

Pacific Motorized Trolley

U-MEGA Series

OPERATION MANUAL & PARTS LIST

Model

PET050S
PET100S
PET200S



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 " Pacific " MOTORIZED TROLLEY.



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I. FOREWORD

This manual contains important information to help you properly install, operate and maintain the motor driven trolley for maximum performance, economy and safety.

Please study its contents thoroughly before putting the trolley into operation.

By practicing correct operation procedures and by carrying out the recommended preventative maintenance suggestions, you will be assured of dependable service.

In order to help us to supply correct spare parts quickly, please always specify:

1).Trolley Model, 2). Serial Number and 3). Part Number, as well as the description.

We trust that you will find this " Pacific " trolley satisfies your requirements.

Should you have any queries, please contact:

Pacific Hoists Australia	Pacific Hoists New Zealand
24 Foundry Road	11 Druces Road
Seven Hills NSW 2147	Wiri Auckland NZ 2104
P +61 2 8825 6900	P +64 9 263 5566
E sales@pacifichoists.com.au	E sales@pacifichoists.co.nz
W www.pacifichoists.com.au	W www.pacifichoists.com.au

II. OPERATING AND SAFETY PROCEDURES

The following are operating and safety procedures for safe operation of the Pacific motor driven trolley. Taking precedence over and specific rules listed here, however is the most importance rule of all. A few minutes spent reading these rules can make an operator aware of dangerous practices to avoid and precautions to take for his own safety and others.

1. Immediately after installation, operate trolley with safe working load over the entire length of runway or monorail system to be sure that all adjustments and operations are satisfactory.
2. Rail stops must be installed for all trolleys operating on open end beams. These stops must be positioned such that impact forces are absorbed by trolley side frames only.
3. When preparing to lift a load, be sure that the attachments to the hook are firmly seated in hook saddle. Avoid off center loading on the point of hook.
4. When lifting, raise the load only enough to clear the floor or support and check to be sure that the attachments to hook and load are firmly seated. Continue lift only after you are assured the load is free of all obstructions.
5. When applying a load, it should be directly under the trolley. Avoid off center loading of any kind.
6. Take up a slack load chain carefully and start lifting load slowly to avoid shock and jerking of hoist load chain. If there is any evidence of overloading, immediately lower the load and remove the excess load.
7. Do not allow the load to swing or twist while hoisting.
8. Anticipate the stopping point and allow trolley to coast to smooth stop. Reversing or plugging to stop trolley causes overheating of motor and swaying of load.
9. Do not load trolley beyond the rated capacity. Overload can cause immediate failure of load carrying parts of cause damage resulting in future failure at less than rated capacity.
10. Do not use this or any other overhead materials handling equipment for lifting or transporting people.
11. Stand clear of all loads and avoid moving a load over the heads of other people. Warn people of your intention to move a load in their area.
12. Do not leave the load suspended in the air unattached.

13. Do not wrap the load chain around the load and hook into itself as a choker chain.

Doing this will result in the follow:

(a) Operation of the upper limit switch is bypassed and the load could hit the hoist.

(b) The loss of the swivel effect of the hook which could mean twisted chain and a jammed lift wheel.

(c) The chain could be damaged at the hook.

14. Permit only qualified personnel to operate the unit.

III. GENERAL INFORMATION

The Pacific motorized trolleys are designed for use with the Pacific Electric Chain Hoists. The trolleys are available in the following capacities: 0.5-Ton~2-Ton, These trolleys are similar except for the size of the load carrying members.

The trolleys have rugged steel side plates with anti-drop fins, steel wheel axles, steel suspension bolts, construction steel load plate seated in middle of two suspension bolts for top hook of hoist to hook on. The hot forged travelling wheels machine to suit both I-beam and flat beam. Hardened steel gears are attached to two trackwheels and driven by a hardened steel pinion. The pinion is driven by planetary gear reducer in high quality grease. A weather proof motor drive the gear reducer.

The electric housing contains a reversing contactor and a terminal boards. The transformer will be an option depending on the user's need. The 1-phase motor is always equipped with a magnetic brake over the end of driven motor. Above the housing bottom, there three holes, one for cord from hoist, another for control cord from hoist, the third one for trolley motor cord, it will serve as an option for equipped with the Push-Bottom-Station cord for the trolley. In addition, there are two option holes on each side of the housing, motor power cord on the right, and an optional hole for the power cord to trolley on the left. All five holes are equipped with cable gland for IP-55 protection optionally. Please refer to Illust: 1 on page 9.

IV. INSTALLATION

1. UNPACKING INFORMATION

After removing the trolley from the shipping carton/crate, carefully inspect the external condition of the cord, electric housing, gear reducer, motor for damage that may have occurred during shipment and handling. Check to make sure all parts are furnished. i.e. trolley side frame with electric housing, side frame with reducing gear motor, position tube, spacer washer, stay-bolts, nuts and load plate for hoist top hook. Also, before attempting to install the trolley, make sure that the power supply indicated on the labels attached to the motor housing is the same as the power supply on which the unit is to operate.

Generally, the hoist and trolley are packed separately. Except when the order indicates the requirement of 4-way control for the hoist with trolley, then the hoist will be packed with trolley together in one wooden crate.

