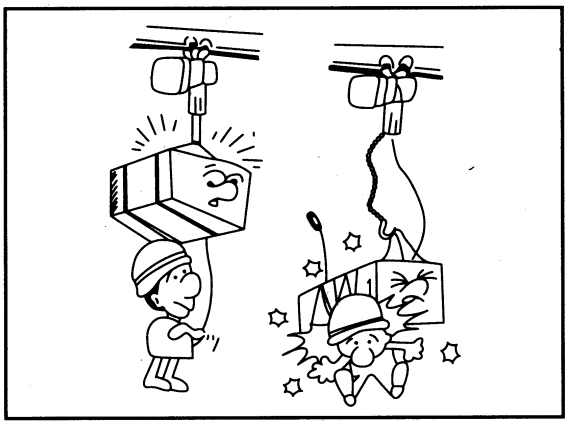
Illust. 4

⚠WARNING

Do not use the hoist chain as a welding electrode.

⚠ DANGER

Never stand under a raised load (Illust. 5)



Illust. 5

(9) Lifting must always be personally attended, never leave a raised load unattended.

(10) Over-capacity-load lifting is hazardous and should not be undertaken.

(11) Never lift a load when the load chain is twisted.

(12) Regularly inspect and check the condition of load chain. Do not operate with damaged chain.

(13) Bucket Specifications:

Bucket No.	Key No.	Bucket Size (mm)	Fall No.	Lift (m)	Chain (mm)	Material
BD1#	208813	90×130×245	1	3~6	Ø4.0	Polyethylene
			2	3		
BD2#	201386	120×160×230	1	6~12	Ø4.0	Polyethylene
			2	3~6		
BD3#	201606	131×160×260	1	12~18	Ø4.0	Canvas
			2	6~9		
BD4#	201607	131×166×310	1	18~24	Ø4.0	Canvas
			2	9~12		
BD5#	201608	131×166×390	1	24~30	Ø4.0	Canvas
			2	12~15		
BD6#	201609	131×166×470	1	30~36	Ø4.0	Canvas
			2	15~18		
BD7#	201610	131×166×550	1	36~42	Ø4.0	Canvas
			2	18~21		
BD8#	201611	131×166×645	1	42~50	Ø4.0	Canvas
			2	21~25		

※ Remember to change bucket if the length of chain increased.

4. INSTALLATION

4.1 Unpacking Information

After removing the hoist from its packing box, carefully inspect the external condition of the electrical cables, contactor, gear box and motor casing for damage.

Check and ensure that these items are present.

Each hoist is supplied as standard with the following accessories.

1. Chain bucket	1 piece
2. Power cable	3 meters
3. Separated control cable with PBS and male plug	1 set

Table. 4-1

4.2 Voltage

⚠CAUTION

If power supply deviates from standard by more than ± 10%, abnormal operation or damage to the motor may result. It is imperative to ensure correct voltage supply before commencing operation.

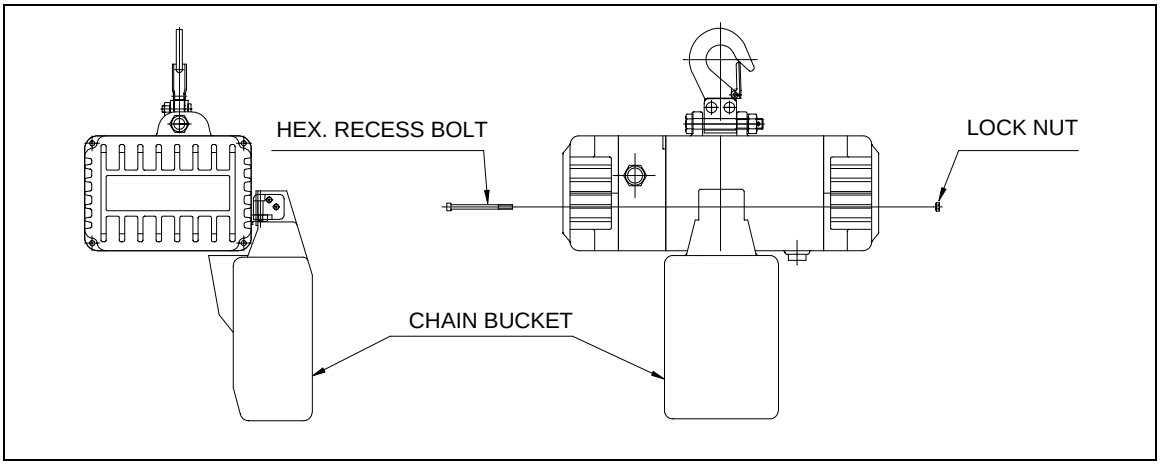
4.3 Installation

⚠WARNING

Connection to power supply before installation procedures having been completed is strictly prohibited.
The equipment safety earth connection on the plug must NEVER be removed.

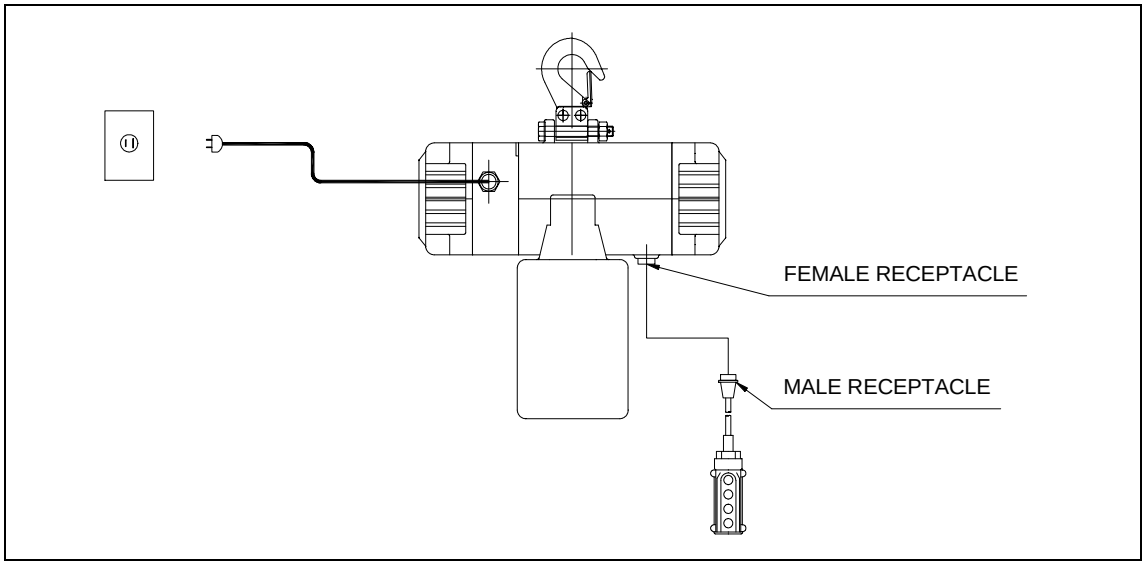
(1) Prior to installation check and ensure that the top hook assembly is securely attached to the hoist by means of the lock bolt (key No.56, page.22).
NOTE: If the hoist is to be installed under a trolley, remove the top hook and install the trolley on the hoist.

