NITCHI

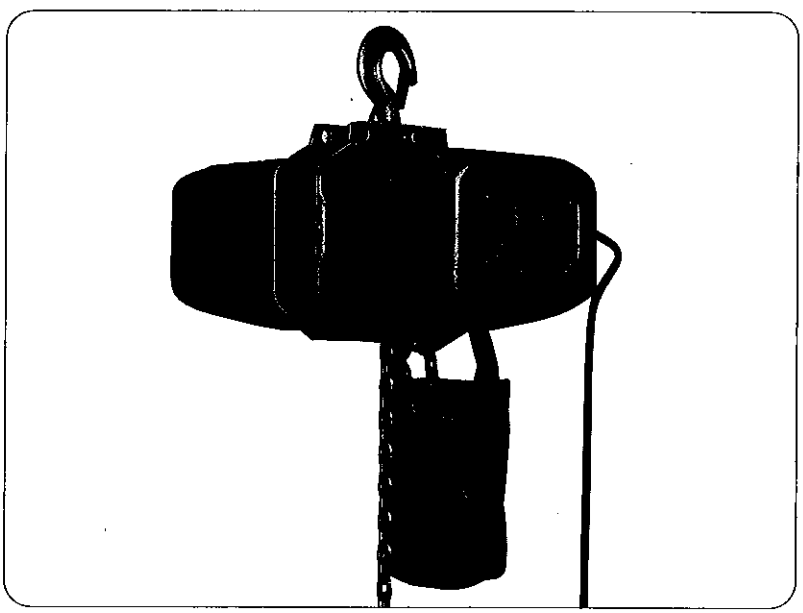
Electric Chain Hoists
Models: EC4, ECT4 and ECC4
Trolleys (Mechanical Joining Type)
Models: EET6, EGT5 and EPT5

Operating Instructions Booklet

- Thoroughly read this operating instructions booklet before operating the trolley and electric chain hoist.
- Carefully store this operating instructions booklet after reading it. This operating instructions booklet contains important information that will be necessary when inspecting and maintaining the trolley and electric chain hoist.

■ The hoist operator must receive this operating instructions booklet !

■ The hoist operator must read this operating instructions booklet !



CE

Customer's notes:-

Model	
Serial No.	
Date Purchased	

N.B.

The above information will be required when purchasing spare parts and when making inquiries. Copy them from the name plate on the hoist and save them for future reference.

PREFACE

NITCHI products are made of the best selected materials, and processed through up-to-date streamlined production facilities by skilled NITCHI engineers under severe quality control. Tested in are accordance with our own standards and a rigid final inspection before leaving the plant are carried out on the NITCHI products to assure absolute safety, dependable and satisfactory perfomance.

WARRANTY

NITCHI products are guaranteed to be free from any defects in materials or workmanship. If any part or parts proves defective within six months from the date of purchase, we will replace the part no-charge, f.o.b. Osaka, Japan, provided the part claimed defective is returned to our factory through authorized NITCHI Distributors and or Agents with transportation prepaid. However, we reserve the right to decline responsibility for these which repairs are made or attempted by others or misused or carelessly operated or maintained.

SAFETY PROCEDURES

In this operating instructions booklet, precautions are listed under two categories, "**DANGER**" and "**WARNING**".

⚠ **DANGER** Situations in which improper use can lead to death or serious injuries.

⚠ **WARNING** Situations that can cause property damage or light to intermediate injuries. Some situations listed as ⚠ "**WARNING**" may lead to serious conditions. Precautions must be obeyed no matter which category they come under.

⃠ Mark indicating a procedure that is prohibited.

Mark indicating a procedure that must be carried out by the operator.

Mark specifying that the electric chain hoist must be grounded.

Mark warning of the possibility of electrical shocks.

※ For future reference, store this operating instructions booklet where it can be easily obtained by the operator.

1. OVERALL HANDLING:

⚠ DANGER
The unit (electric chain hoist and trolley) must be operated only by people who fully understand the operating instructions booklets and the precautions on the warning name plates. People without the necessary qualifications must not operate the unit or carry out hook and sling connecting operations. Inspect the unit before operating it, and carry out periodical inspections.

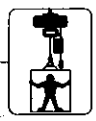
2. IMPORTANT!!

The following warning and safety procedures are essential for avoiding possible bodily injury and property damage.

2.1 Basic Safety Procedures

⚠ WARNING

NEVER lift more than the rated load marked on the hoist.



NEVER use the hoist to lift, support or transport people.

NEVER lift or transport loads over or near people.

ALWAYS read the operation and safety instructions.

2.2 Safety Procedures Prior To Use:

⚠ WARNING

ALWAYS the operator of the hoist must be a person who is completely familiar with all safety and operation procedures.

ALWAYS check the hoist before use and confirm that the load chain is well lubricated

ALWAYS check the brake before use.

ALWAYS chack the safety latches to see if they work properly. Broken and missing safety latches must be replaced immediately.

ALWAYS use genuine NITCHI parts and chains.

NEVER modify the hoist.

NEVER use modified or deformed hooks.

NEVER use a hoist when malfunction, unusual performance, damage or extensive wear are found.

NEVER abuse the over-hoisting/over-lowering limit switch mechanism by using it regularly.

NEVER remove or obscure the warnings and nameplate on the hoist.

Safety Procedures During Operation:

⚠ WARNING

ALWAYS set the load properly in the hook.

ALWAYS confirm that the safety latch has closed completely.

ALWAYS take up the slack of the load chain and sling carefully, and make the initial load liftoff shock as small as possible.

ALWAYS use a hoist within the " Duty rating " , ED % or time rating.

ALWAYS avoid excessive inching and make sure that the hoist motor completely stops before reversing the operating direction.

NEVER allow your attention to be diverted when operating the hoist and never leave a suspended load unattended.

NEVER operate the hoist unless the load is centered underneath it.

NEVER use the hoist with twisted, kinked, damaged or worn chain and never attempt to lengthen tne load chain.

NEVER use the load chain as a sling and never apply the load to the tip of the hook.

NEVER use the load chain so that it comes in to contact with an edge.

NEVER allow the chain or hook to be used as a ground for welding and never touch them with live welding electrodes.

NEVER abuse the friction clutch by using it frequently. Improper use can severely damage the hoist and lead to serious injuries.

NEVER pull on the pendant control cable.

Maintenance Safety Procedures:

⚠ WARNING

ALWAYS have a qualified service person inspect the hoist periodically.

ALWAYS clean the hoist thoroughly and keep the load chain well lubricated.

ALWAYS only allow the friction clutch to be adjusted at an authorized NITCHI Service Shop .

NEVER attempt to extend, repair or weld the load chain.

NEVER touch live electrical parts.

3. CONDITIONS OF USE:

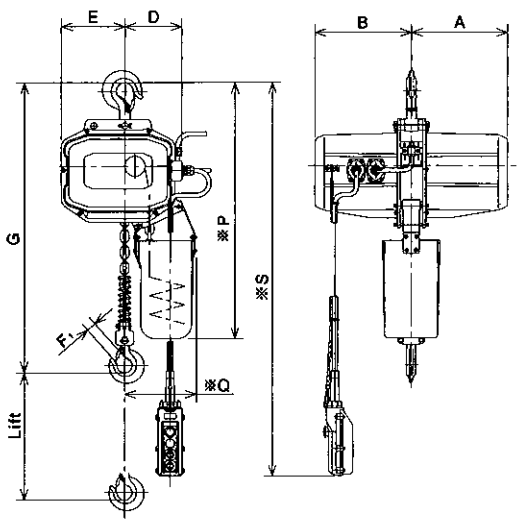
The EC4 Series electric chain hoists and trolleys are designed for the vertically lifting, lowering and horizontal transportation of loads by operating the pendant push button switch, and must be used within the following conditions:-

1. Power source : As specified on name plate of the electric chain hoist, and motorized trolley.
2. Trolley beam : Trolley to be used only on the designated beams.
3. Temperature : -20℃～40℃
4. Humidity : Under 90%
5. Protection : IP54 (Do not use in rain or dusty environments.)
6. Enclosure status : Do not use in ambient conditions that contain steam or explosive gases.
7. Rating : Model EC4 30 minutes
   Model ECT4 10/30 minutes (Slow / Fast)
   Model ECC4 15 minutes
   Model EET6 30 minutes
8. Grade : Model EC4, EET6 1Am
   Model ECT4, ECC4 1Bm

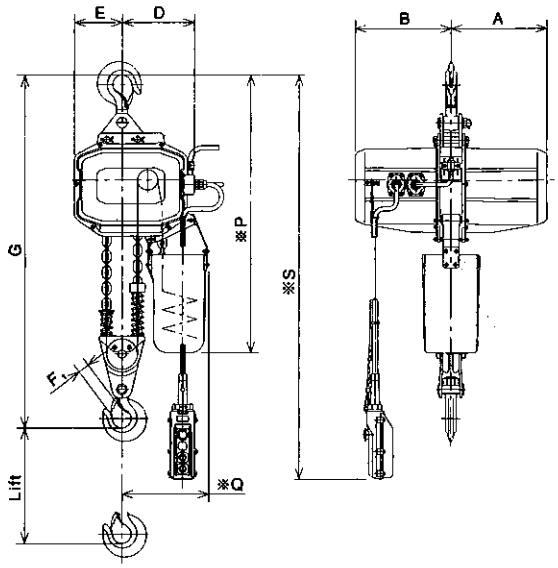
CONTENTS

STANDARD SPECIFICATIONS:

Hook Suspended Type Electric Chain Hoist



EC4 250 kg • 500 kg • 1t



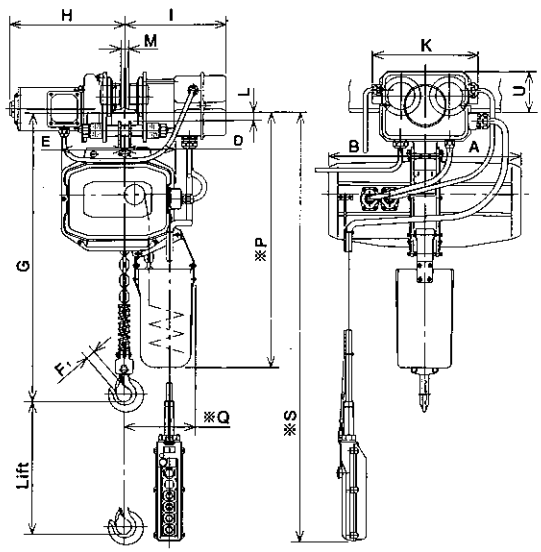
ECJ4 1tw • 2t

Item No.	Rated load	Lift (m)	Lifting speed (m/min)		Motor output (kW)		Rating (min)	Load chain		Cable Length		Minimum head room G (mm)	Net weight ※ (≒ kg)
			50Hz	60Hz	50Hz	60Hz		Type	Nos. of falls	Power source (m)	Pendant ※S (m)		
EC40025	250kg	3.0	8.7	10.3	0.4	0.5	30	CT-6.3	1	5.0	2.6	485	35
		6.0									5.6		38
EC40050	500kg	3.0	8.6	10.1	0.9	1.1					2.6	520	37
		6.0									5.6		41
ECJ40100	1tw	3.0	4.3	5.0					2		2.6	660	43
		6.0									5.6		49
EC40100	1t	3.0	5.6	6.6	1.1	1.3		CT-7.1	1		2.6	570	49
		6.0									5.6		52
ECJ40200	2t	3.0	2.8	3.3					2		2.6	755	58
		6.0									5.6		65

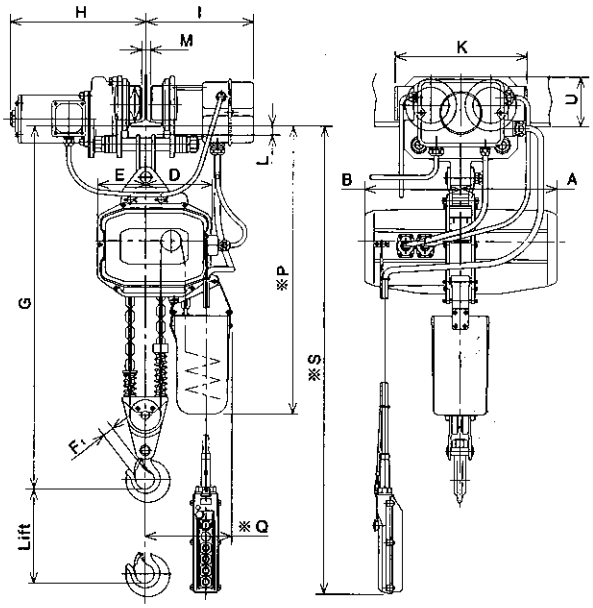
Item No.	Rated load	Hook Block weight (kg)	Major Dimensions (mm)						
			A	B	D	E	F1	※P	※Q
EC40025	250kg	0.7	245	245	137	149	20	660	195
EC40050	500kg								
ECJ40100	1tw	2.3			167	119	25	715	225
								835	
EC40100	1t	0.9	255	255	150	168		710	200
ECJ40200	2t	5.0			191	127	30	770	240
								890	

1. Values marked ※ will differ in accordance with the height of lift.
2. The specifications in the above table are subject to change without notice.