WARNING

For all trolley suspended hoist rail stops must be installed at each end of the rail. Failure to install rail stops will allow the hoist and trolley to fall off the end of the rail and thus cause an accident that may result in injury and/or property damage. The stops must be positioned as to not exert impact force on the hoist frame or trolley wheels. They must contact the ends of the trolley side frames.

2. TROLLEY TO BEAM

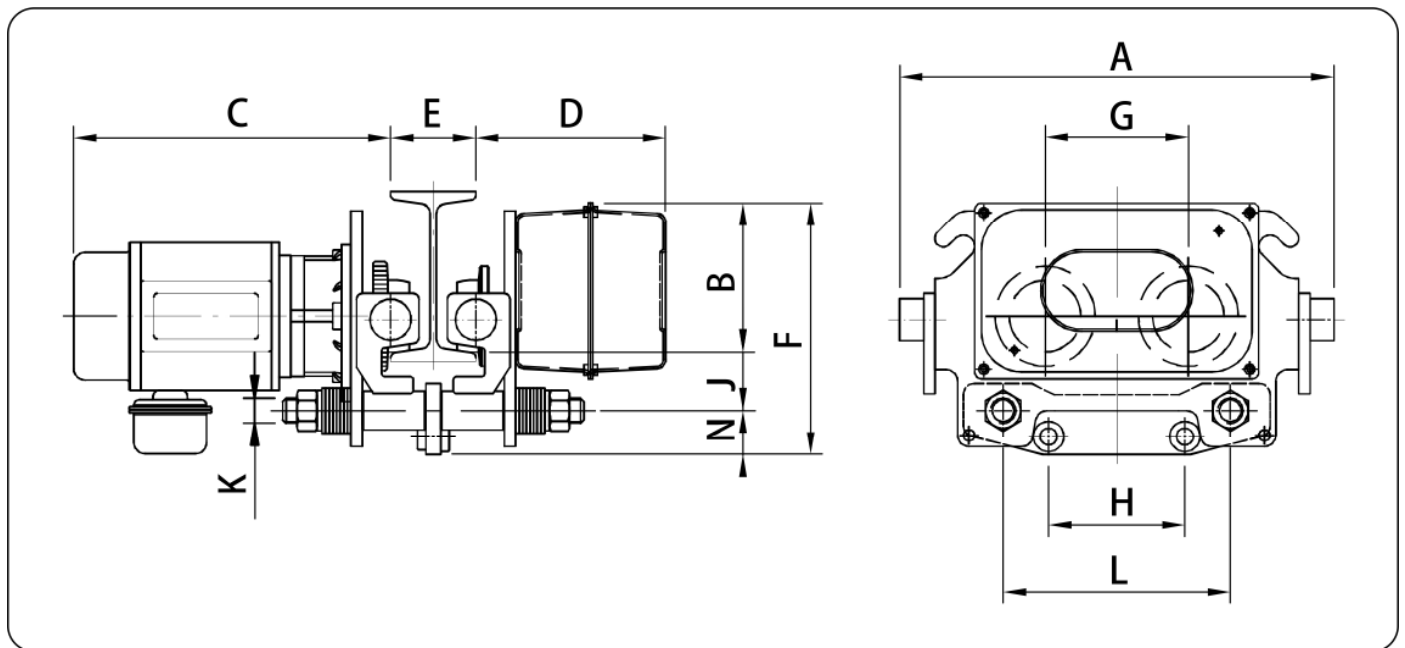
It is recommended that the trolley be mounted on the beam prior to attaching the hoist to the trolley. Before attempting to mount the trolley on the beam, measure the actual width of the beam flange on which the trolley is to operate. Using this measurement determine the arrangement of spacer washers between the two trolley side frames. First loosely assemble the side frames, position tubes, spacer washers and nuts on the stay bolts.

WARNING

The trolley and beam should be inspected periodically to assure their continued operations. Operating a malfunctioning trolley and/or operation the trolley on a beam with an excessively worn flange may allow the trolley to fall from the beam causing an accident that may result in injury and/or property damage.