(2) Assemble chain bucket.



Illust. 6

(3) Plug power supply to hoist and operate the push button switch. This operation must be carried out by a trained person.



Illust. 7

(4) Operation Test

(a) Firmly push ⬇ switch button to lower load chain until the chain end buffer touches the limit switch. Power should be cut off automatically.

(b) Firmly push ⬆ switch button to check the collection of load chain into chain bucket.

(c) Check load chain lubrication. (It has been lubricated at our works, but the lubricant may dry out during transportation) Any readily available lubricant is recommended. It is further advisable to keep a small amount of lubricant in chain bucket to allow chain in oil bath.

(d) Check the emergency stop device function :

While holding down either ⬆ or ⬇ button on the push button switch, push the emergency stop button. Check that the hook stops when the emergency stop button is pushed. Also, check the hoist does not move in response to the push button switch. Finally, check that the emergency stop device pops out when turned to the right and that operation can be resumed thereafter. If the equipment fails to pass another above checks, check the wiring and automatic locking function of the emergency stop device.

5. OPERATION

After running test and checks have been completed, the hoist will be ready for normal operation.

⚠WARNING

Since dealing with heavy loads may involve unexpected danger all of the "SAFETY RULES" (Ref 3.) must be followed and the operator must be aware of the following points while using the hoist.

(1) On connection of power supply allow 15 seconds to initiate start up.

(2) The operator must have a clear and unobstructed view of the entire working area before operating the hoist.

(3) The operator must check that the entire working area is safe and secure before operating the hoist.

(4) When using the hoist with a plain trolley, the operator must take care to prevent excessive load swinging by sympathetic push trolley movements.

6. MAINTENANCE AND INSPECTION

⚠ DANGER

Do not perform maintenance on the hoist while it is carrying a load except monthly checking for the brake, limit switch or slip clutch.

⚠ DANGER

Before performing maintenance do not forget to affix tags to the power source and the push button switch reading : "DANGER", "EQUIPMENT BEING REPAIRED".

6.1 Maintenance

(1) Check the level of gear box lubricant after first 100 hours of operation, thereafter every 3 months and lubricant accordingly. Lubricant use SHELL S4 WE460 or equivalent.

(2) Always keep the hoist unit dry and never misuse it in a manner likely to reduce its durability.

(3) When it is necessary to keep the unit outdoors, a protective covering should be fitted.

6.2 Inspection

(1) Daily inspection: Before starting daily operation, check the following,

(a) Correct power supply.

(b) "Up" , "Down" and "Emergency stop" (where fitted) test runs under no load.

(c) Correct motor performance.

(d) No abnormal or excessive noise.

(e) No malfunction of the bottom hook safety latch.

(f) Proper function of moving/turning parts, limit switches and brake.

(g) Well lubricated load chain.

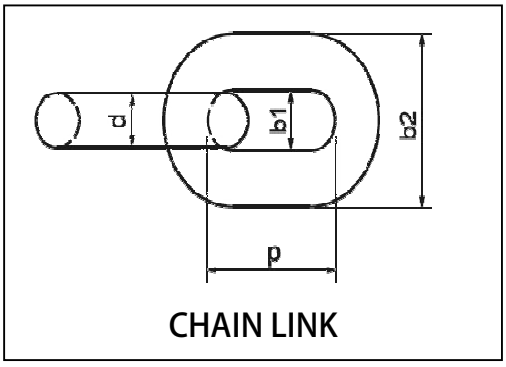
(2) Monthly inspection

⚠WARNING

Always use the hoist manufacture's recommended parts when repairing a hoist.

(a) Load chain:

Distorted, elongated or worn chain link will not sit properly on the load sprocket wheel and may cause chain breakage and/or damage to hoist unit. To ensure safe and efficient operation, the chain links must be checked for their pitch (inside length, inside width) and outside width monthly according to following table.



CHAIN LINK

Dia-Meter (mm) (d)	Inside Length (mm) (p)	Inside Width (mm) (b1)	Outside Width (mm) (b2)	Breaking Load (kN)
4	12	5	13.6	20.1

Chain Gauge — Wear and Stretch Measuring

(1) The chain gauge is useful and convenience for measuring.
(2) Please use a chain gauge to measure the chain pitch and diameter, such as illustrations (1) and (2).
(3) Every chain ring must be measured, and the chain must be replaced when one of chain ring is wear or stretch.
(4) It will be a cutting-out possibility if you use a chain fall either wear or stretch during operation.
(5) Do not replace a chain fall by yourself and do please contact specific either service centers or contractors to help you out.
(6) The chain fall must be replaced whole instead of a partial part.
(7) The load sheave, regulator, and chain compressing wheel must be replaced the same time as you do a second time replacement.

Remark :

(1) Chain must be perfect condition without any defects and attachments.

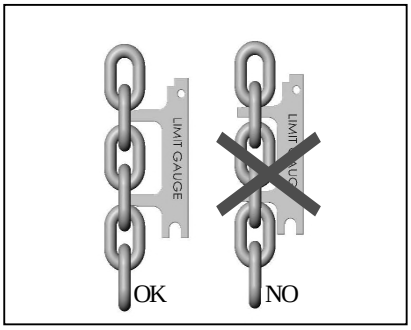


Illustration (1)
Chain pitch measure

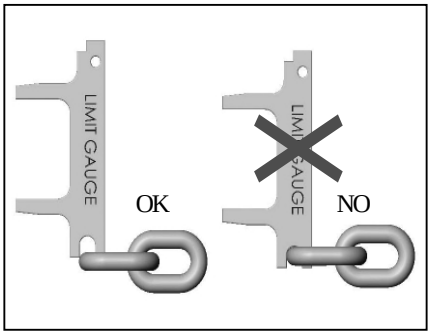
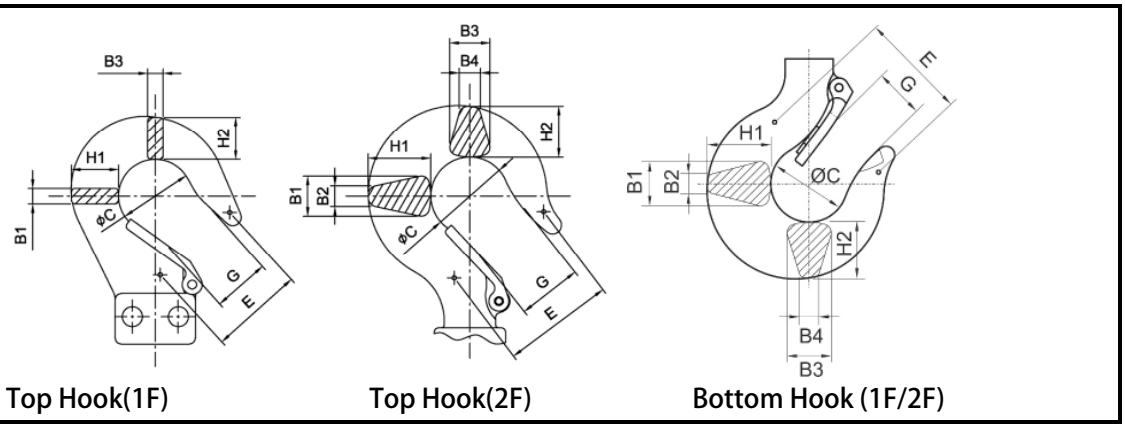