Electric Chain Hoist with Motorized Trolley



ECE4 250 kg • 500 kg • 1t

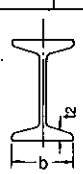


ECJE4 1tw • 2t

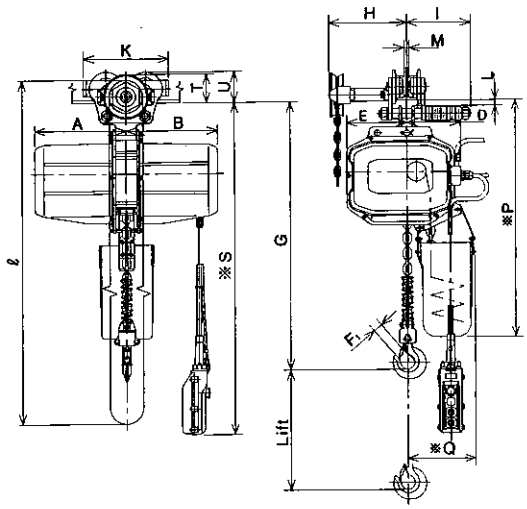
Item No.	Rated load	Lift (m)	Traversing speed (m/min) 50Hz	Traversing speed (m/min) 60Hz	Motor output (kW)	Rating (min)	Breadth of Beams b (mm)	Minimum radius for curve (m)	Cable Length: Power source (m)	Cable Length: Pendant ※S (m)	Minimum head room G (mm)	Net weight ※ (≒ kg)
ECE40025	250kg	3.0	20 (10)	24 (12)	0.2	30	Refer to page-9	1.0	1.0	3.0	495	62
		6.0								6.0		66
ECE40050	500kg	3.0								3.0	530	65
		6.0								6.0		69
ECJE40100	1tw	3.0								3.0	660	71
		6.0								6.0		77
ECE40100	1t	3.0								3.0	565	76
		6.0								6.0		80
ECJE40200	2t	3.0			0.4					3.0	780	107
		6.0								6.0		114

Item No.	Rated load	Hook Block weight (kg)	Major Dimensions (mm) A	B	D	E	F1	H	I	K	L	M	※P	※Q	U
ECE40025	250kg	0.7	245	245	123	149	20	b/2 +280	b/2 +240	240	32 −t2	b− 49	670	195	99 +t2
ECE40050	500kg														
ECJE40100	1tw	2.3			153	119	25						715	225	
													835		
ECE40100	1t	0.9	255	255	136	168							705	200	
ECJE40200	2t	5.0			177	127	30	b/2 +325	b/2 +250	300	33 −t2	b− 70	790	240	121 +t2
													910		

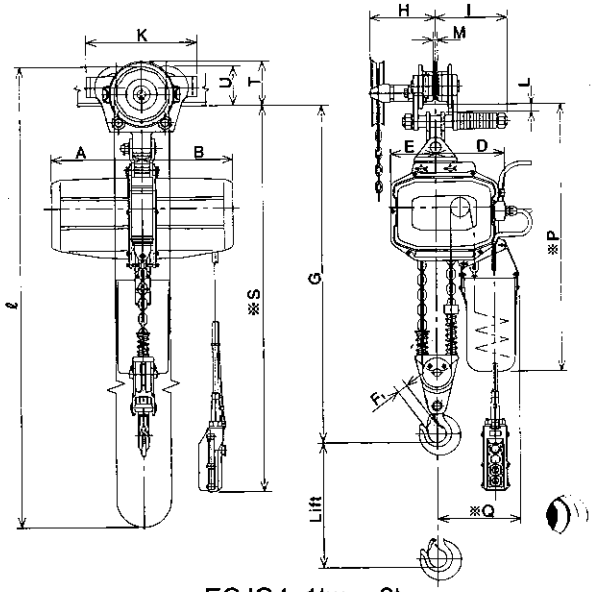
1. Values marked ※will differ in accordance with the height of lift.
2. The specifications in the above table are subject to change without notice.
3. The specifications in the ( ) are for electric trolleys with half speed.
4. Please refer to the beam drawing on the right for dimensions b and t2.
5. Please refer to page-1 for the specifications of the hoist (EC4).



Electric Chain Hoist with Geared Trolley or Plain Trolley



ECG4 250 kg • 500 kg • 1t

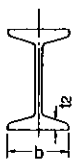


ECJG4 1tw • 2t

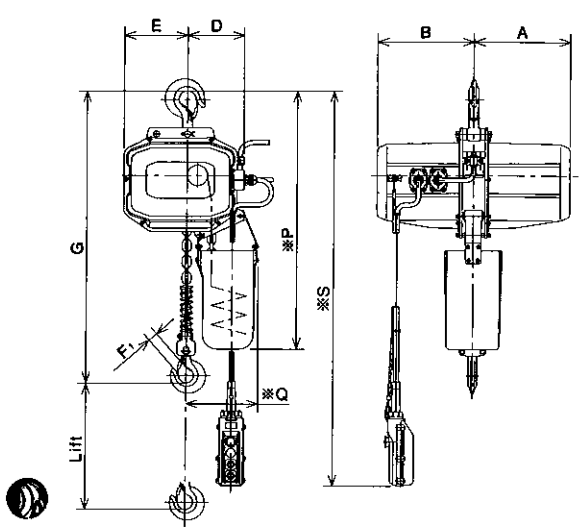
Item No.	Rated load	Lift (m)	Breadth of Beams b (mm)	Minimum radius for curve (m)	Cable Length: Power source (m)	Cable Length: Pendant ※S (m)	Minimum head room G (mm)	Common specifications: Major Dimensions (mm) A	B	D	E	F1	I	K	L	M	※P	※Q	U
ECG40025	250kg	3.0	Refer to page-10	1.0	5.0	2.6	475	245	245	137	149	20	105	206	24 −t2	b− 42	650	195	80 +t2
ECP40025		6.0				5.6													
ECG40050	500kg	3.0				2.6	510												
ECP40050		6.0				5.6													
ECJG40100	1tw	3.0				2.6	640			167	119	25					695	225	
ECJP40100		6.0				5.6											815		
ECG40100	1t	3.0				2.6	550	255	255	150	168						685	200	
ECP40100		6.0				5.6													
ECJG40200	2t	3.0				2.6	765			191	127	30	128	262	28 −t2	b− 63	775	240	102 +t2
ECJP40200		6.0				5.6											895		

Item No.	Rated load	Hook Block weight (kg)	Geared trolley: Hand chain ℓ (m)	Amount of gear trolley movement when hand chain is pulled 1 meter (mm)	H (mm)	T	Net weight ※ (≒ kg)	Plain trolley: H (mm)	Net weight ※ (≒ kg)
ECG40025	250kg	0.7	3.0	229	b/2 +190	72 +t2	47	105	41
ECP40025			6.0				53		45
ECG40050	500kg		3.0				49		44
ECP40050			6.0				55		47
ECJG40100	1tw	2.3	3.0				55		50
ECJP40100			6.0				63		55
ECG40100	1t	0.9	3.0				60		55
ECP40100			6.0				67		59
ECJG40200	2t	5.0	3.0	138	b/2 +150	115 +t2	80	127	73
ECJP40200			6.0				90		80

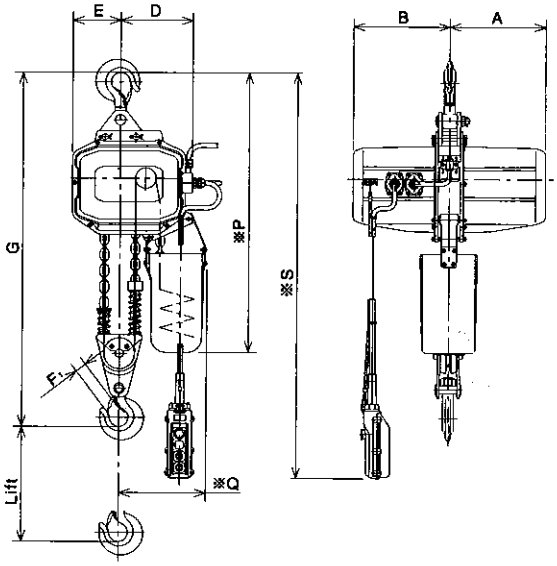
1. Values marked ※will differ in accordance with the height of lift.
2. The specifications in the above table are subject to change without notice.
3. Please refer to the beam drawing on the right for dimensions b and t2.
4. Please refer to page-1 for the specifications of the hoist (EC4).



Suspended Type 2-Speed Electric Chain Hoist



ECT4 250 kg • 500 kg • 1t



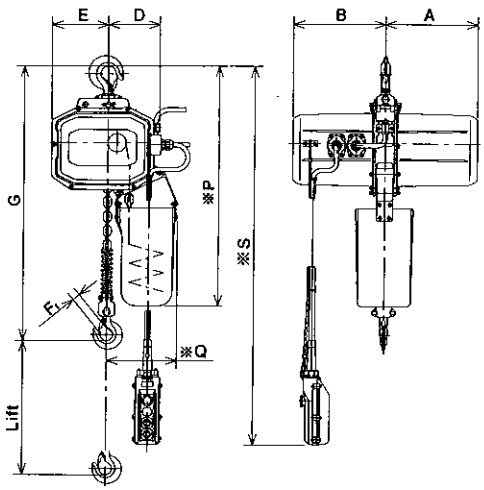
ECTJ4 1tw • 2t

Item No.	Rated load	Lift (m)	Lifting speed (m/min) Fast 50Hz	Fast 60Hz	Slow 50Hz	Slow 60Hz	Motor output (kW) Fast 50Hz	Fast 60Hz	Slow 50Hz	Slow 60Hz	Rating (min) Fast	Rating (min) Slow	Load chain Type	Load chain Nos. of falls	Cable Length Power source (m)	Cable Length Pendant ※S (m)	Minimum head room G (mm)	Net weight ※ (≒ kg)
ECT40025	250kg	3.0	8.7	10.3	2.2	2.6	0.4	0.5	0.1	0.13	30	10	CT-6.3	1	5.0	2.6	485	37
		6.0														5.6		40
ECT40050	500kg	3.0	8.6	10.1	2.2	2.6	0.9	1.1	0.23	0.28						2.6	520	41
		6.0														5.6		44
ECTJ40100	1tw	3.0	4.3	5.1	1.1	1.3	0.9	1.1						2		2.6	660	47
		6.0														5.6		52
ECT40100	1t	3.0	5.6	6.7	1.4	1.7	1.1	1.3	0.27	0.33			CT-7.1	1		2.6	570	54
		6.0														5.6		58
ECTJ40200	2t	3.0	2.8	3.3	0.7	0.8	1.1	1.3						2		2.6	755	63
		6.0														5.6		70

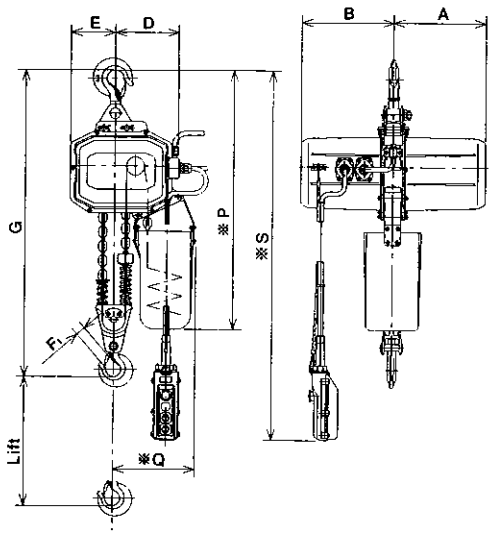
Item No.	Rated load	Hook Block weight (kg)	Major Dimensions (mm) A	B	D	E	F1	※P	※Q
ECT40025	250kg	0.7	245	245	137	149	20	660	195
ECT40050	500kg								
ECTJ40100	1tw	2.3			167	119	25	715	225
								835	
ECT40100	1t	0.9	255	255	150	168		710	200
ECTJ40200	2t	5.0			191	127	30	770	240
								890	

1. Values marked ※will differ in accordance with the height of lift.
2. The specifications in the above table are subject to change without notice.

Supended type Single-Phase Electric Chain Hoist



ECC4 300 kg • 500 kg



ECCJ4 1tw

Item No.	Rated load	Lift (m)	Lifting speed (m/min)		Motor output (kW)		Rating (min)	Load chain		Cable Length		Minimum head room G (mm)	Net weight ※ (≒ kg)
			50Hz	60Hz	50Hz	60Hz		Type	Nos. of falls	Power source (m)	Pendant ※S (m)		
ECC40030	300kg	3.0	5.4	6.4	0.4		15	CT-6.3	1	5.0	2.6	485	36
ECC40050	500kg		3.2	3.8								520	36
ECCJ40100	1tw		1.6	1.9					2			660	42

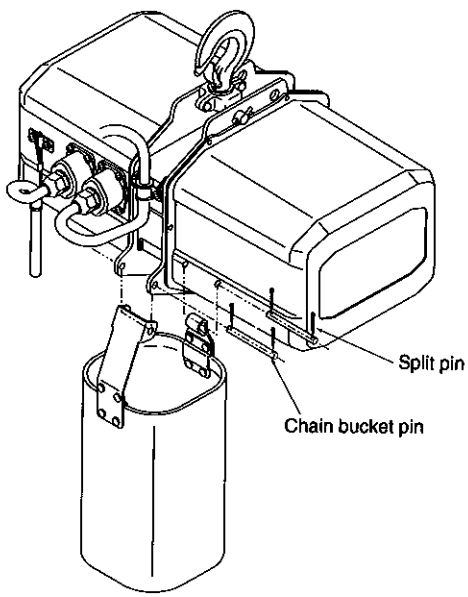
Item No.	Rated load	Hook Block weight (kg)	Major Dimensions (mm)						
			A	B	D	E	F1	※P	※Q
ECC40030	300kg	0.7	245	245	137	149	20	660	195
ECC40050	500kg								
ECCJ40100	1tw	2.3			167	119	25	715	225

1. Values marked ※ will differ in accordance with the height of lift.
2. The specifications in the above table are subject to change without notice.

Connecting the Chain bucket

⚠ DANGER

- Do not modify the chain bucket assembly.
- Always attach the chain bucket assembly before raising the hoist into position.



① Connect the chain bucket assembly with the chain bucket pins.

② Feed the load chain into the chain bucket gradually and neatly from the end.

③ The load chain may tangle and the hoist may not operate correctly when the load chain is placed into the chain bucket assembly in one bundle.

④ The inside of the chain bucket assembly must be cleaned periodically when the hoist is used in an area where dust and foreign matter can enter the chain bucket assembly.

Open the split pin as shown in the drawing.

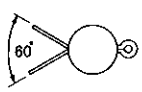
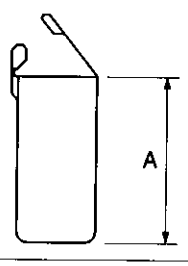


Table 1

Code	Dimension A (mm)
D1	260
D2	380
D3	480



Chain bucket application table:

Table 2

Rated load	Type of chain & numbers of falls	Lift (m) 0 3 6 9 12 15
250kg · 300kg · 500kg	CT6.3×1	D1 D2 D3
1tw	CT6.3×2	D1 D2 D3
1t	CT7.1×1	D1 D2 D3
2t	CT7.1×2	D1 D2 D3

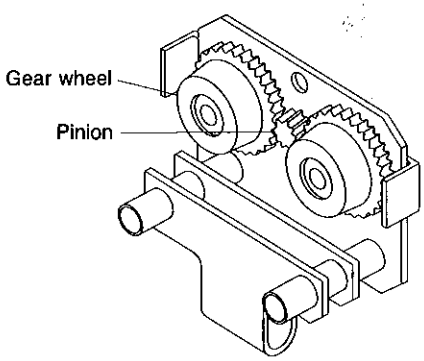
Lubrication

① Lubricate the load chain before use with machine oil or gear oil.

② When the gear section of the hoist is disassembled, always change the grease within the gear case. Use heavy duty (disulfide molybdenum) grease.

③ When the gear box section of the Motorized trolley is disassembled,add an extra coat of heavy duty grease (disulfide molybdenum grease) to the gears. The gear box section normally does not need to be regularly lubricated.

Paint the gear teeth section of the Gear wheel and Pinion with cup grease.



Circuit breakers

① Always install a circuit breaker.

※ The circuit breaker must be exclusively for the hoist and independent from other machinery.

② Select an adequate capacity circuit breaker from Table 3.