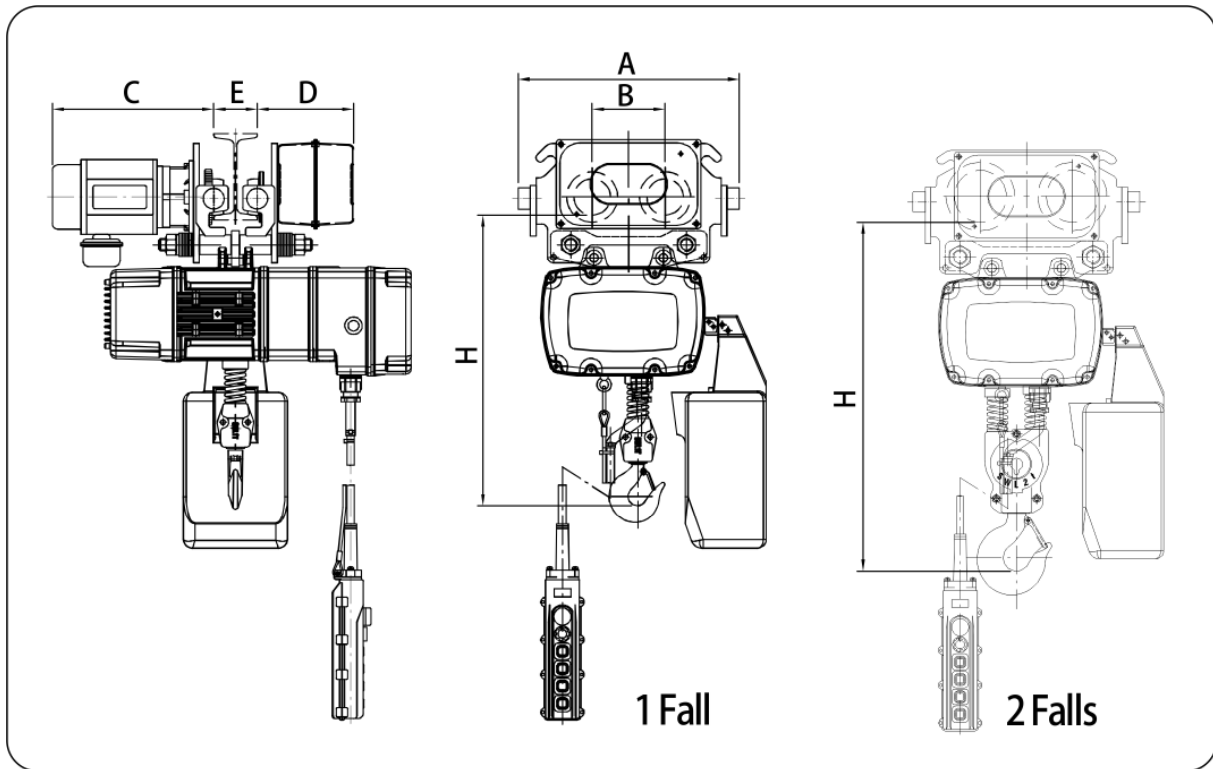
Due to the variations in beam flange widths, it is suggested that the beam flange width be measured to determine the exact distribution of spacer washers. The distance between trackwheel flanges should be 3-5 mm greater than the beam flange width for straight runway beams, and 5-7 mm greater than the beam flange width if runway includes sharp curves. Now install the trolley on the beam by sliding one side frame out far enough to allow the trackwheels to clear beam flange. Lift the trolley up so that the trackwheels are riding on the beam and draw the side frames together and tighten the nuts snugly.

3. MOTORIZED TROLLEY



Model	Dimensions(mm)												Speed (m/min)	Motor (kw)	N.W. (kg)	Min radius of carve(m)
	A	B	C	D	E	F	G	H	L	J	N	K				
PET050S	385	125	280	180	75~ 125	216	126	95.5	200	52	39	7/8"-9UNC (Ø22.2)	10	0.18 4P	45	1.3
PET100S	385	114	280	180	75~ 125	220	126	120	210	67	39	1"-8UNC (Ø 25.4)	10	0.18 4P	45	1.3
PET200S	395	125	285	185	100~ 150	236	159	120	230	75	36	1 1/4"-7UNC (Ø31.8)	10	0.18 4P	50	1.7

4. HOIST WITH MOTORIZED TROLLEY



Model	DWG.	Dimensions(mm)					
		A	B	C	D	E	H
PEH050S+PET050S	I	385	126	280	180	75~125	500
PEH100S+PET100S	I	385	126	280	180	75~125	550
PEH200S+PET200S	II	395	159	285	185	100~150	625

5. ELECTRICAL INSTALLATION

The trolley electrical connection must be completed as shown in Illust.1, the Hoist & Trolley General Arrangement. Generally, the electric housing is provided with three holes in the bottom, one for trolley motor cord, the second one for trolley power cord from hoist and the third one for control cord from hoist. Moreover, the optional five holes design for independent usage of trolley are also available, please refer to the Illus.1. There are two holes on each side of the housing, on the left is the power cord for trolley, on the right is for the trolley motor cord. For the details of wiring connection, please refer to the wiring diagrams.

Hoist with trolley wiring diagram shown example as follows:

F2300078310101 is 1 phases model, Please refer to page 10.

For special unit, please see wiring diagram supplied with unit.