Illustration (2)
Diameter measure

(b) Load hook:

Check hook with care. If hook shows crack deformation or wear in excess of 5% of its original size, it should be replaced. (Ref. following table)



Top Hook(1F) Top Hook(2F) Bottom Hook (1F/2F)

Fall	Hook	Dimensions (mm)									Allow Stress (kg/mm²)
		H1	B1	B2	H2	B3	B4	C	G	E	
1F	T	21	7	-	19	7	-	33	25	42	70
	B	20	12	6	20	12	6	36	24	42	70
2F	T	28	18	8	23	18	8	35	28	50	70
	B	28	18	8	23	18	8	35	28	50	70

T= Top Hook B=Bottom Hook

(3)Annual inspection

⚠WARNING

Your dealer should be asked to perform this inspection.

(a) check gearing for any excessive wear or damage.

(b) Replace gear box lubricant completely (500C.C ±10%) as following table for your reference.

NOTE：We recommend using lubricant oil equivalent to SHELL OMALA S4 WE 460.

※Table of recommended oils according to DIN 51354

ISO-VG DIN 51519 viscosity At 40℃ mm²/s (cST)	Approximate viscosity of the VG Categories 50℃ mm²/s (cST)	ARAL	BP	ESSO	MOBIL OIL
VG460	251	Aral Degol BG 460-BMB 460	BP Energol GR-XP 460	Spartan EP-460	Mobilgear 634

ISO-VG DIN 51519 viscosity At 40℃ mm²/s (cST)	Approximate viscosity of the VG Categories 50℃ mm²/s (cST)	SHELL	TEXACO	I..P.	AGIP
VG460	251	Omala oil 460	Meropa 460	Mellana 460	Blasia 460

(c) Check brake lining and ratchet pawl for any wear or damage.

(d) Check operation of pawl spring.

(e) After reassembly of above check, lifting a load several times to ensure good performance of the hoist before starting duty operation.

7. TROUBLESHOOTING

7.1 Wiring Diagrams

(1) 90V~270V — 1Ph — 50/60Hz power supply (With Emergency Stop) 17

The above listed wiring diagram for reference only.

The end user should refer to the wiring diagram stuck to the inside cover of electric housing.

Our electric specifications can be done according to following.