Table 3

Type of hoist	Rated load	Lifting motor (kW) 50Hz/60Hz	Traversing motor (kW)	Circuit breaker Capacity (A)
Hoist with motorized trolley	250kg	0.4 /0.5 0.1/0.4/0.13/0.5	0.2	3
	500kg 1tw	0.9/1.1 0.23/0.9/0.28/1.1		5
	1t	1.1/1.3 0.27/1.1/0.33/1.3		
	2t		0.4	
Hook suspension hoist and hoist with geared or plain trolley	250kg	0.4/0.5 0.1/0.4/0.13/0.5	——	2
	500kg 1tw	0.9/1.1 0.23/0.9/0.28/1.1	——	3
	1t 2t	1.1/1.3 0.27/1.1/0.33/1.3	——	5
Single-phase	300kg 500kg 1tw	0.4	——	10

The values in the ( ) are for 200 to 240 volt hoists.

Power source cable

① With electric chain hoists that use the electrical cable power feeding method, always be sure to use the appropriate sized cabtyre cable (tough-rubber sheathed cable).

② Use a larger size cabtyre cable when the cable length is long, and when there is a possibility that the hoist and the motorized trolley will be operated together at the same time.

③ Please refer to Table 12 for the specifications of long cabtyre cables.

Adjusting the Trolley width

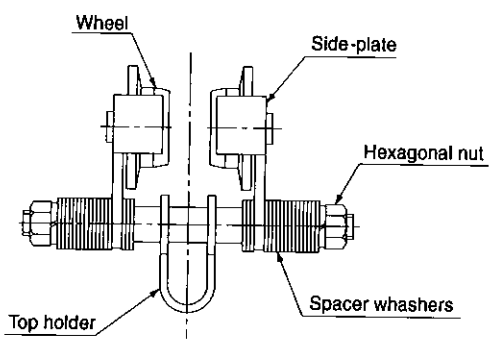
Adjust the width between the trolley wheels as follows:-

① Remove the Hexagonal nuts, and remove the side-plate.

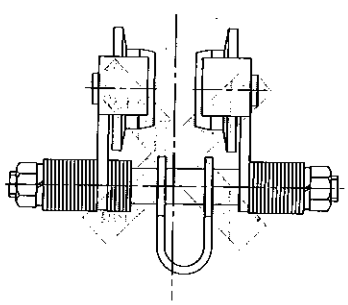
② Adjust the width by increasing or decreasing the number of inner spacer washers. Refer to Tables 4 and 5 for the appropriate combination of inner and outer spacer washers.

③ Tighten the Hexagonal nuts for the Stay bolts.

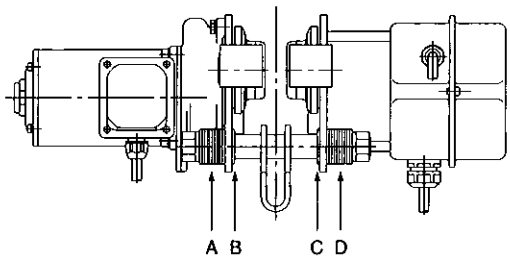
④ Confirm that the Top holder is positioned directly under the center of the trolley beam.



Incorrect installation of the Adjusting Spacer washers



Number of Spacer washers



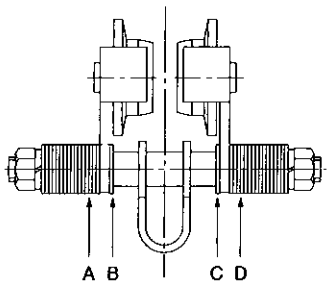
EET6

Quantity and location.

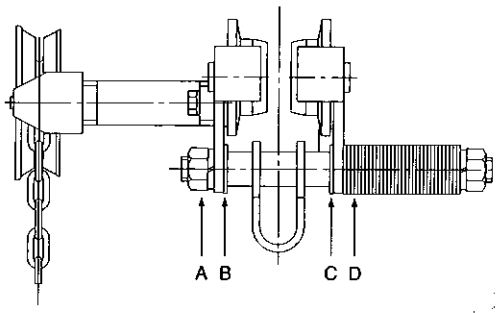
Table 4

BEAM SIZE			250kg ~ 1t				2t			
			EET6							
INP	IPE	mm	A	B	C	D	A	B	C	D
12		58	11	0	0	11	—	—	—	—
	12	64	10	1	1	10	—	—	—	—
14		66	10	1	2	9	—	—	—	—
15		70	9	2	2	9	—	—	—	—
	14	73	9	2	3	8	—	—	—	—
16		74	9	2	3	8	—	—	—	—
18	16	82	7	4	4	7	8	0	0	8
20		90	6	5	6	5	7	1	1	7
	18	91	6	5	6	5	7	1	1	7
22		98	5	6	7	4	6	2	2	6
	20	100	4	7	7	4	6	2	2	6
24		106	3	8	8	3	6	2	3	5
	22	110	3	8	9	2	5	3	3	5
26		113	2	9	9	2	5	3	4	4
28		119	1	10	10	1	4	4	4	4
	24	120	1	10	10	1	4	4	4	4
30		125	0	11	11	0	3	5	5	3
32		131	—	—	—	—	3	5	6	2
	27	135	—	—	—	—	2	6	6	2
34		137	—	—	—	—	2	6	6	2
36		143	—	—	—	—	1	7	7	1
38		149	—	—	—	—	1	7	8	0
	30	150	—	—	—	—	1	7	8	0
40		155	—	—	—	—	0	8	8	0

Number of Spacer washers



EPT5



EGT5

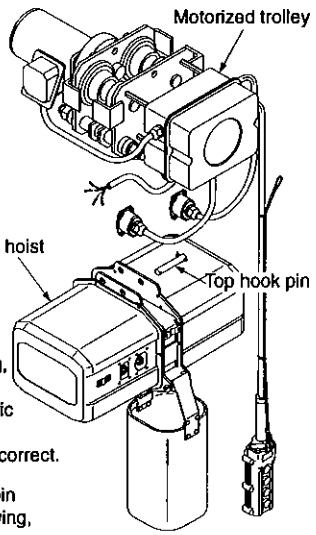
Quantity and location.

Table 5

BEAM SIZE			250kg ~ 1t								2t							
			EPT5				EGT5				EPT5				EGT5			
INP	IPE	mm	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
	10	55	17	0	0	17	0	0	0	34	—	—	—	—	—	—	—	—
12		58	17	0	1	16	0	0	1	33	—	—	—	—	—	—	—	—
	12	64	16	1	2	15	0	1	2	31	—	—	—	—	—	—	—	—
14		66	15	2	2	15	0	2	2	30	12	0	0	12	0	0	0	24
15		70	15	2	3	14	0	2	3	29	12	0	1	11	0	0	1	23
	14	73	14	3	3	14	0	3	3	28	11	1	1	11	0	1	1	22
16		74	14	3	4	13	0	3	4	27	11	1	1	11	0	1	1	22
18	16	82	13	4	5	12	0	4	5	25	10	2	2	10	0	2	2	20
20		90	11	6	6	11	0	6	6	22	9	3	3	9	0	3	3	18
	18	91	11	6	6	11	0	6	6	22	9	3	3	9	0	3	3	18
22		98	10	7	8	9	0	7	8	19	8	4	4	8	0	4	4	16
	20	100	10	7	8	9	0	7	8	19	8	4	4	8	0	4	4	16
24		106	9	8	9	8	0	8	9	17	8	4	5	7	0	4	5	15
	22	110	8	9	10	7	0	9	10	15	7	5	5	7	0	5	5	14
26		113	8	9	10	7	0	9	10	15	7	5	6	6	0	5	6	13
28		119	6	11	11	6	0	11	11	12	6	6	6	6	0	6	6	12
	24	120	6	11	11	6	0	11	11	12	6	6	6	6	0	6	6	12
30		125	5	12	12	5	0	12	12	10	5	7	7	5	0	7	7	10
32		131	4	13	13	4	0	13	13	8	5	7	8	4	0	7	8	9
	27	135	4	13	14	3	0	13	14	7	4	8	8	4	0	8	8	8
34		137	3	14	14	3	0	14	14	6	4	8	8	4	0	8	8	8
36		143	2	15	15	2	0	15	15	4	3	9	9	3	0	9	9	6
38		149	1	16	16	1	0	16	16	2	3	9	10	2	0	9	10	5
	30	150	1	16	16	1	0	16	16	2	3	9	10	2	0	9	10	5
40		155	0	17	17	0	0	17	17	0	2	10	10	2	0	10	10	4
	33	160	—	—	—	—	—	—	—	—	2	10	11	1	0	10	11	3
42½		163	—	—	—	—	—	—	—	—	1	11	11	1	0	11	11	2
45	36	170	—	—	—	—	—	—	—	—	0	12	12	0	0	12	12	0

Connecting the Hoist to the Motorized trolley

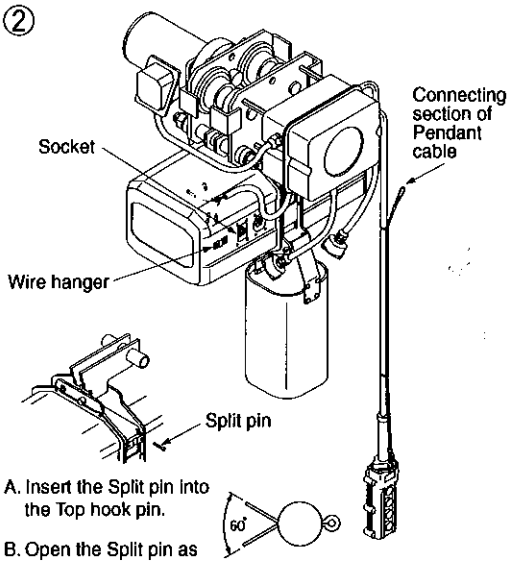
①



A. Connect the electric chain hoist to the motorized trolley as shown in the drawing, and be sure that the direction of the electric chain hoist and the motorized trolley are correct.

B. Insert the Top hook pin as shown in the drawing, and be sure to use the correct hole.

②



A. Insert the Split pin into the Top hook pin.

B. Open the Split pin as shown in the drawing.

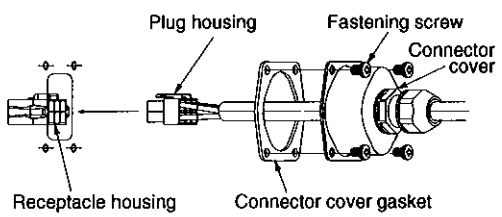
③

Connecting the Cables:

A. Connect the electric trolley and motorizd chain hoist connecting cable.

B. Insert the Plug (Plug housing) completely till it is locked.

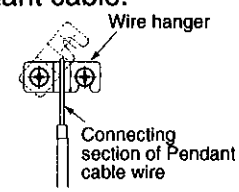
C. Next secure the Gasket and Connector cover positively.



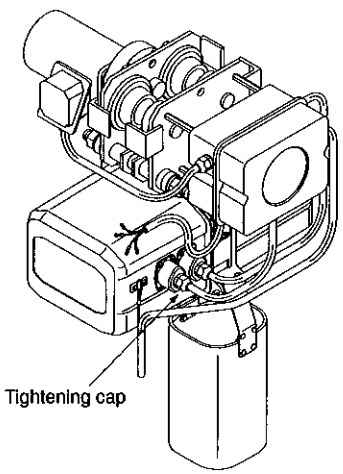
Connecting the Pendant cable:

A. Loosen the Fastening screws and detach one-side of the Wire hanger as shown in the drawing.

B. Insert the Pendant cable wire, reassemble and firmly tighten the Fastening screws.



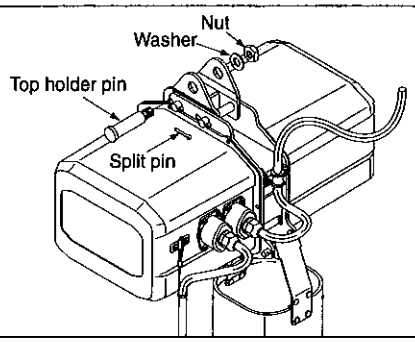
④



A. Confirm that the cables are connected as shown in the drawing.

B. Firmly screw in the Tightening cap

⑤



Connecting 1 tw and 2 t

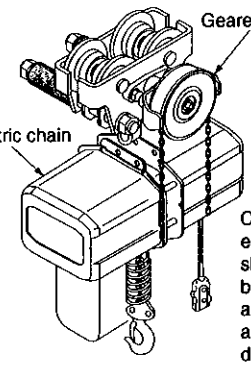
A. The shape of the Top holder pin is as shown in the drawing.

B. Insert the Top holder pin and set the Washer onto it.

C. Lightly tighten the Nut by hand and insert the Split pin.

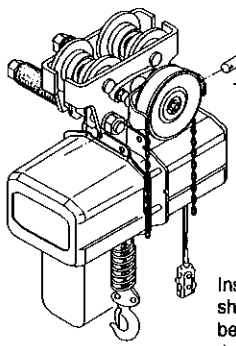
Connecting the Hoist to the Geared trolley (plain trolley)

①



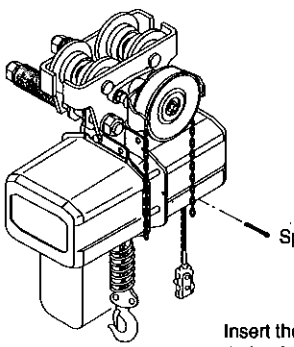
Connect the trolley to the electric chain hoist as shown in the drawing,and be sure that the trolley and electric chain hoist are both facing the correct direction.

②



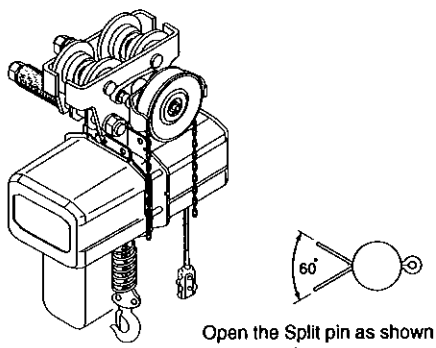
Insert the Top hook pin as shown in the drawing, and be sure to use the correct hole.

③



Insert the Split pin into the hole of the Top hook pin

④



Open the Split pin as shown in the drawing.

The connecting method of a plain trolley is basically the same as the above.

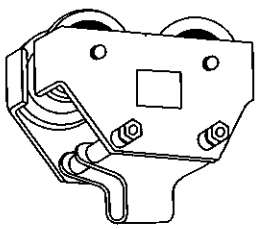
Setting the Trolley onto the beam

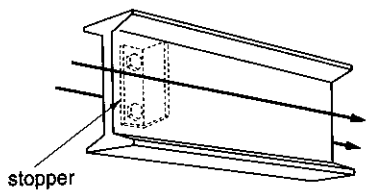
⚠ DANGER

- The trolley must be installed onto the trolley beam only by qualified people with the necessary knowledge.