WARNING

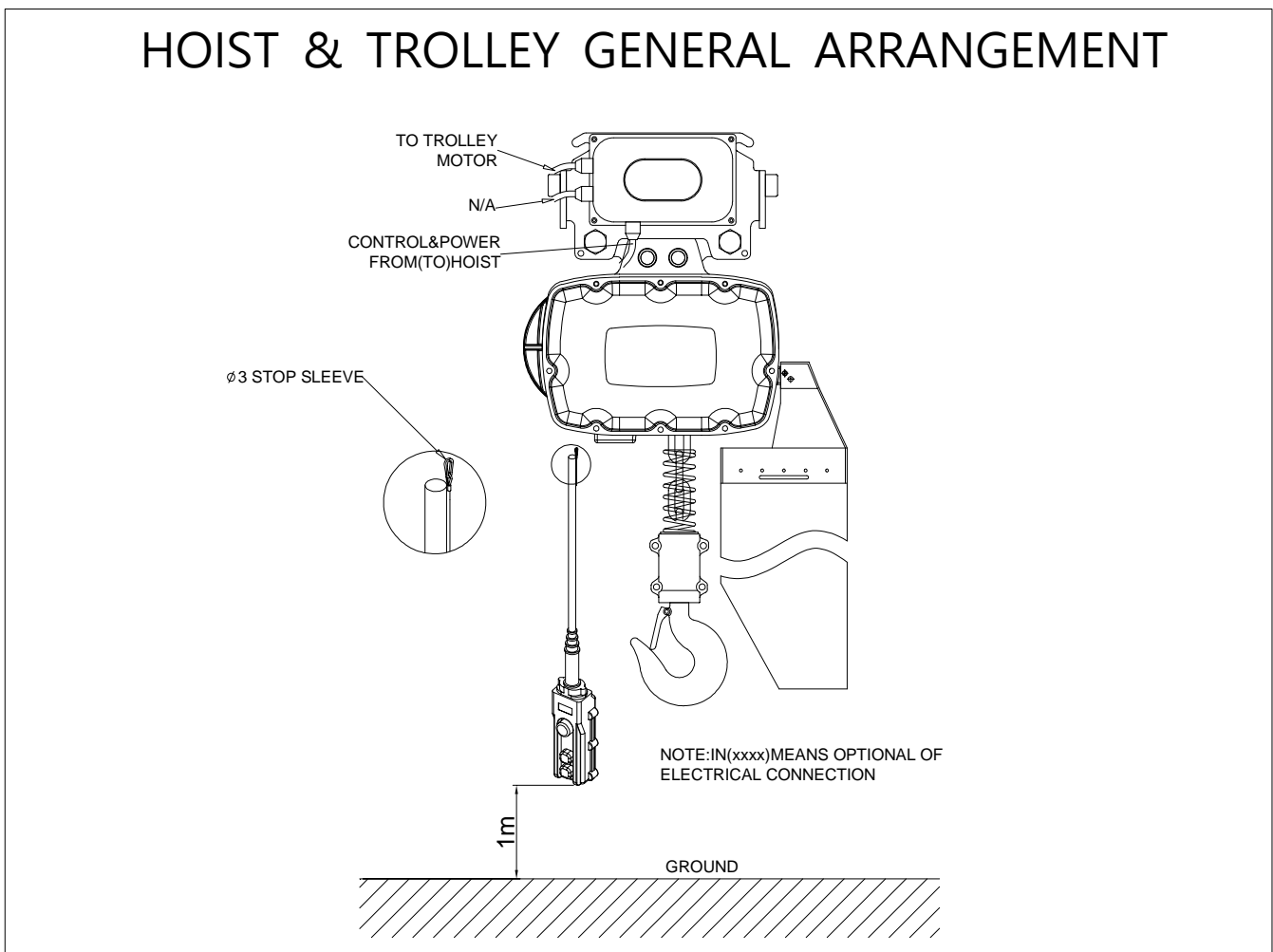
Power should be disconnected when making or changing connections, also proper grounding should be accomplished.

Warranty Details:

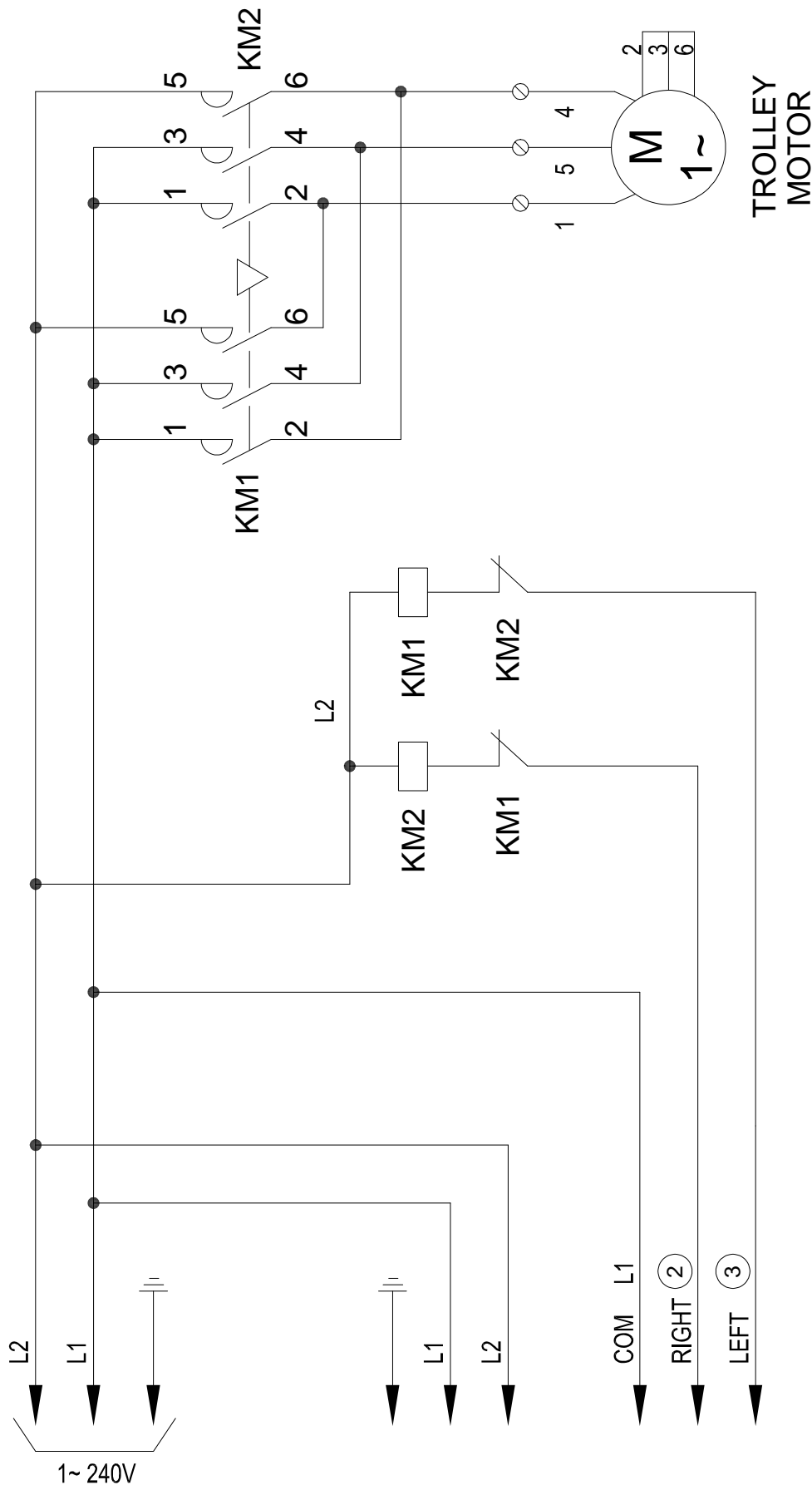
1. Warranty Period : One year for Mechanical Spare Parts after purchase the product.
2. Non-Warranty Scope:
 - a. Electrical Spare Parts (ex. Contactor, Pendant, Phase Error Relay, etc.)
 - b. Expense Spare Parts (ex. Chain Bucket, Brake Lining, etc.)
 - c. Damage caused by unsuitable operation.
(galvanize plant, chemical plant, and dye-works etc.)
 - d. Damage caused by operating on the wrong electric voltage.
 - e. Damage caused by user emending 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.)