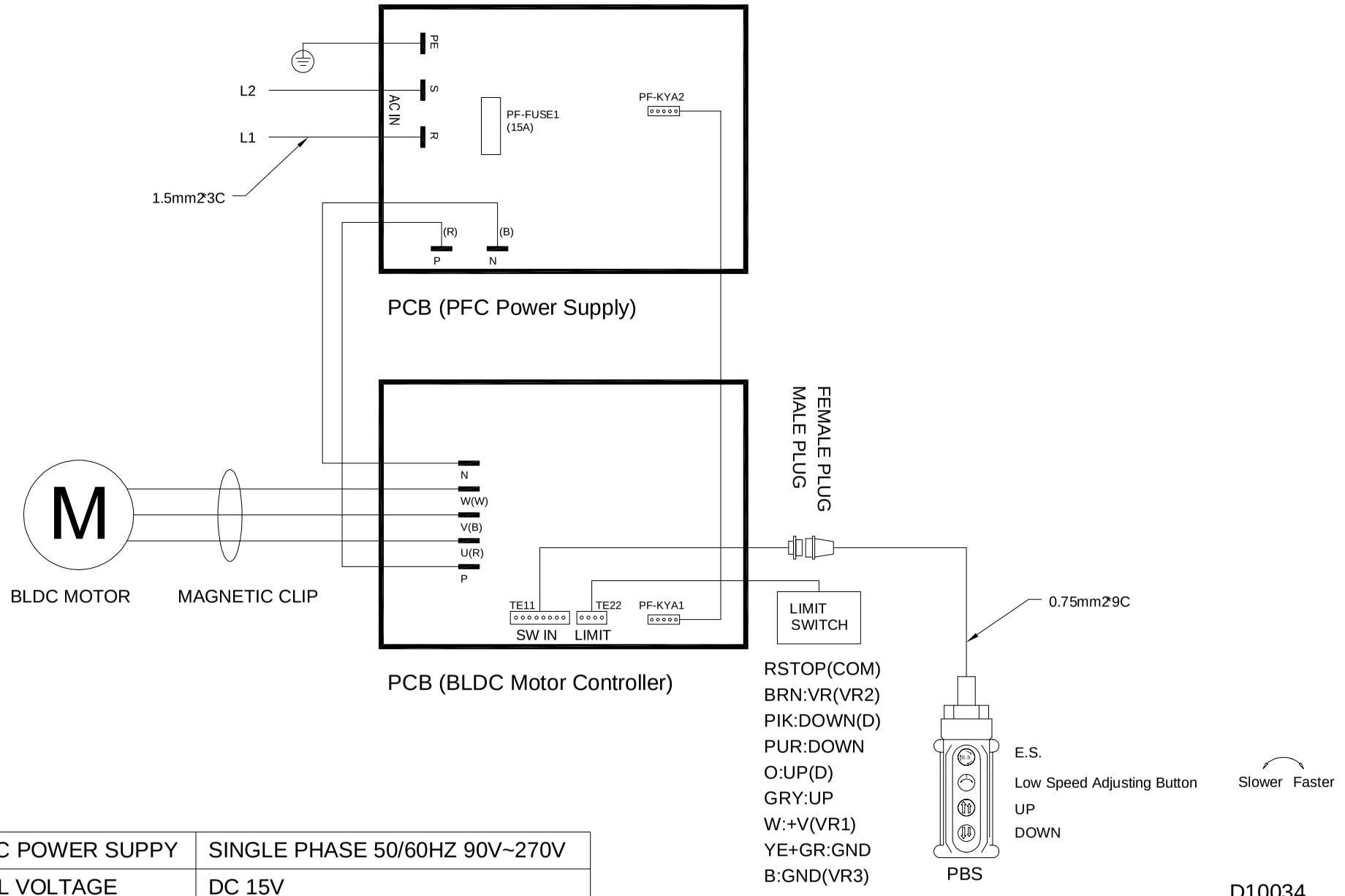
(a) 1 — Phase

(b) 50Hz or 60Hz

(c) 90V~270V

Warranty Details

1. Warranty Period : One year for Mechanical Spare Parts after purchase the product.
2. Non-Warranty Scope:
   a. Electrical Spare Parts (ex. Contactor, Pendant, Phase Error Relay, etc.)
   b. Expense Spare Parts (ex. Chain Bucket, Brake Lining, etc.)
   c. Damage caused by unsuitable operation.
      (ex. Galvanize plant, Chemical Plant, Dye-work, etc.)
   d. Damage caused by operating on the wrong electric voltage.
   e. Damage caused by user amend the product.
   f. Damage caused by natural disaster.
3. Warranty Scope shall be permitted by Cheng Day Machinery and Within One Year of damaged Mechanical Spare Parts Repair and Replacement.
   (circumstance stated in detail No. 2 are not included.)



ELECTRIC POWER SUPPY	SINGLE PHASE 50/60HZ 90V~270V
CONTROL VOLTAGE	DC 15V

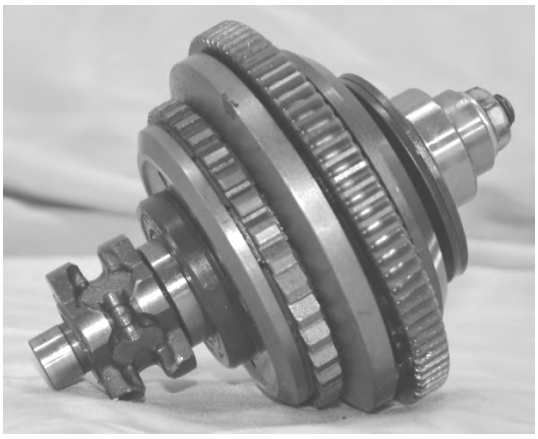
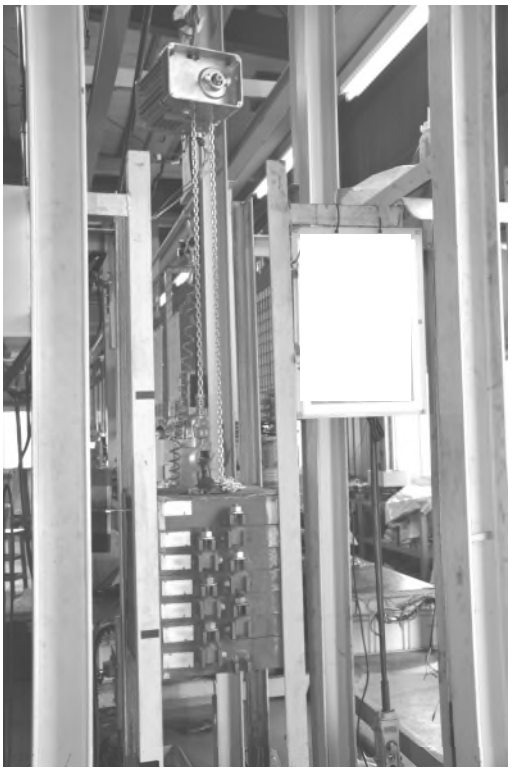
D10034

7.2 Troubleshooting and Remedial Action

SITUATION	CAUSE	REMEDY
Hoist will not operate	(1) Phase error relay operated due to incorrect phase connections.	Check the phase connections of controller & the wire's color of BLDC motor for correct Ref. Page 16 or 17.
	(2) Blown power fuse or tripped power circuit breaker.	Check supply requirements and refuse/reset breaker to meet requirements Contact your authorized "Black Bear" dealer- if high voltage fuse was blown
	(3) Blown control circuit fuse.	Check fuse for correct rating and replace
	(4) Broken/disconnected power or control circuit wire.	Locate and repair/reconnect (take the power supply away until 10 min. later)
	(5) Low supply voltage	Check if 10% reduction in voltage, have mains supply checked
	(6) Motor hums but does not rotate	Check motor-insulate and wire connection
	(7) Emergency stop button release pushed	Check the cause as necessary
	(8) The button of PBS is fixed (9) The button or Elect. wire of PBS is broken	Release the button of PBS Replace or repair it (take the power supply away until 5 min. later)
	(10) Broken/is connected limit switch	Locate and repair/reconnect
Brake slips	Abrasion of motor brake	Replace
Hoist runs but does not lift	(1) Clutch slipping	Contact your authorized " Black Bear " dealer — this adjustment needs to be carried out on a test rig
Abnormal sound on load chain/chain sprocket	(1) Chain dry (2) Worn chain sprocket	Lubricate Replace load chain and chain sprocket
Electric shock	(1) Poor earth connection (2) Accumulated foreign matter/ moisture on electrical parts	Provide correct earth connection Remove foreign matter/dry electrical parts
Oil leak	(1) No oil plug (2) Loose fitting of oil plug (3) No plug packing (4) Worn or deteriorated oil packing	Attach the normal oil plug Fasten the plug tightly Attach normal packing Attach the new packing