① Inserting an assembled trolley from the end of the trolley beam:

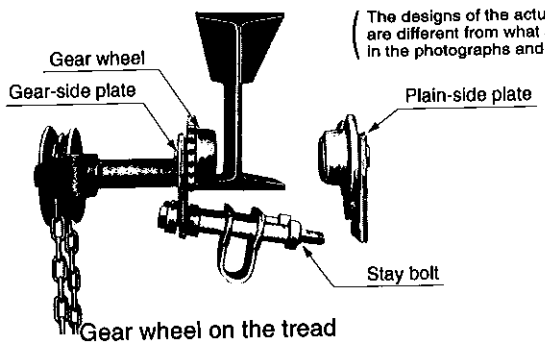
- Remove the Stoppers at the end of the trolley beam, and insert the trolley.
- Replace and positively secure the stoppers.





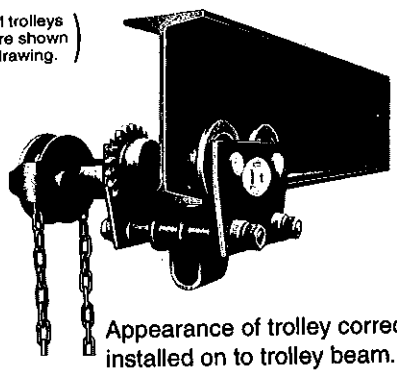
② How to install the trolley when the assembled trolley can not be inserted from the end of the trolley beam:

- Remove the Hexagonal nuts from the Stay bolts.
- Dismount the Plain-side plate.
- Set the Geared wheels on to the tread section of the trolley beam.
- While holding the Geared wheels in position, insert the Plain-side plate so that the Plain wheels will be in position on the tread section of the trolley beam.
- Firmly tighten the Hexagonal nuts of the Plain-side plate side of the Stay bolts.



Gear wheel on the tread section of the trolley beam

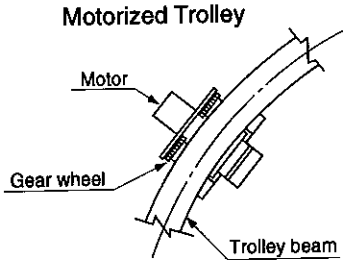
(The designs of the actual trolleys are different from what are shown in the photographs and drawing.)



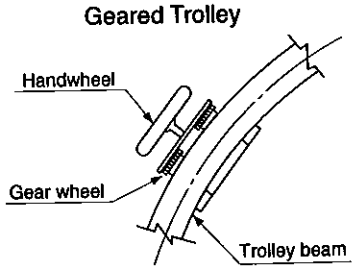
Appearance of trolley correctly installed on to trolley beam.

③ When the trolley beam is curved, install the trolley so that the geared wheels are on the outside of the curve.

Motorized Trolley



Geared Trolley



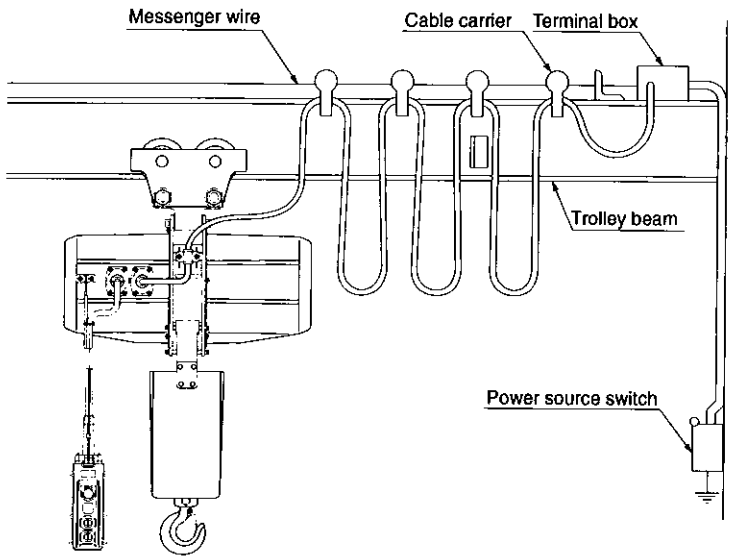
Connecting the Power source cable

⚠ DANGER

- The hoist must be efficiently grounded, and an independent circuit breaker of the appropriate capacity must be installed in the power source system.

The power source systems of hoists connected to trolleys are as follows:-

① Install a messenger wire (ϕ 6 mm steel cable) parallel to the trolley beam. Hang the power source cable from the messenger wire with cable carriers, and be careful not to twist the power source cable.



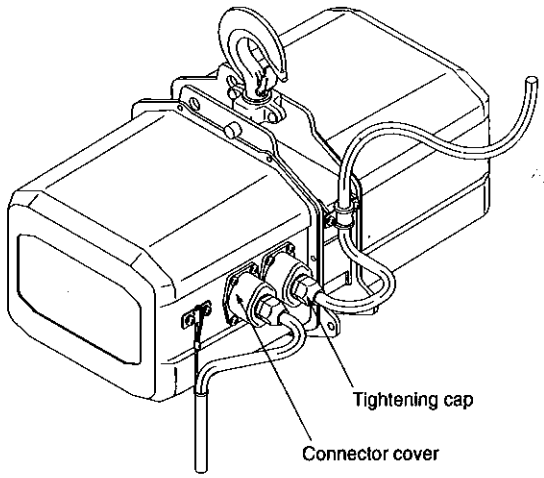
② Install cable carriers at every 1.5 meters length of the power source cable.

③ The connections of the Power source cable must only be made at the Hoist, Terminal box and Power source switch. Do not use Power source cables that are lengthened with connections.

④ The following power source feeding method can be used in place of the Messenger wire method. Please consult an electrician for the most appropriate method for your hoist: CABLE CARRIER METHOD, TROLLEY DUCT METHOD & TROLLEY WIRE METHOD

Connecting the Quick coupling

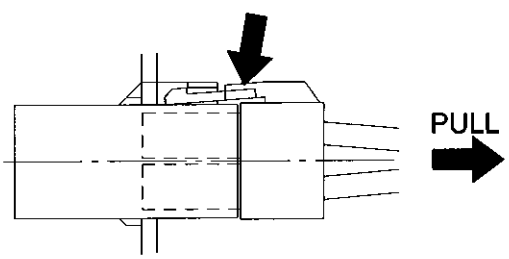
Disconnecting and Connecting the Quick coupling:-



Disconnecting:

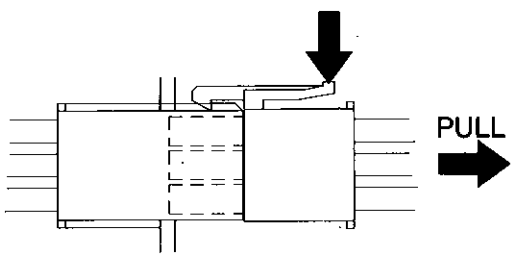
Loosen the Tightening cap.
Remove the Fastening screws from the Connector cover.
Slide the Connector cover gasket and Connector cover out of the way.
Disconnect the Plug (Plug housing).

Pull the Plug (Plug housing) out while pressing the ↓ section down.



Inner lock type

Pull the Plug (Plug housing) out while pressing the ↓ section down.



Outer lock type

Connecting:

① The connecting procedures are the opposite of the disconnecting procedures.
② Insert the Plug (Plug housing) positively.
③ While holding the cable and preventing it from rotating, screw in the Tightening cap.
④ Screw in the Tightening cap by hand, and do not use any tools.
Over-tightening will damage the Tightening cap.

Inspection After Installation:

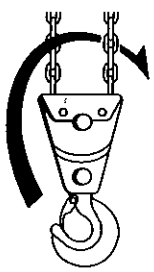
⚠ DANGER

● Check the following immediately after installation:

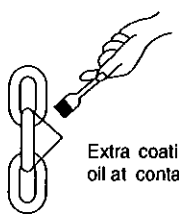
Procedures to be carried out before the power source switch is turned "ON".

① The load chain must always be free from twists. When the hoist lifts on two or more falls of load chain, twist can arise from the bottom hook being accidentally turned over through the load chain.

② While the hoist is not under a load, lubricate the whole length of the load chain with machine oil, and be sure to give the contact points between the links extra coatings.



Hoist with two falls of load chain

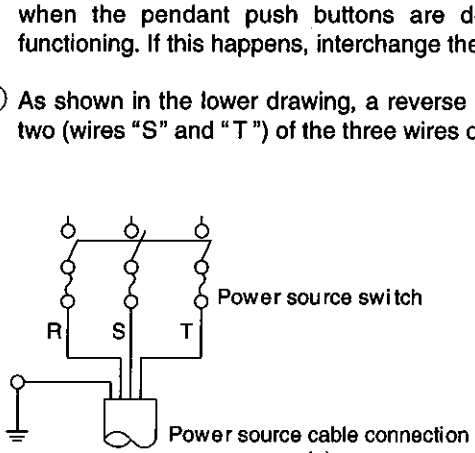


Extra coating of machine oil at contact points

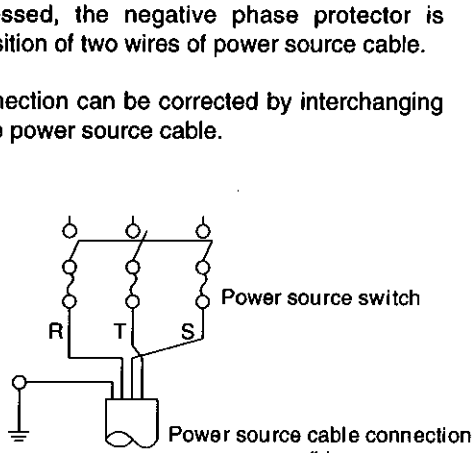
Procedures to be carried out after the power source switch is turned "ON".

① The hoist is equipped with a negative phase protector. When the hoist does not function when the pendant push buttons are depressed, the negative phase protector is functioning. If this happens, interchange the position of two wires of power source cable.

② As shown in the lower drawing, a reverse connection can be corrected by interchanging two (wires "S" and "T") of the three wires of the power source cable.



(a)



(b)

When "Power source connection (a)" is a reverse connection, the reverse connection can be corrected by interchanging wires "S" and "T" as shown in "Power source cable connection (b)"

INSPECTION & MAINTENANCE

⚠ DANGER

- When inspecting the hoist, turn the power source "OFF" and hang out a sign that distinctly indicates that it is under inspection. Inspect the hoist while it is not under a load. Consult the authorized NITCHI dealer or distributor from where the hoist was purchased when repairs or replacement parts are required.

Daily, monthly and annual inspections are essential for ensuring a long and safe lifetime of the hoist. All inspections and repairs must be carried out by competent responsible peopleauthorized by the person in charge of the hoist. Always check the following safety procedures when inspection and maintenance work are carried out on the hoist:-

INSPECTION BEFORE USE

While the hoist is not under a load, confirm that the whole length of the load chain is well lubricated. When the load chain requires lubrication, be sure to give the contact points between the links extra coatings of machine oil. The load chain must not be deformed and elongated and it must be free of twists and kinks. Check especially carefully when the hoist lifts on two or more falls of load chain.

The hooks must not be elongated and deformation must be within the limits indicated in Table 9.

The safety latches must all be in good condition and moving smoothly.

The pendant push button switch must function properly and smoothly.

While the hoist is not under a load, confirm that the limit switch and brake systems are functioning correctly.

The trolley and/or crane must be free of faults that prevent smooth and safe operation.

MONTHLY AND ANNUAL INSPECTIONS

The components of the hoist will eventually wear from use. Tables 6 and 7 give inspection points that are essential for insuring a long and safe lifttime of the hoist.

MONTHLY INSPECTION
Inspect the hoist once a month, and keep a record of all inspections and repairs on file.

ANNUAL INSPECTION
Check all sections of the hoist especially carefully once a year, and keep detailed records of the inspections and repairs on file.

INSPECTION POINTS

EC4 SERIES HOISTS

Table 6

Section	Check points	Proper condition
Body	External view	No crack or deformation.
	Abnormal sound	Motor and other parts sound normal.
	Side-plates	No wearing and deformation.
	Gears and bearings	No wearing and crack. Well lubricated with grease.
	Load sheave	No wearing and crack.
Hooks	Opening	Same as recorded dimension "A" of new hook.
	Holders	No crack and deformation.
	Bottom swivel hook	Rotates smoothly on a thrust ball bearing.
	Rivets for holder	No wear or deformation.
Load chain	Dimensions	Refer to the Table 10.
	Visual condition	No rust, cracks, wear or deformation.
Lubricant	Gear teeth	Sufficient grease.
	Load chain	Well lubricated with machine oil along the whole length, particularly at the contact points.
Limit mechanism	Limit switch	Motor stops when handle is pushed up. Test lifting and lowering without a load.
	Stop-holder	Bolts and nuts firmly tightened. No crack.
Brake mechanism	Brake	The brake must function positively. When the rated load is lifted, the amount of slippage of the brake must be within 1% of the distance the hoist can lift in 1 minute (Refer to the "Lifting speed"on Page-1.)
Electrical components	Power source cable and pendant control cable	No breakage and damage of the rubber-covered cables. No disconnection.
	Push-button switch	Contact points functioning positively.
	Switch box	Limit switch, electromagnetic contactor functioning correctly.
	Motor	No humming and over-heating.
	Insulation resistance	Insulation resistance exceeds 2M Ω by DC 500V Megger.
Others	Bearings	Properly and smoothly engaging with shafts.
	Chain collecting bucket	Inside of the chain bucket free of rust, dirt, grease and other foreign matter.
	Bolts, nuts, etc.	All in good condition and securely in position.
	Name-plate (mark-plate)	Clearly observable.

INSPECTION POINTS

TROLLEYS (PLAIN / GEARED / MOTORIZED)

Table 7

Section	Check points	Proper condition
All Trolleys	Side-plates	No bending, crack and other deformations.
	Bolts, nuts, cotter-pins and snap-rings etc.	No looseness, breakage and missing.
	Trolley wheels	No excessive wear on tread and gear sections. Well lubricated and rotating smoothly.
	Bearings	Properly engaged with shafts and rotating smoothly.
	Capacity mark	Distinctly observable.
Geared Trolleys	Handwheels	Correctly meshing with hand chain. No cracks, breakage or extensive wear.
	Shaft area of handwheels	Well lubricated and rotating smoothly.
	Hand chain	No excessive elongation and deformation that can prevent the smooth meshing with the hand chain.
Motorized Trolleys	Reduction gear section	No flaw, crack and excessive wear. Well lubricated. No backlash in the gears and bearings.
	Brake mechanism	Stops smoothly without coasting too long.
	Power source cable and pendant control cable	No breakage and damage of the rubber-covered cables and no disconnection.
	Motor	No humming and overheating
	Insulation resistance	Insulation resistance exceeds 2 M Ω by DC 500-volt Megger.