6. TEST RUNNING

After trolley to beam, hoist hook to trolley and wiring connection completed, operate the trolley forward and backward over a short distance. Then you can operate the trolley over the entire length of runway or monorail system to be sure that all adjustment and operations are satisfactory.



Illust.1



TB:PT 2.5-QUATTRO*8

L1	L2	PE	L1	2	3
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SF23000783-10101

V. INSPECTION

To maintain continuous and satisfactory operation, a regular periodic inspection procedure must be initiated so that worn or damaged parts can be replaced before they become unsafe.

The frequency of inspection must be determined by the individual application.

The following list gives an inspection procedure for normal usage under normal conditions.

When the unit is subjected to heavy usage or duty, moist or other adverse atmospheric conditions, shorter time periods must be assigned. Inspection must be made of all parts for unusual wear, corrosion or damage in addition to those specifically mentioned in the succeeding list.

It is suggested that the unit be inspected monthly for wear damage and corrosion effects to all parts with particular attention to the following:

1. Tightness of all fasteners.
2. Contactor and control station for burnt or pitted contacts and loose or corroded terminals.
3. Cables and leads for broken wires, loose or corroded terminals and damaged insulation.
4. Terminal board for loose or corroded connections.
5. Trackwheels for wear of tread, flange and bearings.
6. Gear portion of trackwheel and pinion for wear.
7. Check the wear of top hook to load plate in trolley.
8. Collector or power supply system for damage, wear corrosion and proper operation.

VI. MAINTENANCE

The following three steps are recommended for maintenance:

1. Once a month lubricate track wheel gear and pinion with grease or graphite grease.
2. Motor reducing gearbox uses planetary gear lubricated with cosmo No. 3 grease (Equivalent to: Shell Unedo 3, Exxon Eastan 3, Mobil Cup Grease 3) for good maintenance. It is highly recommended that the motor gearbox grease should be changed after 100 hours of operation, then every 6 months or 2500 hours of normal service. Whichever comes first, the grease needs to be changed as well.
3. The motor brake should be changed & be checked periodically for wear of brake lining and disc. The gap between brake lining & disc can be adjusted by the brake adjusting hex. bolts over the end of motor.