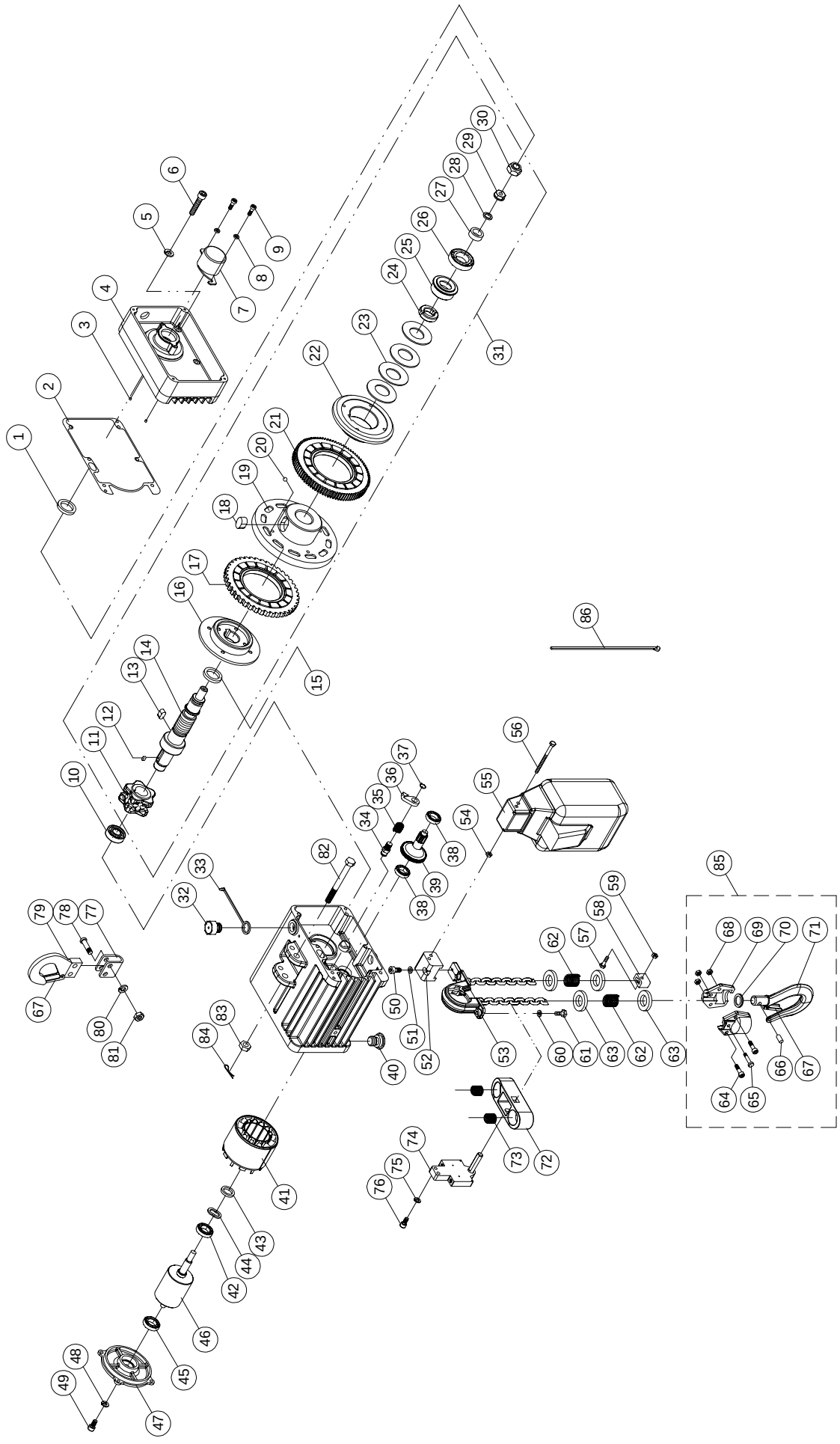
7.3 BLFD Overload clutch adjustment instructions

This procedure requires professional personnel to operate.

Description	Picture
1. Overload Protection Assembly	
1. Tool for Overload clutch adjustment <ring spanner no. 17>	
1. Adjust the load to 125% rated load	

Description	Picture
1. Use ring spanner to tighten the clutch nut. 2. It can be able to lift in 125% rated load 3. Adjust the load to 150% rated load. 4. Clutch is slipping, cannot lift, setting complete. 5. Setting the clutch does not slip when lifting a load: 1) Loosen the adjusting nut, and set the clutch slip, be unable to lift the load 2) Adjust the load to 125% rated load, clutch does not slip and can be able to lift the load 3) Adjust the load to 150% rated load, clutch slip the loading material. Setting complete. 6. Setting of overload is 125% rated load can be able to lift and 150% rated load have to slip	 
1. Apply screw fixation agent on the bolt.	
1. Tighten with anti-loose nut	
1. Adjust the load to 125% rated load 2. It can be able to lift in 125% rated load 3. Overload clutch setting complete.	

BLFD-008,012,016,024 BODY EXPLOSION



BLFD-008,012,016,024 BODY PARTS B.O.M.

KEY NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT			
			008	012	016	024
1	400943	Oil Seal<Ø25×Ø35×5t>	1	1	1	1
2	402586	Gasket #40	1	1	1	1
3	400615	Parallel Pin <Ø5×12L>	2	2	2	2
4	208815	Gearbox	1	1	1	1
5	400094	Spring Washer <M6>	6	6	6	6
6	400418	Hex. Recess Bolt <M6×1.0×30L>	6	6	6	6
7	208836	Cover	1	1	1	1
8	400661	Flat Washer <M4>	2	2	2	2
9	408394	Cross Headed Screw <M4×0.7×6L>	2	2	2	2
10	400110	Bearing <6202 ZZ>	1	1	1	1
11	208834	Load Sheave	1	1	1	1
12	405924	Key <5×5×20L>	1	1	1	1
13	400962	Key <6×6×12L>	1	1	1	1
14	201219	Sheave Spindle <Ø30×145L>	1	1	1	1
15	400934	Oil Seal <Ø30×Ø50×8t>	1	1	1	1
16	201321	Brake Body <Ø83×Ø20×17.5L>	1	1	1	1
17	208843	Ratchet Ass'y	1	1	1	1
18	405944	Key <10×8×16L>	1	1	1	1
19	201340	Brake Bushing <Ø105×27.85L>	1	-	1	-
	201327	Brake Bushing <Ø105×27.75L>	-	1	-	1
20	400289	Ball	3	3	3	3
21	268132	4th Gear Ass'y <M1.25×83T>	1	-	1	-
	201329	4th Gear Ass'y <M1.25×89T>	-	1	-	1
22	201323	Brake Flange <Ø87×19.1L>	1	1	1	1
23	207118	Disc Spring	3	3	-	-
	200404		-	-	3	4
24	200272	Load Brake Gear Spacer	2	2	2	2
25	201325	Bush<Ø34×10L>	1	1	1	
	206563	Bush<Ø34×12L>				1
26	400125	Bearing<6003>	1	1	1	1
27	200402	Oil Bush<Ø25×Ø17×9L>	1	1	1	1
28	400226	O-Ring<Ø12×Ø17×2.5>	1	1	1	1
29	200407	Flange Nut<M10×1.5×8L>	1	1	1	1
30	400089	Lock Nut<M10×1.5>	1	1	1	1
31	268221	Over Load Ass'y	1	-	-	-
	268222		-	1	-	-
	201253		-	-	1	-
	201200					1