TEST RUNNING AFTER PERIODIC INSPECTION

Table 8

Test points	Check points
Test running	Operate the hoist and confirm that it runs smoothly.
Limit switch function	First, test without a load. Next, test with a load within rated capacity.
Test running with a load within the rated capacity	Check for noise and vibration when hoisting and lowering. Check the amount of the brake slippage.
Over-loading test	Test run with a 125% overload.

Repeated use over a long period of time will cause the hooks and load chain to wear or elongate, and corrosion and/or cracks may arise depending on the place and method of use. The hooks and load chain are vital components of the hoist that must be within the permissible limits of the following tables.

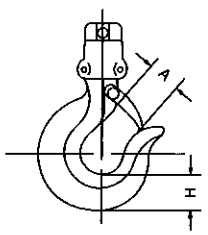
Hooks

Measure dimension "A" of the new hook with a slide calipers, and write it down for future reference.

The hook must be replaced immediately when one of the following limits are exceeded:

- When deformation is visually noticeable (elongation, twists, cracks, etc.)
- When the limits of Table 9 are exceeded and when dimension "H" has worn down more than 95%.
- When dimension "A" differs from the above recorded value of the new hook.

Table 9



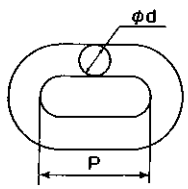
Rated load	Top hook			Bottom hook		
	A	H		A	H	
	Normal	Normal	Limit	Normal	Normal	Limit
250kg 300kg 500kg	28	27	25.7	23	23	21.9
1tw, 1t	32	31	29.5	28	27	25.7
2t	33	35	33.3	33	35	33.3

(dimensions in mm)

Load chain

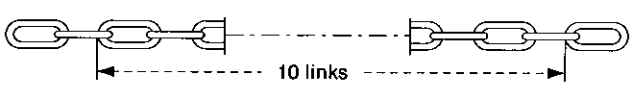
Measure the sections of the load chain that come into contact with the load sheave with a slide calipers. Replace the load chain when the limits of Table 10 are exceeded. The whole load chain must be replaced even if one link is extensively worm or deformed.

Table 10



Rated load	Type	Chain dia. φd (mm)	Standard P (mm)	Limit 10 links' (mm)
250kg 300kg 500kg 1tw	CT - 6.3	6.3	19.1	196
1t · 2t	CT - 7.1	7.1	21.2	218

(dimensions in mm)



⚠ DANGER

- NEVER attempt to disassemble or readjust the Friction clutch (O.L.P.) ! The Friction clutch will malfunction when it is incorrectly adjusted.

Friction clutch (O.L.P.)

The hoist is equipped with a friction clutch mechanism, which will slip and cause the motor to run idle when the hoist is overloaded. The friction clutch is adjust before the hoist leaves the factory, and will normally not require further adjusting.

Emergency stop device

During an emergency, depress the mushroom shaped Emergency stop button (the topmost button on the pendant push button switch) to immediately stop the hoist and trolley. When depressed the Emergency stop button will automatically lock and cut off the electricity.
After the emergency, the Emergency stop button can be reset to its normal position by turning it.

ADJUSTING THE BRAKE

⚠ DANGER

- The brake must be adjusted only at a NITCHI Service Shop or by a qualified person with the appropriate knowledge.
- The power source must be turned off before the brake is adjusted.
- There must be no load on the hoist when adjusting the brake.
- Adjust the brake after lowering the hoist to the floor.

Always test the electromagnetic brake system before operating the hoist. When the hoist has been in service for a long time, the Brake linings (Brake wheel) will eventually wear, and the braking torque will become unstable. Test the hoist by lifting the load a little and stopping. Repeat this operation 2 to 3 times. Adjust the brake system when the load slips down 5 to 10 cm during the test.

Adjusting the electromagnetic brake

A. Remove the Switch cover
The structure of the Electromagnetic brake is as shown in the drawings on the right. When clearance " A " exceeds 5 mm (over 8 mm for ECC4), adjust the Electromagnetic brake as follows so that clearance " A " becomes 2.5 mm (4 mm for ECC4).

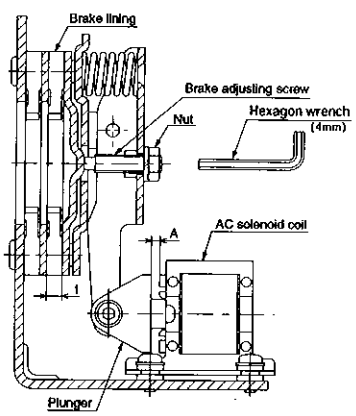
① Loosen the Nut with a spanner.
② Screw in the Adjusting screw with a hexagon wrench.

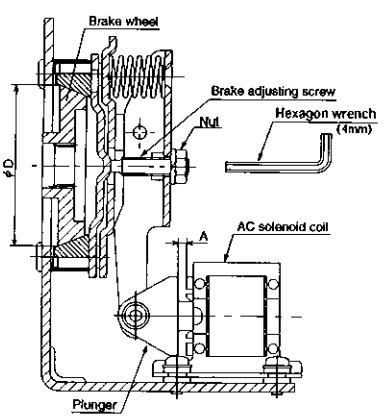
N.B.
Screw the Adjusting screw in till the AC solenoid plunger touches the AC solenoid coil, and next loosen the Adjusting screw to obtain the necessary clearance.

③ After adjusting clearance "A" to 2.5 mm (4 mm for ECC4), tighten the nut.
④ The permissible limits of use of the Brake linings are as shown in Table 11:

Table 11

	Brake lining	Brake wheel
Standard dimension	t=7	D=φ72
Permissible limit	t=6.5	D=φ71



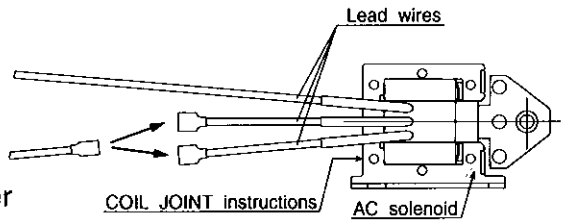


CIRCUIT DIAGRAM

Warning

Remove the P/N093 switch cover. Then connect the lead wire referring to the COIL JOINT instructions correctly.

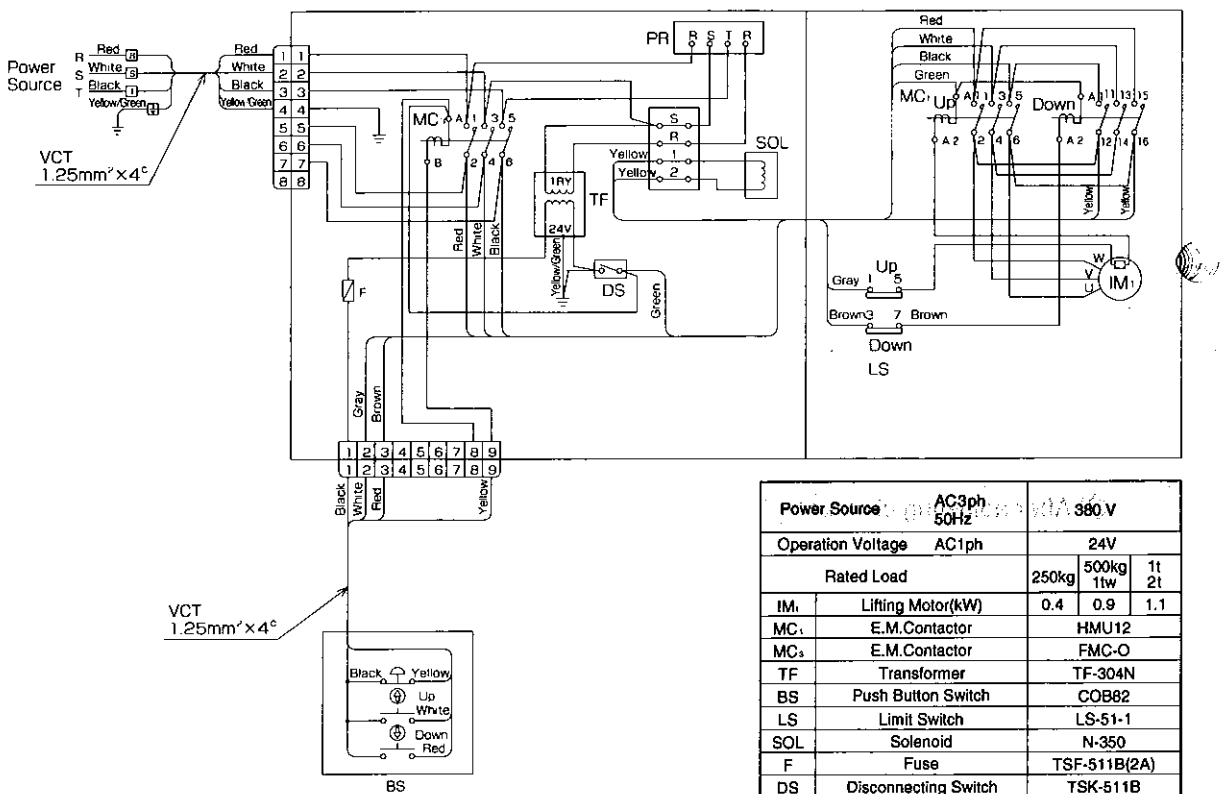
The unused lead wires get broken sometimes when they are accidentally caught in the brake. Bind them together and make sure that they do not get caught in the brake.



⚠ DANGER

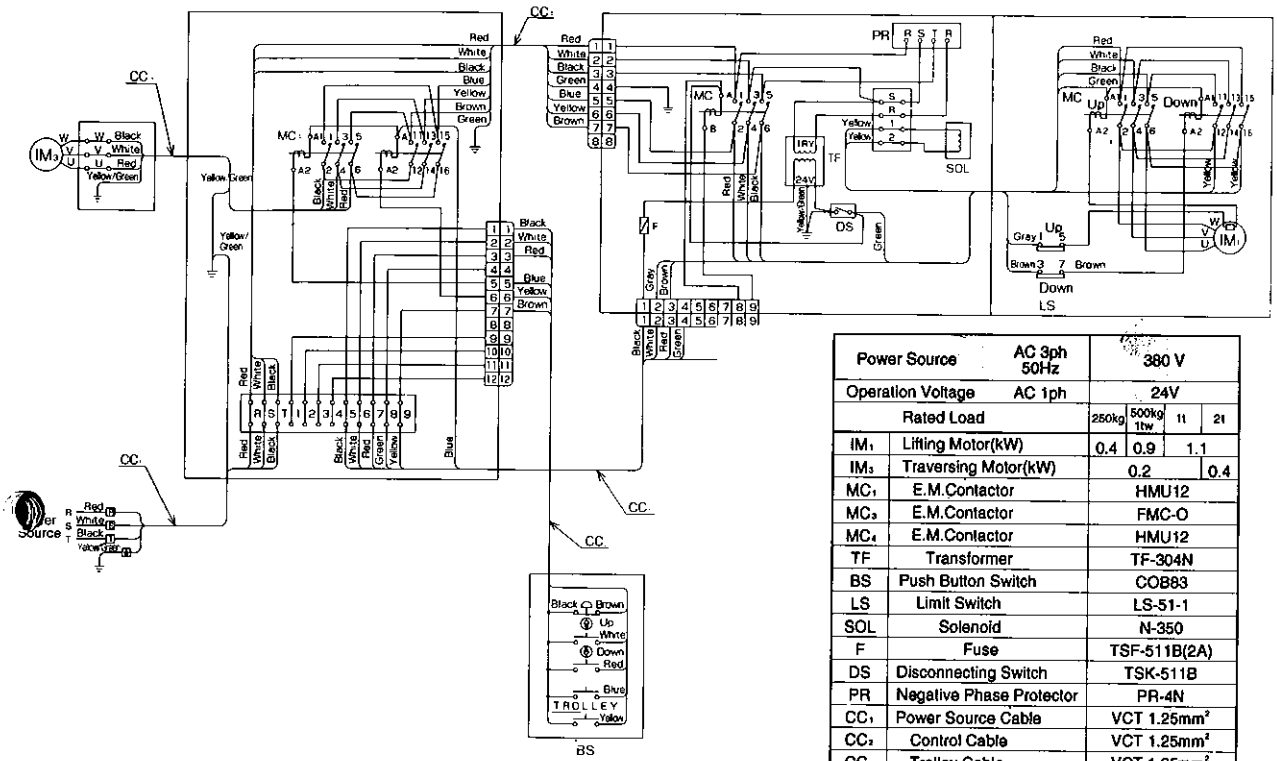
- Be sure to turn off the power source before changing the lead wire.