VII. TROUBLE SHOOTING

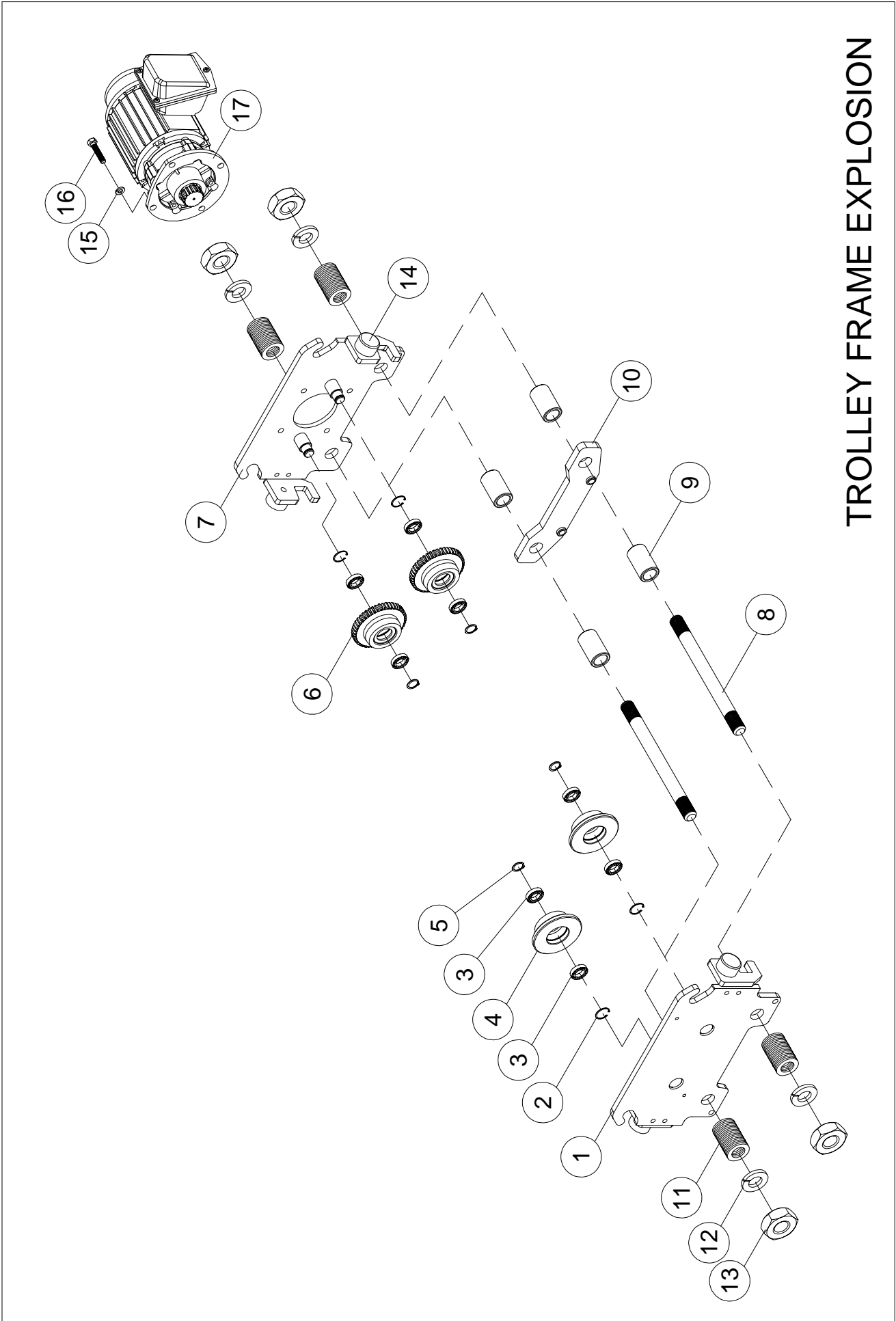
Please refer to table 1 on page 13.

VIII. PARTS LIST (BOM)

1. Motorized Trolley Exploded	P.14~P.16
2. Motor Assembly	P.17~P.18
3. Electric Explosion	P.19~P.19

Table 1. Troubleshooting and Remedial Action

IF	CAUSE MAY BE	REMEDY
1. Trolley does not operate in either direction.	a) Power failure at trolley b) Phase error (Single phasing) c) Turn on control circuit d) Wrong voltage or frequency e) Low voltage f) Excessive load	Main line or branch circuit switch power on, branch line fuse blown or circuit breaker tripped. Power off, replace or reset. Check for grounded or connect supply lines or current collectors. Power on, grounded or connected one line of supply system, collectors, trolley wiring, reversing contactor, motor leads or windings. Check for electrical continuity. Power on or shorted windings in transformer or reversing contactor coil, loosen connection or broken wire in circuit, mechanical binding in contactor, control station switch contacts not making. Check continuity and repair or replace defective parts. The voltage and frequency must be the same as shown on trolley control box. Control power supply deviates from standard not to exceed $\pm 10\%$ to prevent abnormal operation or damage to the motor. Prevent frequently loading rated load of trolley.
2. Trolley operates in one direction only.	a) Turn on control circuit	As item 1. c)
3. Trolley operates sluggishly	a) Excessive load b) Low Voltage c) Worn or dirty rail	As item 1. f) As item 1. e) Clean rails, inspect for worn spots.
4. Motor overheats	a) Excessive load b) Low voltage c) Extreme external heating d) Frequent starting or reversing e) Phase error	As item 1. f) As item 1. e) Above an ambient temperature of 40°C., the frequency of trolley operation must be limited to avoid overheating of motor. Special provision should be made to ventilate the space or shield the trolley from heat radiation. Excessive inching, jogging or plugging should be avoided since this type of operation will drastically shorten the life of motor and contactor. As item 1. e)