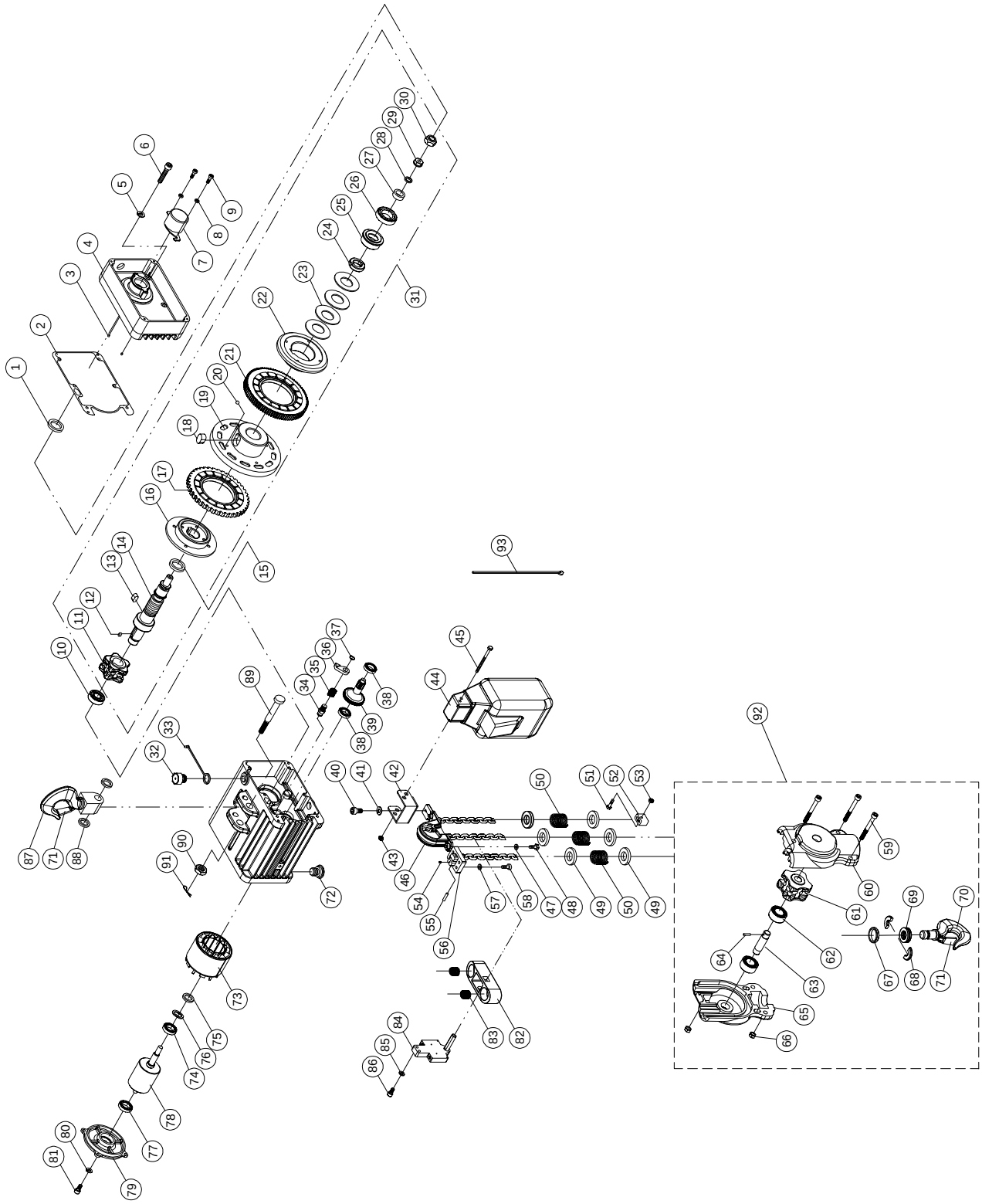
BLFD-008,012,016,024 BODY PARTS B.O.M.

KEY NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT			
			008	012	016	024
32	200926	Hex. Oil Plug	1	1	1	1
33	200927	Air Plug	1	1	1	1
34	200416	Ratchet Pawl Pin <d14×26L>	2	2	2	2
35	408512	Ratchet Pawl Spring	2	2	2	2
36	200415	Ratchet Pawl	2	2	2	2
37	400907	Retaining Ring <S-11>	2	2	2	2
38	407845	Bearing<6000>	2	2	2	2
39	201320	2nd & 3rd Gear Set	1	-	1	-
	200417		-	1	-	1
40	300523	Oil plug <Philips Machine Screw Ass'y >	1	1	1	1
41	106120	Stator Ass'y <300W>	1	1	-	-
	106109	Stator Ass'y <600W>	-	-	1	1
42	405641	Bearing <6201 2RS>	1	1	1	1
43	400945	Oil Seal <Ø12×Ø25×7t>	1	1	1	1
44	400863	Wave Washer <6201>	1	1	1	1
45	405569	Bearing <6201ZZ>	1	1	1	1
46	102522	Rotor <300W>	1	1	-	-
	102523	Rotor <600W>	-	-	1	1
47	106111	Motor End Cover	1	1	1	1
48	400093	Spring Washer <M5>	4	4	4	4
49	400003	Hex. Recess Bolt <M5×0.8×16L>	4	4	4	4
50	408396	Hex. Recess Bolt <M5×0.8×10L>	1	1	1	1
51	400093	Spring Washer <M5>	1	1	1	1
52	208824	Chain Bucket Connector	1	1	1	1
53	208816	Chain Guide	1	1	1	1
54	400646	Lock Nut <M5>	2	2	2	2
55	208813	Chain Bucket <No.1>	1	1	1	1
56	408486	Hex. Recess Bolt <M5×0.8×70L>	2	2	2	2
57	200445	Lock Pin <Ø10×25.5L>	1	1	1	1
58	200441	Chain Stopper <24×19×13.5>	1	1	1	1
59	400646	Lock Nut <M5>	1	1	1	1
60	400094	Spring Washer <M6>	2	2	2	2
61	400006	Hex. Recess Bolt <M6×1.0×16L>	2	2	2	2
62	408485	Spring	2	2	2	2
63	200442	Buffer Steel Plate <Ø25.5×Ø14×t4>	4	4	4	4

BLFD-008,012,016,024 BODY PARTS B.O.M.

KEY NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT			
			008	012	016	024
64	408329	Hex. Recess Bolt <M5×0.8×20L>	2	2	2	2
65	200445	Lock Pin <Ø10×25.5L>	1	1	1	1
66	407463	Parallel Pin <Ø8×25L>	1	1	1	1
67	200480	Safe Latch Ass'y	2	2	2	2
68	400646	Lock Nut <M5>	3	3	3	3
69	201371K	Bottom Hook Cover Set	2	2	2	2
70	400830	Thrust Bearing	1	1	1	1
71	201372K	Bottom Hook	1	1	1	1
72	208857	Collision Block	1	1	1	1
73	408588	Collision Block Spring	2	2	2	2
74	208818	Limit Switch Ass'y	1	1	1	1
75	400093	Spring Washer <M5>	2	2	2	2
76	400417	Hex. Recess Bolt <M5×0.8×20L>	2	2	2	2
77	200432	Top Hook Suspension <t20×37×39L>	1	1	1	1
78	200433	Top Hook lock bolt <Ø12×29.5L>	2	2	2	2
79	200456K	Top Hook	1	1	1	1
80	400095	Spring Washer <M8>	2	2	2	2
81	400088	Lock Nut <M8×1.25>	2	2	2	2
82	208827	Lock Bolt <Ø12/M12×1.75×85L>	1	1	1	1
83	400084	Hex. Nut <M12×1.75>	1	1	1	1
84	400610	Cotter Pin <Ø3×30L>	1	1	1	1
85	228922	Bottom Hook Ass'y	1			
	228902			1		
	228923				1	
	228921					1
86	400512	Substitute Chain <Ø4.0×12>	1	1	1	1

BLFD-032,048 BODY EXPLOSION



BLFD-032,048 BODY PARTS B.O.M.