EC4 250kg • 500kg • 1tw • 1t • 2t
Suspended Type 1-Speed electric chain hoist



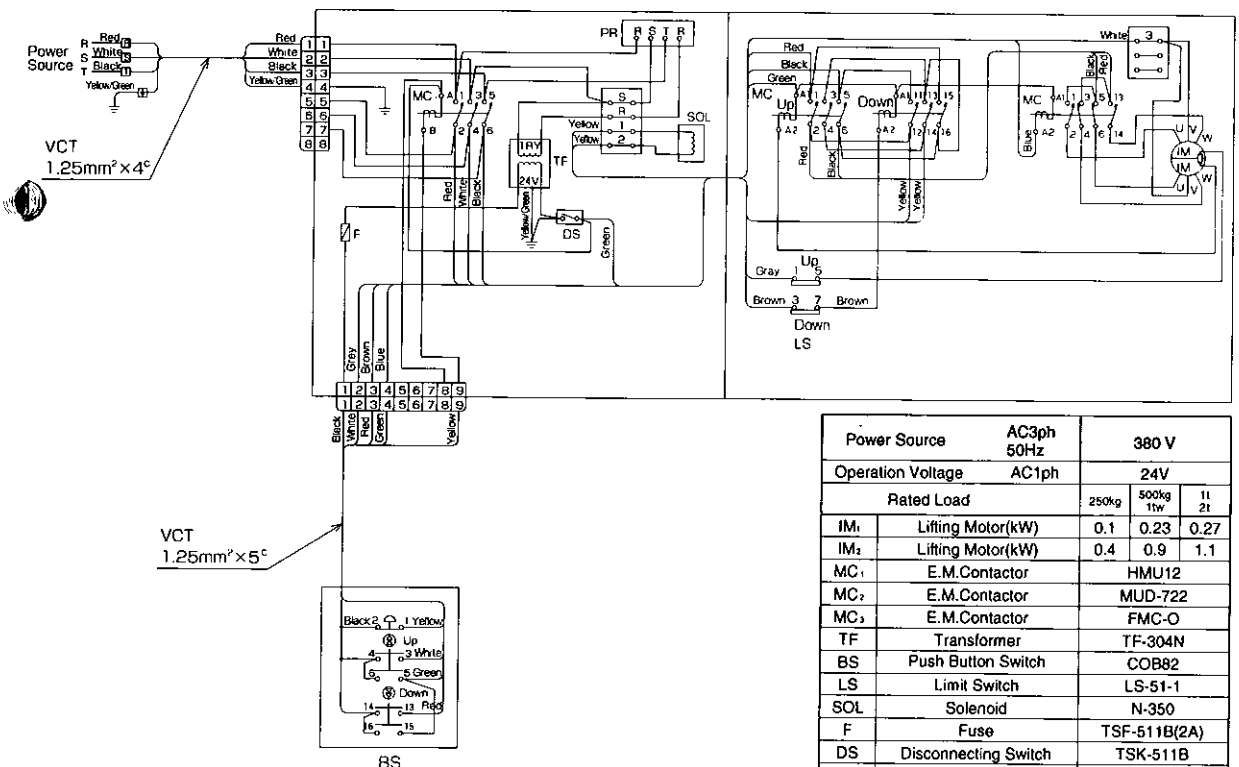
Power Source	AC3ph 50Hz	380V		
Operation Voltage	AC1ph	24V		
Rated Load		250kg	500kg 1tw	1t 2t
IM1	Lifting Motor(kW)	0.4	0.9	1.1
MC1	E.M.Contactor	HMU12		
MC2	E.M.Contactor	FMC-O		
TF	Transformer	TF-304N		
BS	Push Button Switch	COB82		
LS	Limit Switch	LS-51-1		
SOL	Solenoid	N-350		
F	Fuse	TSF-511B(2A)		
DS	Disconnecting Switch	TSK-511B		
PR	Negative Phase Protector	PR-4N		
SYMBOL	NAME	TYPE		

ECE4 250kg • 500kg • 1tw • 1t • 2t
Motorized Trolley 1-Speed electric chain hoist



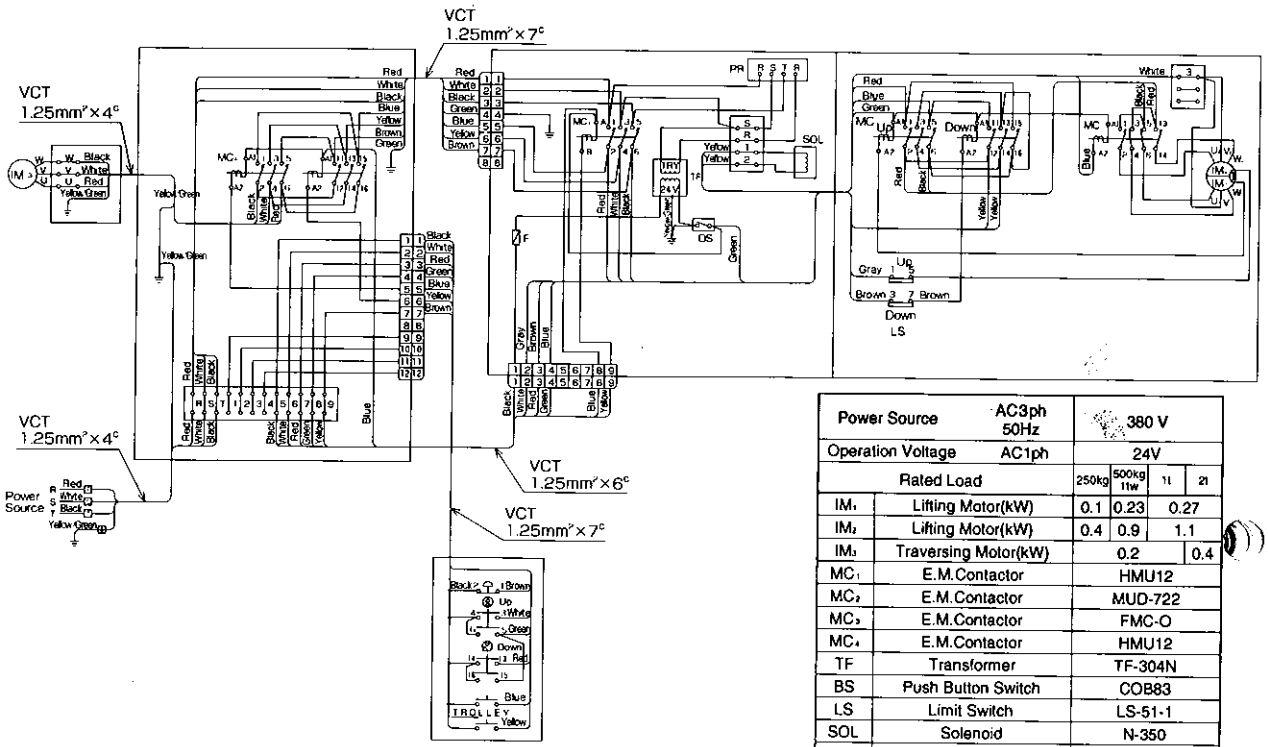
Power Source	AC 3ph 50Hz	380 V		
Operation Voltage	AC 1ph	24V		
Rated Load		250kg	500kg 1tw	1t 2t
IM_1	Lifting Motor(kW)	0.4	0.9	1.1
IM_3	Traversing Motor(kW)	0.2		0.4
MC_1	E.M.Contactor	HMU12		
MC_3	E.M.Contactor	FMC-O		
MC_4	E.M.Contactor	HMU12		
TF	Transformer	TF-304N		
BS	Push Button Switch	COB83		
LS	Limit Switch	LS-51-1		
SOL	Solenoid	N-350		
F	Fuse	TSF-511B(2A)		
DS	Disconnecting Switch	TSK-511B		
PR	Negative Phase Protector	PR-4N		
CC_1	Power Source Cable	VCT 1.25mm²		
CC_2	Control Cable	VCT 1.25mm²		
CC_3	Trolley Cable	VCT 1.25mm²		
CC_4	Connecting Cable(Power)	VCT 1.25mm²		
CC_5	Connecting Cable(Control)	VCT 1.25mm²		
SYMBOL	NAME	TYPE		

ECT4 250kg • 500kg • 1tw • 1t • 2t
Suspended Type 2-Speed electric chain hoist



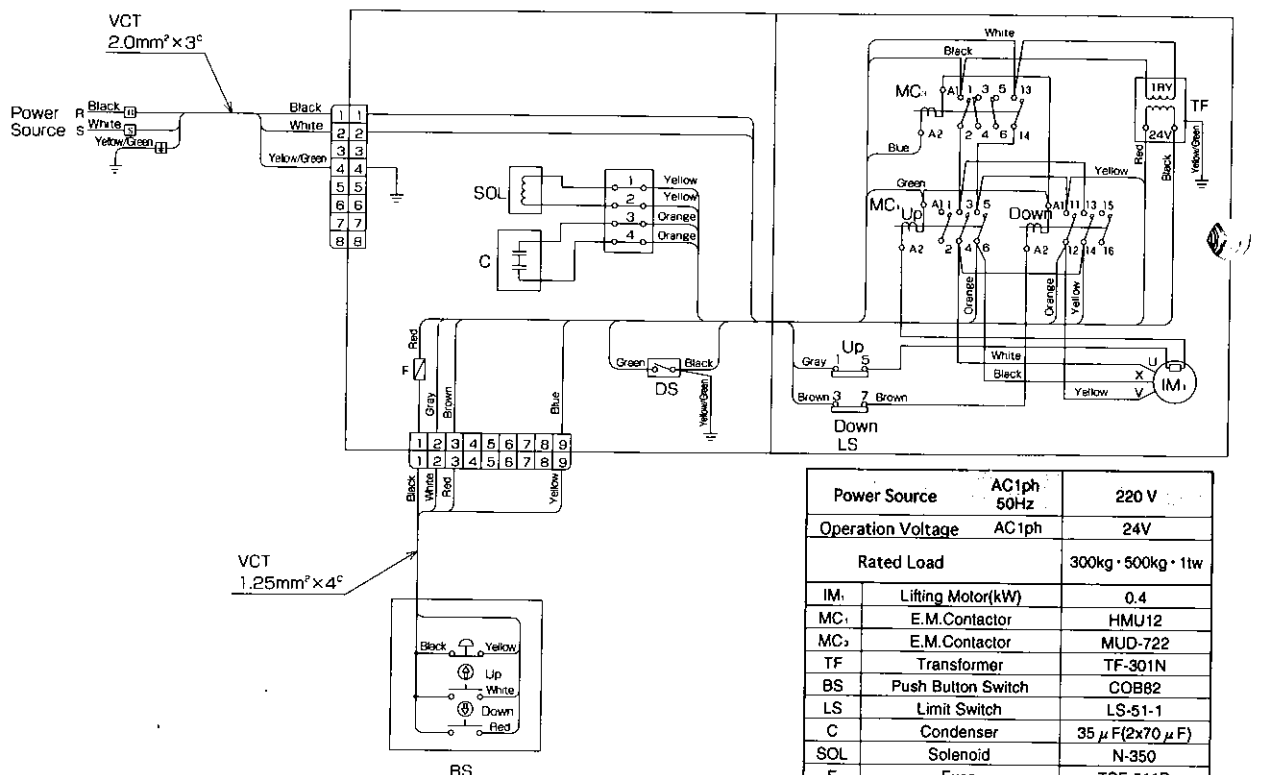
Power Source	AC3ph 50Hz	380 V		
Operation Voltage	AC1ph	24V		
Rated Load		250kg	500kg 1tw	1t 2t
IM_1	Lifting Motor(kW)	0.1	0.23	0.27
IM_2	Lifting Motor(kW)	0.4	0.9	1.1
MC_1	E.M.Contactor	HMU12		
MC_2	E.M.Contactor	MUD-722		
MC_3	E.M.Contactor	FMC-O		
TF	Transformer	TF-304N		
BS	Push Button Switch	COB82		
LS	Limit Switch	LS-51-1		
SOL	Solenoid	N-350		
F	Fuse	TSF-511B(2A)		
DS	Disconnecting Switch	TSK-511B		
PR	Negative Phase Protector	PR-4N		
SYMBOL	NAME	TYPE		

ECTE4 250kg • 500kg • 1tw • 1t • 2t
Motorized Troley Type 2-Speed electric chain hoist



Power Source	AC3ph 50Hz	380 V			
Operation Voltage	AC1ph	24V			
Rated Load		250kg	500kg 1tw	1t	2t
IM_1	Lifting Motor(kW)	0.1	0.23	0.27	
IM_2	Lifting Motor(kW)	0.4	0.9	1.1	
IM_3	Traversing Motor(kW)	0.2			0.4
MC_1	E.M.Contactor	HMU12			
MC_2	E.M.Contactor	MUD-722			
MC_3	E.M.Contactor	FMC-O			
MC_4	E.M.Contactor	HMU12			
TF	Transformer	TF-304N			
BS	Push Button Switch	COB83			
LS	Limit Switch	LS-51-1			
SOL	Solenoid	N-350			
F	Fuse	TSF-511B(2A)			
DS	Disconnecting Switch	TSK-511B			
PR	Negative Phase Protector	PR-4N			
SYMBOL	NAME	TYPE			

ECC4 300kg • 500kg • 1tw
Suspended Type Single-phase electric chain hoist



Power Source	AC1ph 50Hz	220 V
Operation Voltage	AC1ph	24V
Rated Load		300kg • 500kg • 1tw
IM_1	Lifting Motor(kW)	0.4
MC_1	E.M.Contactor	HMU12
MC_2	E.M.Contactor	MUD-722
TF	Transformer	TF-301N
BS	Push Button Switch	COB82
LS	Limit Switch	LS-51-1
C	Condenser	35 μF(2x70 μF)
SOL	Solenoid	N-350
F	Fuse	TSF-511B
DS	Disconnecting Switch	TSK-511B
SYMBOL	NAME	TYPE

POWER SOURCE CABLE SPECIFICATIONS

Motorized trolleys are supplied with 1 M long power source cables and manually operated trolleys are supplied with 5 M long power source cables. Please select the appropriate sized cable from Table 12 when lengthening the power source cable.

Table 12

Type of hoist		Rated load	Cable length 10m	20m	30m	40m
Hoist with Motorized trolley	1-Speed	250kg	The 1.25mm² (standard) power source cable can be used for lengths up to 50 meters.			
		500kg · 1tw				
		1t				
		2t				
	2-Speed	250kg				
		500kg · 1tw				
		1t				
		2t				
Hook suspension hoist and hoist with geared or plain trolley	1-Speed	250kg				
		500kg · 1tw				
		1t · 2t				
	2-Speed	250kg				
		500kg · 1tw				
		1t · 2t				
	Single-Phase	300kg · 500kg 1tw	2.0mm² (standard)		3.5mm²	

SPARE PARTS TABLE AND SPARE PARTS CODE TABLE

⚠ DANGER

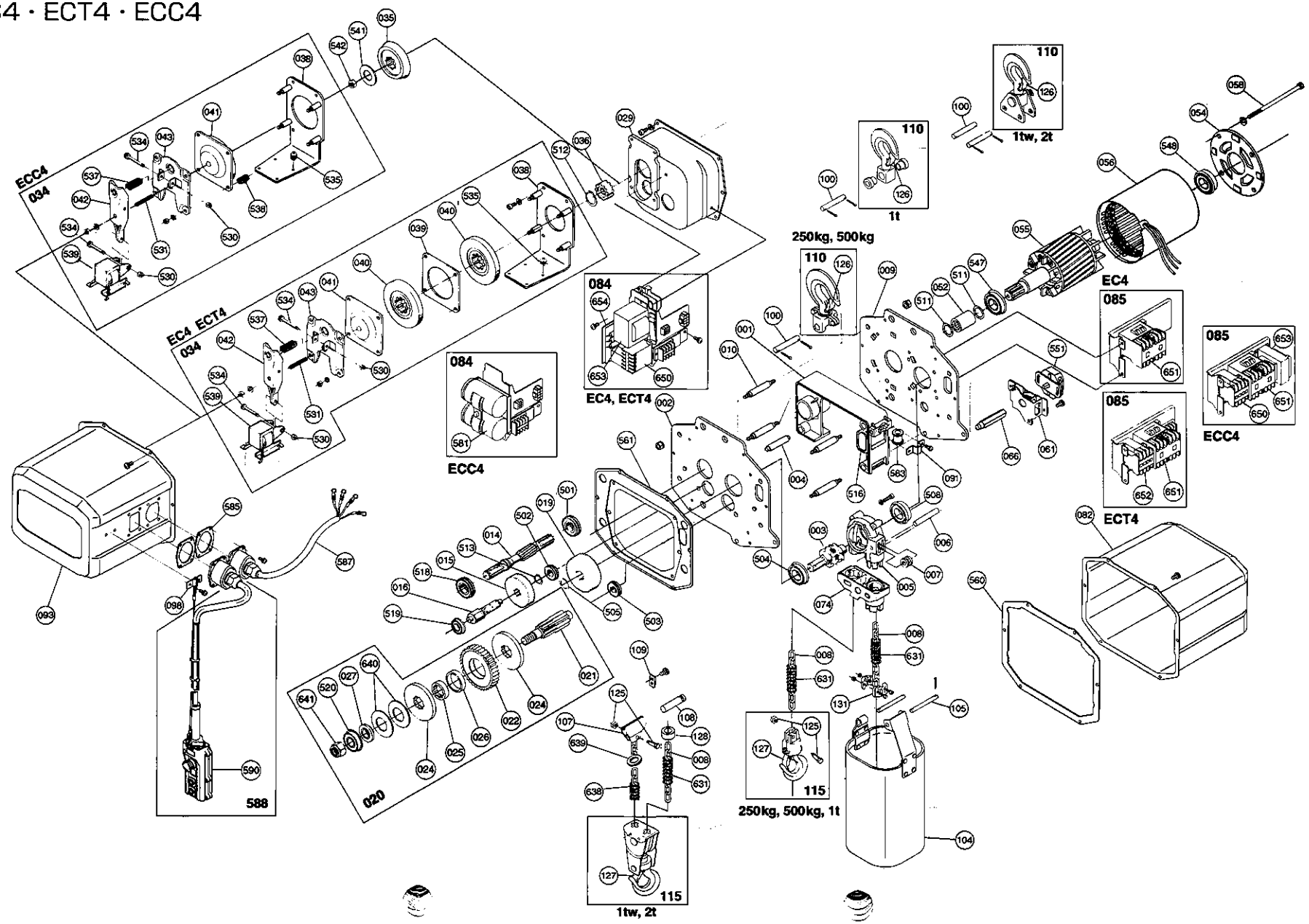
● Only use genuine NITCHI spare parts.