TROLLEY FRAME EXPLOSION

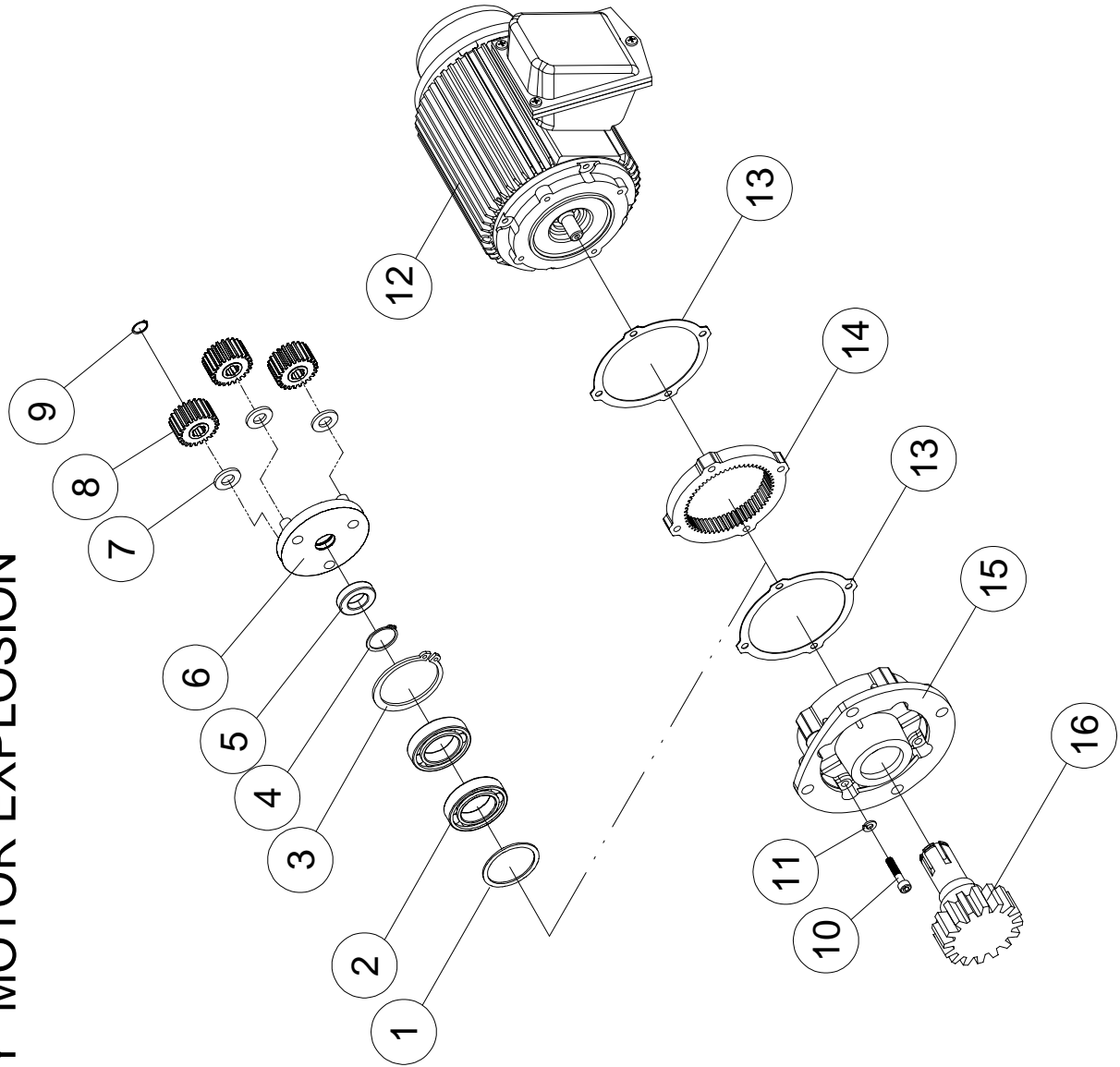
TROLLEY ASSEMBLY

NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT		
			PET050S	PET100S	PET200S
1	210311N	Electric Frame Ass'y	1		
	217577N			1	
	217579N				1
2	400922	Retaining Ring <R-40>	4	4	-
3	407850	Bearing <6203 ZZ>	4	4	
	407715	Bearing <6205 ZZ>			8
4	203128	Plain Wheel <Ø88 × 28L>	2	2	
	203510	Plain Wheel <Ø119 × 49L>			2
5	404184	Retaining Ring <S-17>	4	4	
	400192	Retaining Ring <S-25>			4
6	203110	Gear Wheel <M2 × 46T × 33L>	2	2	
	210323	Gear Wheel < Ø130 × 54L>			2
7	210312N	Motor Frame Ass'y	1		
	217576N			1	
	217578N				1
8	408366	Stay Bolt <7/8" × 9UNC × 265L>Beam 75~125	2		
	408367	Stay Bolt <7/8" × 9UNC × 340L>Beam 125~210	2		
	408368	Stay Bolt <7/8" × 9UNC × 440L>Beam 210~310	2		
	408411	Stay Bolt <1" × 8UNC × 265L>Beam 75~125		2	
	408412	Stay Bolt <1" × 8UNC × 355L>Beam 125~210		2	
	408370	Stay Bolt <1" × 8UNC × 450L>Beam 210~310		2	
	400394	Stay Bolt <1 1/4" × 7UNC × 335L>Beam 100~150			2
	400410	Stay Bolt <1 1/4" × 7UNC × 395L>Beam 150~225			2
	408307	Stay Bolt <1 1/4" × 7UNC × 480L>Beam 225~310			2
9	203151	Position Tube <Ø34 × Ø24 × 56L>	4		
	217565	Position Tube <Ø38 × Ø28 × 56L>		4	
	217566	Position Tube <Ø48 × Ø34 × 69L>			4
10	210314N	Load Bracket	1		
	217569N			1	
	217570N				1