KEY NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT	
			032	048
1	400943	Oil Seal <Ø25×Ø35×5t>	1	1
2	402586	Gasket #40	1	1
3	400615	Parallel Pin <Ø5×12>	2	2
4	208815	Gearbox	1	1
5	400094	Spring Washer <M6>	6	6
6	400418	Hex. Recess Bolt <M6×1.0×30L>	6	6
7	208836	Cover	1	1
8	400661	Flat Washer <M4>	2	2
9	408394	Cross Headed Screw <M4×0.7×6L>	2	2
10	400110	Bearing <6202 ZZ>	1	1
11	208834	Load Sheave	1	1
12	405924	Key <5×5×20L>	1	1
13	400962	Key <6×6×12L>	1	1
14	201219	Sheave Spindle<Ø30×145L>	1	1
15	400934	Oil Seal<Ø30×Ø50×8t>	1	1
16	201321	Brake Body <Ø83×Ø20×17.5L>	1	1
17	208843	Ratchet Ass'y	1	1
18	405944	Key <10×8×16L>	1	1
19	201340	Brake Bushing <Ø105×27.85L>	1	-
	201327	Brake Bushing <Ø105×27.75L>	-	1
20	400289	Ball	3	3
21	268132	4th Gear Ass'y <M1.25×83T>	1	-
	201329	4th Gear Ass'y <M1.25×89T>	-	1
22	201323	Brake Flange <Ø87×19.1L>	1	1
23	200404	Disc Spring	3	4
24	200272	Load Brake Gear Spacer	2	2
25	201325	Bush <Ø34×10L>	1	
	206563	Bush <Ø34×12L>		1
26	400125	Bearing <6003>	1	1
27	200402	Oil Bush <Ø25×Ø 17×9L>	1	1
28	400226	O-Ring <Ø12×Ø17×2.5>	1	1
29	200407	Flange Nut <M10×1.5×8L>	1	1
30	400089	Lock Nut <M10×1.5>	1	1
31	201253	Over Load Ass'y	1	-
	201200		-	1
32	200926	Hex. Oil Plug	1	1
33	200927	Air Plug	1	1

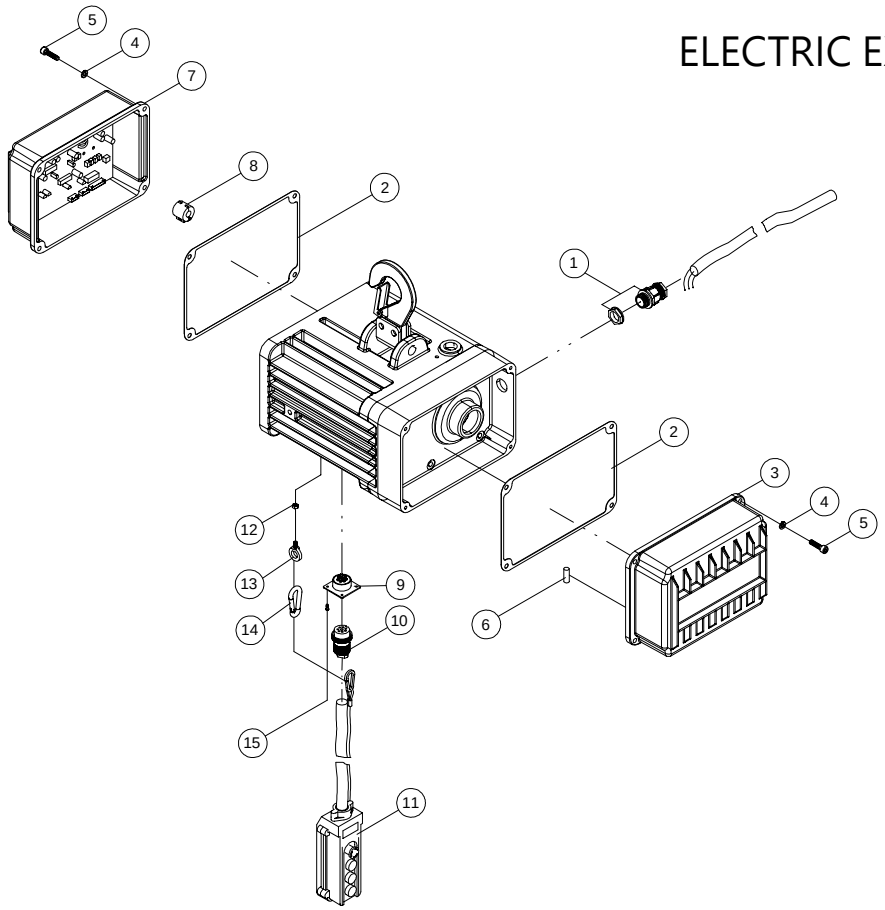
BLFD-032,048 BODY PARTS B.O.M.

KEY NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT	
			032	048
34	200416	Ratchet Pawl Pin<d14×26L>	2	2
35	408512	Ratchet Pawl Spring	2	2
36	200415	Ratchet Pawl	2	2
37	400907	Retaining Ring <S-11>	2	2
38	407845	Bearing <6000>	2	2
39	201320	2nd & 3rd Gear Set	1	-
	200417		-	1
40	408396	Hex. Recess Bolt <M5×0.8×10L>	1	1
41	400093	Spring Washer <M5>	1	1
42	208824	Chain Bucket Connector	1	1
43	400646	Lock Nut <M5>	2	2
44	208813	Chain Bucket <No.1>	1	1
45	408486	Hex. Recess Bolt <M5×0.8×70L>	2	2
46	208816	Chain Guide	1	1
47	400094	Spring Washer <M6>	2	2
48	400006	Hex. Recess Bolt <M6×1.0×16L>	2	2
49	200442	Buffer Steel Plate <Ø25.5×Ø14×t4>	6	6
50	408485	Spring	3	3
51	200445	Lock Pin <Ø10×25.5L>	1	1
52	200441	Chain Stopper <24×19×13.5>	1	1
53	400646	Lock Nut <M5>	1	1
54	408407	Threaded Stud <M4×0.7×4L>	1	1
55	407462	Parallel Pin <Ø5×25L>	1	1
56	208839	Load Bracket	1	1
57	400093	Spring Washer <M5>	4	4
58	405019	Hex. Recess Bolt <M5×0.8×15L>	4	4
59	408329	Hex. Recess Bolt <M5×0.8×20L>	3	3
60	202075K	Bottom Block Cover A	1	1
61	200361	Sprocket	1	1
62	408058	Needle Bearing <HK1412>	2	2
63	200322	Sprocket Axle	1	1
64	400295	Spring Pin <Ø3×10L>	1	1
65	202076K	Bottom Block Cover B	1	1
66	400646	Nylon Nut<M5>	3	3
67	200221	End Spacer	1	1
68	200212	Half Spacer	2	2
69	408057	Thrust Bearing <51103>	1	1
70	202077K	Bottom Hook	1	1

BLFD-032,048 BODY PARTS B.O.M.