- When ordering spare parts, specify the model, capacity, serial number, code number, and the quantity.
- ※1 specify the height of length.
- ※2 Refer to page-9,10

● How to use the spare parts table

Model →	E C 4			
Rated load →	250kg	500kg	1tw	
Code number →	DEC4001			

EC4 · ECT4 · ECC4

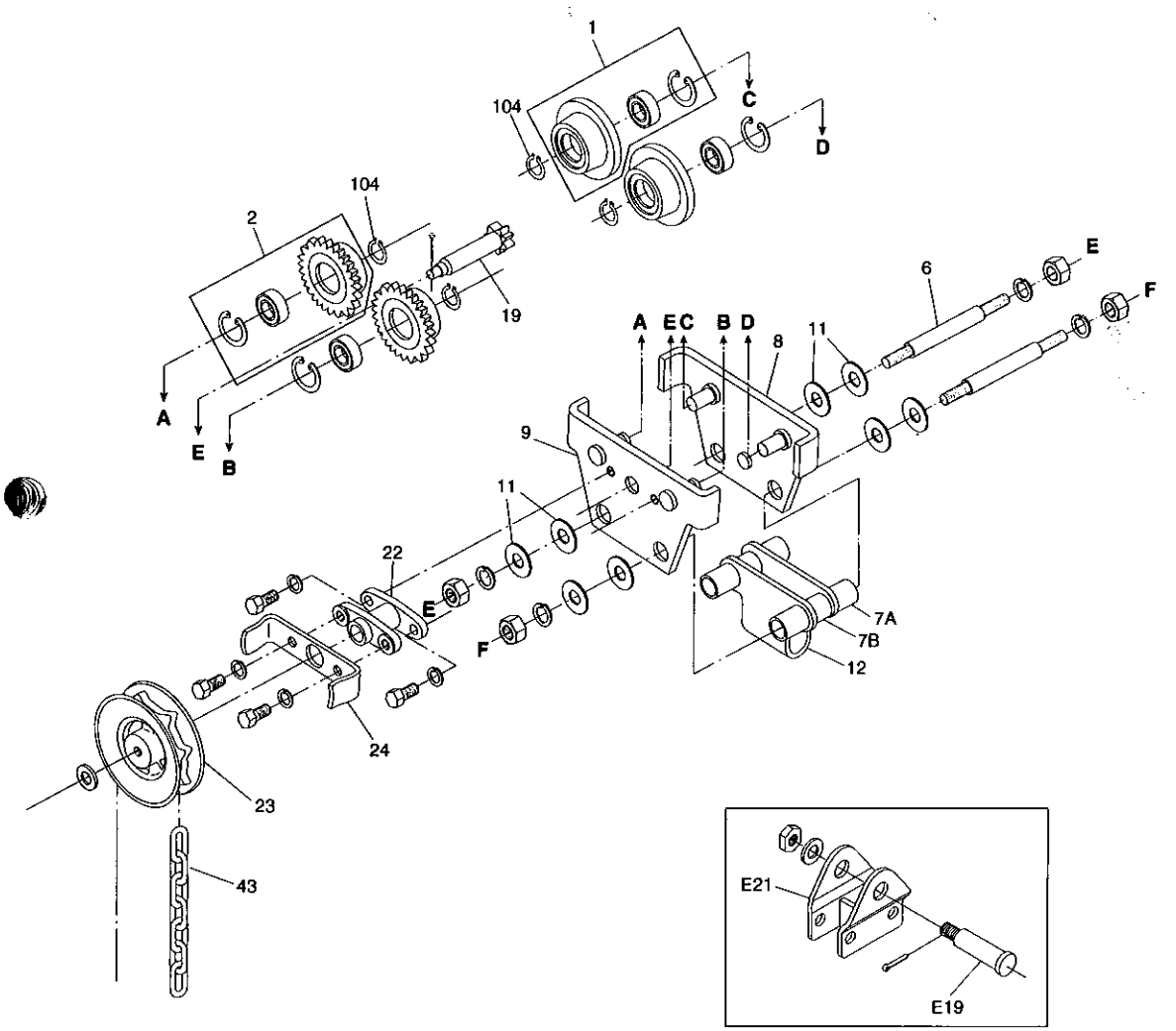


Part Number	Part Name	Nos. used	E C 4					E C T 4					E C C 4			Remarks
			250kg	500kg	1tw	1t	2t	250kg	500kg	1tw	1t	2t	300kg	500kg	1tw	
001	Center frame	1	DEC4001			JEC4001		DEC4001			JEC4001		DEC4001			
002	Gear-side plate	1	DEC4002			JEC4002		DEC4002			JEC4002		DEC4002			
003	Load sheave	1	BEC3003			JEC4003		BEC3003			JEC4003		BEC3003			
004	Frame pin	1	DEC4004			JEC4004		DEC4004			JEC4004		DEC4004			
005	Load chain guide	1	DEC4005			JEC4005		DEC4005			JEC4005		DEC4005			
006	Chain guide stay	1	DEC4006					DEC4006					DEC4006			
007	Chain guide roller	1	DEC4007					DEC4007					DEC4007			
008	Load chain	1	CT-6.3			CT-7.1		CT-6.3			CT-7.1		CT-6.3			※1
009	Motor-side plate	1	DEC4009			JEC4009		DEC4009			JEC4009		EEC4009C			
010	Stay bolt	4	DEC4010			JEC4010		DEC4010			JEC4010		DEC4010			
014	Pinion shaft	1	DEC4014			JEC4014		DED4014			JED4014		EEC4014C			
015	Pinion gear	1	DEC4015			JEC4015		DED4015			JED4015		DED4015			
016	Second pinion	1	DEC4016			JEC4016		DED4016			JED4016		DEC4016	GEC4016C		
019	Load gear	1	DEC4019			JEC4019		DEC4019			JEC4019		DEC4019			
029	Gear case assembly	1set	DEC4029S			JEC4029S		DEC4029S			JEC4029S		EEC4029CS			
034	Brake unit	1set	DEC4034					DEC4034					EEC4034C			
035	Brake wheel	1	———					———					EEC4035C			
036	Brake bushing	1	DEC4036					DEC4036					———			
038	Brake base	1	DEC4038					DEC4038					EEC4038C			
039	Brake fixed plate	1	DEC4039					DEC4039					———			
040	Brake lining	2	BEC3040					BEC3040					———			
041	Brake forcing plate	1	GEC3041					GEC3041					EEC4041C			
042	Brake lever	1	DEC4042					DEC4042					DEC4042			
043	Brake lever base	1	BEC3043					BEC3043					BEC3043			
052	Coupling	1	DEC4052			JEC4052		DEC4052			JEC4052		DEC4052			
054	Motor flange	1	DEC4054			JEC4054		DEC4054			JEC4054		EEC4054C			
055	Rotor	1	DEC4055	GEC4055		JEC4055		DED4055	GED4055		JED4055		EEC4055C			
056	Stator	1	DEC4056BCE	GEC4056BCE		JEC4056BCE		DED4056BCE	GED4056BCE		JED4056BCE		EEC4056C3CE			
058	Through bolts	4	DEC4058			JEC4058		DEC4058	GED4058		JED4058		EEC4058C			
061	Limit unit	1set	DEC4061					DEC4061					DEC4061			
066	Switch pin	1	DEC4066			JEC4066		DEC4066			JEC4066		DEC4066			
074	Handle	1	DEC4074			JEC4074		DEC4074			JEC4074		DEC4074			

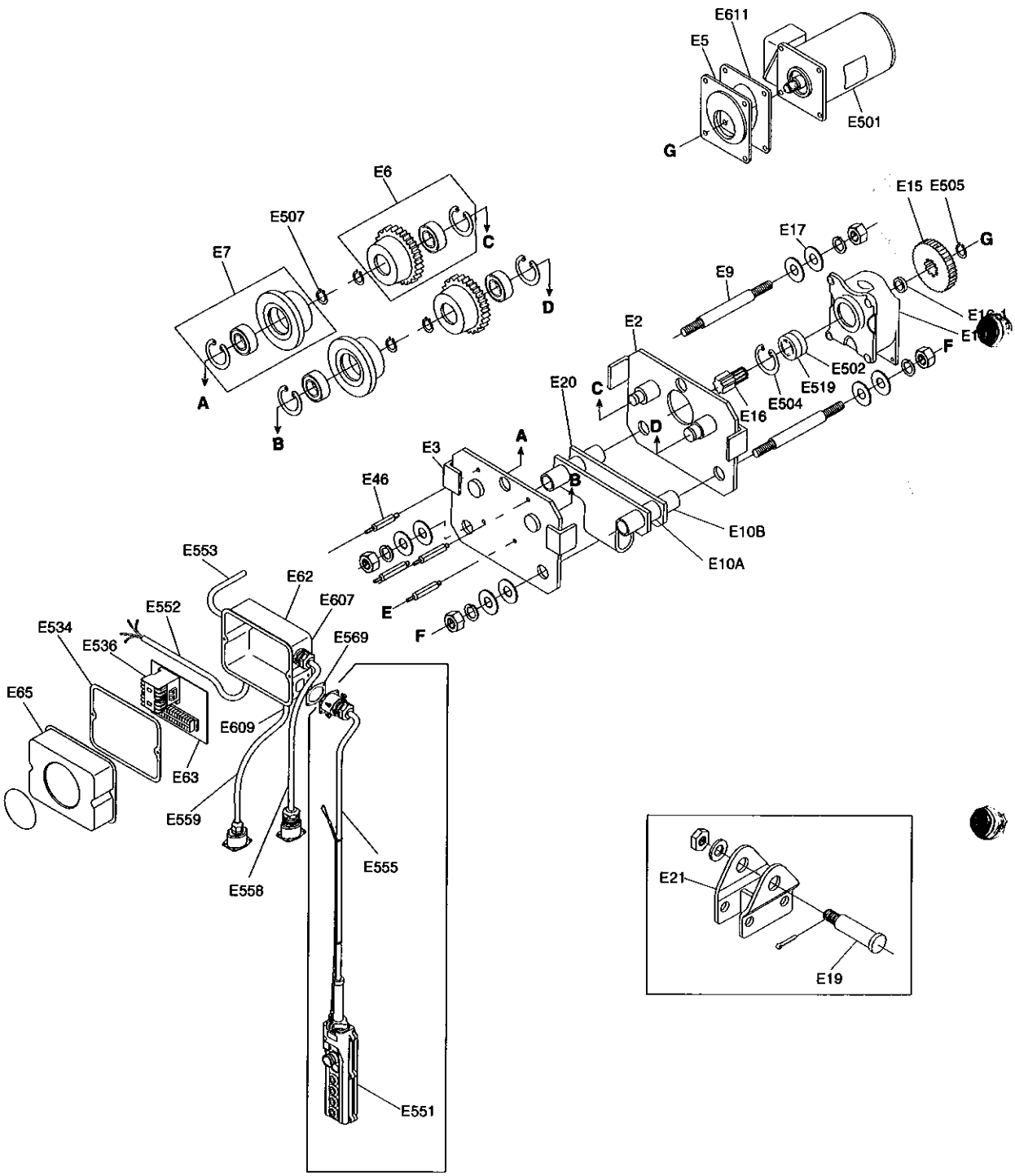
Part Number	Part Name	Nos. used	E C 4					E C T 4					E C C 4			Remarks
			250kg	500kg	1tw	1t	2t	250kg	500kg	1tw	1t	2t	300kg	500kg	1tw	
082	Motor cover	1	DEC4082			JEC4082		DEC4082			JEC4082		DEC4082			
084	Electrical components (Gear-side)	1set	DEC4084ES					DEC4084ES					EEC4084ECS			
085	Electrical components (Motor-side)	1set	DEC4085E					DED4085ES					EEC4085ECS			
091	Cable securing plate	1	DEC4091					DEC4091					DEC4091			
093	Switch cover	1	DEC4093			JEC4093		DEC4093			JEC4093		DEC4093			
098	Wire hanger	1	DEC4098					DEC4098					DEC4098			
100	Top hook pin	in( )	DEC4100(1)		DEC4100(2)	JEC4100(1)	JEC4100(2)	DEC4100(1)		DEC4100(2)	JEC4100(1)	JEC4100(2)	DEC4100(1)		DEC4100(2)	
104	Chain bucket assembly	1set	Refer to the Chain bucket application table on page-6.													
105	Chain bucket pin	2	DEC4105			JEC4105		DEC4105			JEC4105		DEC4105			
107	Chain stop plate	1	———		JEC4107W	———	JEC4107W	———		JEC4107W	———	JEC4107W	———		JEC4107W	
108	Chain stop pin	1	———		JEC4108W	———	JEC4108W	———		JEC4108W	———	JEC4108W	———		JEC4108W	
109	Chain stop pin securing plate	1	———		JEC4109W	———	JEC4109W	———		JEC4109W	———	JEC4109W	———		JEC4109W	
110	Top hook assembly	1set	GEC3110U		JEC 4110XW	JEC 4110X	LEC 4110X	GEC3110U		JEC 4110XW	JEC 4110X	LEC 4110X	GEC3110U		JEC 4110XW	
115	Bottom hook assembly	1set	EEC3115X	GEC3115X	JEC 3115UW	MH4010 D08X	LEC 3115U	EEC3115X	GEC3115X	JEC 3115UW	MH4010 D08X	LEC 3115U	EEC3115X	GEC3115X	JEC 3115UW	
125	Bolt & nut for holder	1	HH4005048T					HH4005048T					HH4005048T			
126	Safety latch assembly (for Top hook)	1	HH4010074T		HH4015074T			HH4010074T		HH4015074T			HH4010074T		HH4015 074T	
127	Safety latch assembly (for Bottom hook)	1	HH4005074T		HH4010074T		HH4015 074T	HH4005074T		HH4010074T		HH4015 074T	HH4005074T		HH4010 074T	
128	Spring collar	1	———		JEC4128W	———	JEC4128W	———		JEC4128W	———	JEC4128W	———		JEC4128W	
131	Stop holder	1set	MH4005B25T					MH4005B25T					MH4005B25T			
501	Ball bearing	1	6004ZZNR			6005ZZNR		6004ZZNR			6005ZZNR		6004ZZNR			
502	Ball bearing	1	6201ZZNR			6202ZZNR		6201ZZNR			6202ZZNR		6201ZZNR			
503	Ball bearing	1	6202ZZNR			6303ZZNR		6202ZZNR			6303ZZNR		6202ZZNR			
504	Ball bearing	1	6005ZZNR			6206ZZNR		6005ZZNR			6206ZZNR		6005ZZNR			
505	Retaining ring - Ctype	1	51025			51029		51025			51029		51025			
508	Ball bearing	1	6005ZZNR			6206ZZNR		6005ZZNR			6206ZZNR		6005ZZNR			
511	Wave washer	6	———					———					WW-20			
512	Retaining ring - Ctype	1	51020					51020					———			
513	Retaining ring - Ctype	1	51020			51022		51020			51022		51020			