KEY NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT	
			032	048
71	400300	Safety Latch Ass'y	2	2
72	300523	Oil plug <Philips Machine Screw Ass'y >	1	1
73	106109	Stator Ass'y <600W>	1	1
74	405641	Bearing<6201 2RS>	1	1
75	400945	Oil Seal <Ø12×Ø25×7t>	1	1
76	400863	Wave Washer <6201>	1	1
77	405569	Bearing <6201ZZ>	1	1
78	102523	Rotor <600W>	1	1
79	106111	Motor End Cover	1	1
80	400093	Spring Washer <M5>	4	4
81	400003	Hex. Recess Bolt <M5×0.8×16L>	4	4
82	208857	Collision Block	1	1
83	408588	Collision Block Spring	2	2
84	208818	Limit Switch Ass'y	1	1
85	400093	Spring Washer <M5>	2	2
86	400417	Hex. Recess Bolt <M5×0.8×20L>	2	2
87	208845	Top Hook Ass'y	1	1
88	208840	Washer	2	2
89	208841	Lock Bolt<Ø15/M12×1.75x85L>	1	1
90	400084	Hex. Nut<M12×1.75>	1	1
91	400610	Cotter Pin<Ø3×30L>	1	1
92	228924	Bottom Hook Ass'y	1	
	228901			1
93	400512	Substitute Chain <Ø4.0×12>	1	1

ELECTRIC EXPLOSION



ELECTRIC PARTS B.O.M.

KEY NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT
			90V~270V
1	400223	Cable Gland <M16>	1
2	402587	Gasket #41	2
3	302992	PFC Power Supply Ass'y	1
4	400854	Spring Washer <M5>	8
5	408608	Hex. Recess Bolt <M5×0.8×16L>	8
6	301525	Fuse <5×20-15A>	1
7	302991	DC Motor Controller Ass'y	1
8	301849	Magnetic Clip	1
9	300615	Female Receptacle	1
10	300616	Male Receptacle	1
11	300610	Push Button Switch	1
12	400087	Nut <M6x1.0>	1
13	404803	Eye Bolt < M6x1.0>	1
14	400841	Shackle	1
15	408601	Cross Headed Screw <M3×0.5×10L>	4

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Product Service

Attestation of Conformity

No. M8A 004703 0016 Rev. 00

Holder of Certificate: **CHENG DAY MACHINERY WORKS CO., LTD.**
No.173, Wen Chiu Rd.
Dajia Dist.
437 Taichung City
TAIWAN

Product: **Lifting equipment**
Electric Chain Hoist

This Attestation of Conformity is issued on a voluntary basis according to Council Directive 2006/42/EC relating to machinery. It confirms that the listed equipment (not Annex IV equipment) complies with the principal protection requirements of the directive. It refers only to the sample submitted to TÜV SÜD Product Service GmbH for testing and certification. For details see: www.tuvsud.com/ps-cert

Test report no.: 615202001201

Date, 2021-04-09

Li Taiwei

(Taiwei LI)

After preparation of the necessary technical documentation as well as the EC declaration of conformity the required CE marking can be affixed on the product. Other relevant directives have to be observed.

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

CE

TÜV SÜD Product Service

Attestation of Conformity

No. M8A 004703 0016 Rev. 00

Model(s):

B Series
BLFD-008, BLFD-012, BLFD-016, BLFD-024, BLFD-032, BLFD-048, BLFD-050, BLFD-100, BLFD-200

Trade name:

Black Bear, U-MEGA, Yong Sheng

Black Bear U-MEGA Yong Sheng

Parameters:

Rated voltage:	230 VAC, 1P+PE
Rated frequency:	50 Hz
Rated power:	As below

0.3kW (BLFD-008, BLFD-012),
0.6kW (BLFD-016, BLFD-024, BLFD-032, BLFD-048)
0.75kW (BLFD-050)
1.2kW (BLFD-100, BLFD-200)

Tested according to:

EN ISO 12100:2010
EN 60204-32:2008
EN 14492-2:2019

After preparation of the necessary technical documentation as well as the EC declaration of conformity the required CE marking can be affixed on the product. Other relevant directives have to be observed.

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CE

TÜV SÜD Product Service

Attestation of Conformity

No. N8MA 004703 0017 Rev. 00

Holder of Certificate: **CHENG DAY MACHINERY WORKS CO., LTD.**
No.173, Wen Chiu Rd.
Dajia Dist.
437 Taichung City
TAIWAN

Product: **Lifting equipment**
Electric Chain Hoist

This Attestation of Conformity confirms that the listed machine complies with the essential electrical safety requirements covered by the directive 2006/42/EC on machinery. These are equivalent to the applying essential protection requirements applicable at the time of issuance as set out in Low Voltage Directive 2014/35/EU relating to electrical equipment designed for use within certain voltage limits. It is issued on a voluntary basis and refers only to the particular sample submitted for testing and certification. For details see: www.tuvsud.com/ps-cert

Test report no.: 615202001201

Date, 2021-04-09

Li Taiwei
(Taiwei LI)

After preparation of the necessary technical documentation as well as the EU declaration of conformity the required CE marking can be affixed on the product. The declaration of conformity is issued under the sole responsibility of the manufacturer. Other relevant EU-directives have to be observed.

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TÜV®

CE

TÜV SÜD Product Service

Attestation of Conformity

No. N8MA 004703 0017 Rev. 00

Model(s):

B Series
BLFD-008, BLFD-012, BLFD-016, BLFD-024, BLFD-032, BLFD-048, BLFD-050, BLFD-100, BLFD-200

Brand:

Black Bear, U-MEGA, Yong Sheng

Black Bear U-MEGA Yong Sheng

Parameters:

Rated voltage: 230 VAC, 1P+PE
Rated frequency: 50 Hz
Rated power: As below
0.3kW (BLFD-008, BLFD-012),
0.6kW (BLFD-016, BLFD-024, BLFD-032, BLFD-048)
0.75kW (BLFD-050)
1.2kW (BLFD-100, BLFD-200)

Tested according to:

EN ISO 12100:2010
EN 60204-32:2008
EN 14492-2:2019

After preparation of the necessary technical documentation as well as the EU declaration of conformity the required CE marking can be affixed on the product. The declaration of conformity is issued under the sole responsibility of the manufacturer. Other relevant EU-directives have to be observed.

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