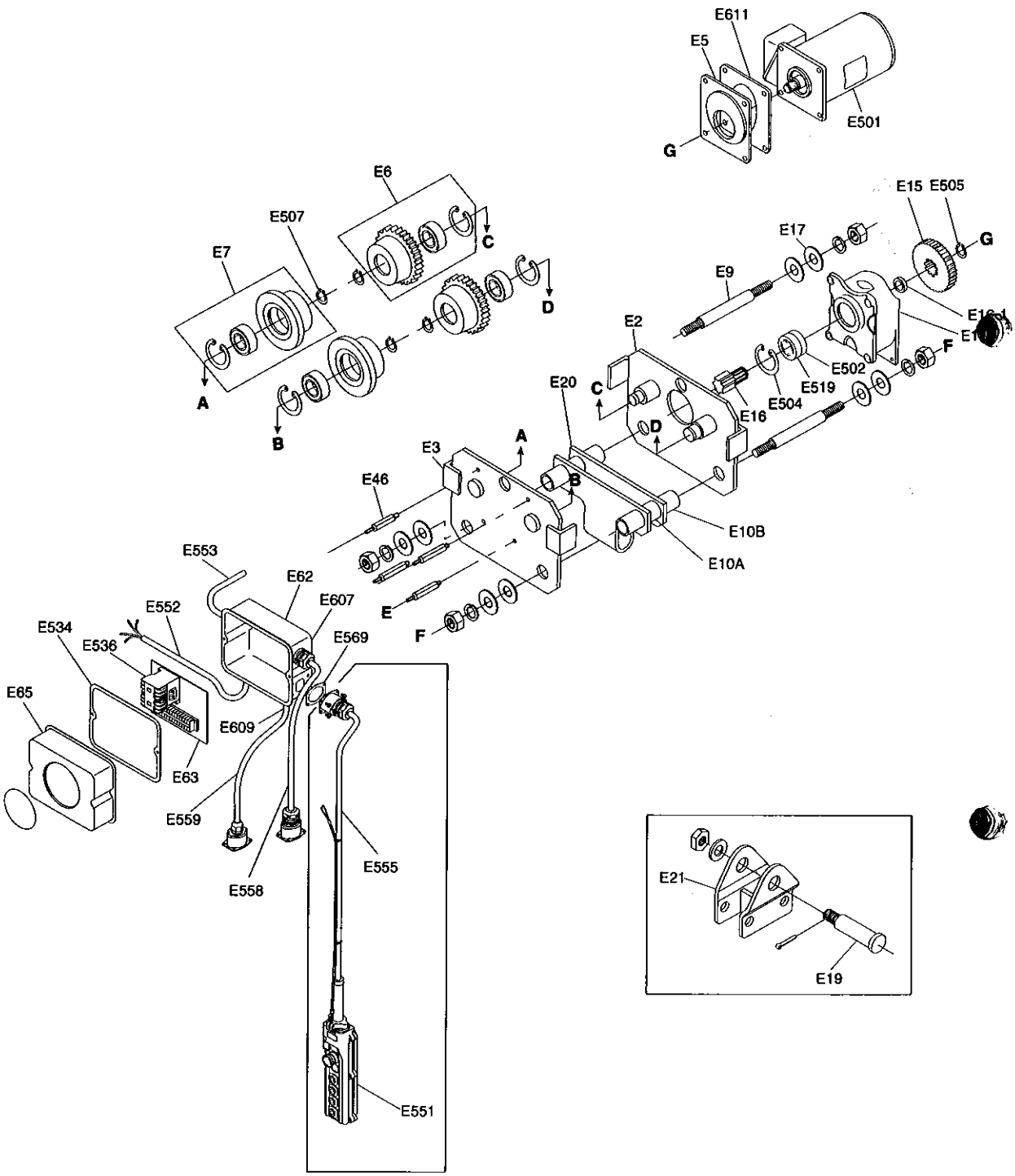
Part Number	Part Name	Nos. used	E C 4					E C T 4					E C C 4			Remarks
			250kg	500kg	1tw	1t	2t	250kg	500kg	1tw	1t	2t	300kg	500kg	1tw	
516	Center frame gasket	1	DEC4516			JEC4516		DEC4516			JEC4516		DEC4516			
518	Ball bearing	1	6004LLUNR					6004LLUNR					6004LLUNR			
519	Ball bearing	1	6201ZZNR			6202ZZNR		6201ZZNR			6202ZZNR		6201ZZNR			
520	Ball bearing	1	6202ZZNR			6004ZZNR		6202ZZNR			6004ZZNR		6202ZZNR			
530	Nylon nut	2	M6					M6					M6			
531	Brake adjusting screw	1	M8×35					M8×35					M8×35			
534	Bolt for lever	2	CBM6×55-03					CBM6×55-03					CBM6×55-03			
535	Fastening screws	4	BEC3554U					BEC3554U					BEC3554U			
537	Brake spring	1	DEC4537					DEC4537					DEC4537C			
538	Brake base springs	4	———					———					DEC3558C			
539	AC solenoid	1	N-350					N-350					N-350			
541	Flat washer	1	———					———					φ10.5×φ21×2			
542	Fine u-nut	1	———					———					M10×0.75			
547	Ball bearing	1	6204ZZNR			6205ZZNR		6204ZZNR			6205ZZNR		6204ZZNR			
548	Ball bearing	1	6303ZZNR			6204ZZNR		6303ZZNR			6204ZZNR		6303ZZNR			
551	Limit switch	1	LS-51-1					LS-51-1					LS-51-1			
560	Motor cover gasket	1	DEC4560			JEC4560		DEC4560			JEC4560		DEC4560			
561	Gear case gasket	1	DEC4561			JEC4561		DEC4561			JEC4561		DEC4561			
581	Condenser	2	———					———					EEC4581EC			
583	Rubber protector	1	DEC4583					DEC4583					DEC4583			
585	Connector cover gasket	2	DEC4585					DEC4585					DEC4585			
587	Power source cable	1	DEC4587E					DEC4587E					EEC4587EC			
588	Pendant control cable assembly	1	Specify the type of push button switch and the length of the pendant cable.													
590	Push button switch	1	Refer to code numbers shown in the circuit diagram tables.													
631	Tail spring	2	DEC4631	GEC4631	GEC3705	GEC4631	JEC3705	DEC4631	GEC4631	GEC3705	JEC4631	JEC3705	DEC4631	GEC4631	GEC3705	
638	Spring for 2 falls	1	———		JEC4638W	———	JEC4638W	———		JEC4638W	———	JEC4638W	———		JEC4638W	
639	Flat washer	1	———		φ23×φ37×3	———	φ25×φ39×4	———		φ23×φ37×3	———	φ25×φ39×4	———		φ23×φ37×3	
650	Electromagnetic contactor	1	FMC-O(24V)					FMC-O(24V)					MUD-72224			
651	Electromagnetic contactor	1	HMU1224					HMU1224					HMU1224			
652	Electromagnetic contactor	1	———					MUD72224					———			
653	Transformer	1	TF-304N					TF-304N					TF-301NA24			
654	Warning relay of negative phase	1	PR-4N					PR-4N					———			
659	Fuse	1	2A					2A					1A			

Part Number	Part Name	Nos. used	E C 4					E C T 4					E C C 4			Remarks
			250kg	500kg	1tw	1t	2t	250kg	500kg	1tw	1t	2t	300kg	500kg	1tw	
020	Friction OLP unit	1set	DEC40200	GEC40200		JEC40200		DED40200	GED40200		JEC40200		EEC40200C0	GEC40200C0		
021	Third pinion (OLP)	1	DEC40210			JEC40210		DEC40210			JEC40210		DEC40210			
022	Friction gear	1	DEC40220			JEC40220		DED40220			JED40220		DEC40220	GEC40220C0		
024	Friction hub	2	DEC40240			JEC40240		DEC40240			JEC40240		DEC40240			
025	Friction boss	1	DEC40250			JEC40250		DEC40250			JEC40250		DEC40250			
026	Friction metal	1	RCS106017			JEC40260		RCS106017			JEC40260		RCS106017			
027	Disk spring collar	1	DEC40270			JEC40270		DEC40270			JEC40270		DEC40270			
640	Disk spring	2	MDS25-1			MDS30-1		MDS25-1			MDS30-1		MDS25-1			
641	Nylon - nut	1	DEC4641			JEC4641		DEC4641			JEC4641		DEC4641			



Part Number	Part Name	Nos. used		250kg	300kg	500kg	1tw	1t	2t	Remarks
		EGT5	EPT5							
1	Plain wheel assmbly	2	4	JGT5001T					LGT5001TSN	
2	Gear wheel assmbly	2	—	JGT5002T					LGT5002TSN	
6	Stay bolts	2	2	LGT5006					LGT5006SN	
7A	Stay pipes A	4	4	JGE5007ASN					LGE5007ASN	
7B	Stay pipes B	2	2	JGE5007BSN					LGE5007BSN	
8	Plain-side plate	1	2	JGT5008TSN					LGT5008TSN	
9	Gear-side plate	1	—	JGT5009TSN					LGT5009TSN	
11	Spacer washer	※2	※2	PWM20					LGT5011SN	
12	Top holder	1	1	GGE5012SN				JGE6012SN	LGE5012SN	
19	Pinion shaft	1	—	JGE5019					LGE5019	
22	Pinion shaft metal	1	—	JGE5022					LGE5022	
23	Hand wheel	1	—	JGT5023					LGT5023	
24	Hand chain guide	1	—	JGT5024					LGT5024	
43	Hand chain	1	—	J-5						※1
E19	Top holder pin	1	1	———			GET5019	———	LET5019	
E21	Connecting plate	1	1	———			GET6021	———	LET6021	
104	Retaining ring - C type	4	4	51015					51020	


E611
E5
E501
G
E6
E507
E7
C
D
A
B
E15 E505
E17
G
E9
E2
E16
E504
E519
E502
F
E20
C
D
A
B
E3
E46
E10B
E10A
E553
E62
E607
E552
E534
E536
E569
E65
E609
E63
E559
E558
E555
E551
E21
E19


E611
E5
E501
G
E6
E507
E7
C
D
A
B
E15 E505
E17
G
E9
E2
E16-1
E1
F
E502
E519
E504
E16
E20
C
D
E3
A
B
E46
E10B
E10A
E553
E62
E607
E552
E534
E536
E569
E65
E609
E63
E559
E555
E558
E551
E21
E19

Part Number	Part Name	Nos. used	250kg	500kg	1tw	1t	2t	Remarks
E1	Gear box	1	BEM6001U				LEM6001U	
E2	Gear-side plate	1	BET5002USN				LET5002USN	
E3	Plain-side plate	1	BET5003USN				LET5003USN	
E5	Support for motor flange	1	BET5005				LET5005	
E6	Gear wheel assembly	2	BET5006TSN				LET5006TSN	
E7	Plain wheel assembly	2	BET5007TSN				LET5007TSN	
E9	Stay bolts	2	BET5009SN				LET5009SN	
E10A	Stay pipes A	2	BET5010ASN					
E10B	Stay pipes B	4	BET5010BSN					
E15	Pinion gear	1	BET5015				LET5015	
E16	Pinion	1	BET5016				LET5016	
E16-1	Pinion collar	1	BET50161				LET50161	
E17	Spacer washer	※2	PWM20				LGT5011SN	
E19	Top holder pin	1	———		GET5019	———	LET5019	
E20	Top holder	1	BET5020TH			JET6020TSN	LET5020TH	
E21	Connecting plate	1	———		JEM6021	———	LEM6021	
E46	Bolts for E62	4	BET5046SN					
E62	Switch holder	1	DEM6062					
E63	Base plate	1	DEM6063USN					
E65	Switch cover	1	BET5065					
E501	Motor	1	DEM6501B				LEM6501B	
E502	Ball bearing	1	6004Z				6205Z	
E504	Retaining ring - Ctype	1	50042				50052	
E505	Retaining ring - Ctype	1	51020				51025	
E507	Retaining ring - Ctype	4	51015				51025	
E519	Ball bearing	1	6004LLU				6205LLU	
E534	Gasket for E62	1	DEM6534					
E536	Electromagnetic contactor	1	HMU1224					
E551	Push button switch	1	Refer to cord numbers shown in the circuit diagram tables.					
E552	Power source cable	1	DEM6552					
E553	Trolley cable	1	DEM6553				LEM6553	
E555	Push button cable assembly	1	Specify the type of push button switch and the length of the pendant cable.					
E558	Connecting cable(power)	1	DEM6558SN				LEM6558SN	
E559	Connecting cable(control)	1	DEM6559SN				LEM6559SN	
E569	Connector cover gasket	1	DEC4585					
E607	Cord lock	2	OA-W2216					
E609	Cord lock	2	SK-14L					
E611	Gasket for E5	1	DEM6611				LEM6611	