TROLLEY ASSEMBLY

NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT		
			PET050S	PET100S	PET200S
11	203221	Spacer Washer < Ø40 × Ø24 × 1/8">Beam 75~125	32		
	203221	Spacer Washer < Ø40 × Ø24 × 1/8">Beam 125~210	84		
	203221	Spacer Washer < Ø40 × Ø24 × 1/8">Beam 210~310	148		
	203222	Spacer Washer < Ø46 × Ø27 × 1/8">Beam 75~125		32	
	203222	Spacer Washer < Ø46 × Ø27 × 1/8">Beam 125~210		84	
	203222	Spacer Washer < Ø46 × Ø27 × 1/8">Beam 210~310		148	
	203223	Spacer Washer < Ø54 × Ø34 × 1/8">Beam 100~150			32
	203223	Spacer Washer < Ø54 × Ø34 × 1/8">Beam 150~225			80
	203223	Spacer Washer < Ø54 × Ø34 × 1/8">Beam 225~310			132
12	400102	Spring Washer <7/8">	4		
	400103	Spring Washer <1">		4	
	400105	Spring Washer <1 1/4">			4
13	400070	Hex. Nut <7/8" × 9UNC>	4		
	400071	Hex. Nut <1" × 8UNC>		4	
	400072	Hex. Nut <1 1/4" × 7UNC>			4
14	206185	Bumper	4	4	4
15	400857	Spring Washer <M10>	4	4	4
16	408364	Hex. Head Bolt <M10 × 1.5 × 20L>	4	4	4
17	107895	Motor Ass'y <0.18KW 1 Phase 50HZ 240V 4P>	1	1	1

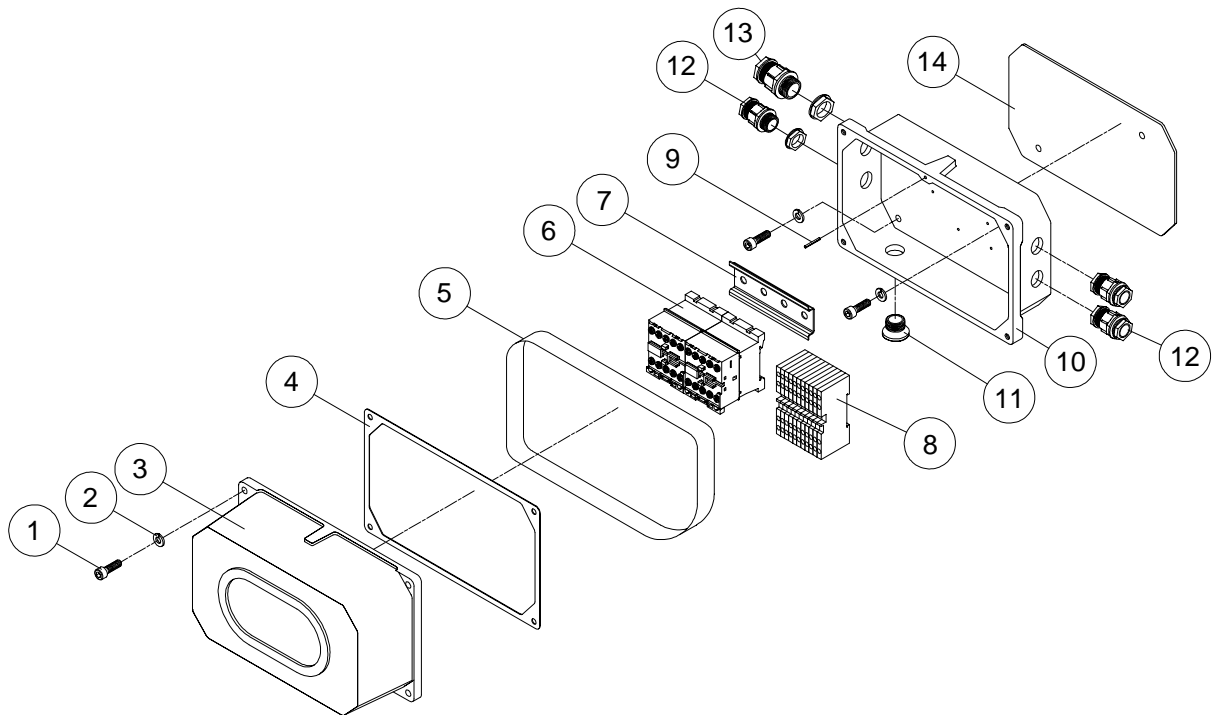
TROLLEY MOTOR EXPLOSION



TROLLEY MOTOR ASSEMBLY

NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT
			0.18Kw 4P
1	400182	Oil Seal <Ø25 × Ø40 × 6t>	1
2	400695	Bearing <6204 Z>	2
3	400198	Retaining Ring <R-47>	1
4	400191	Retaining Ring <S-20>	1
5	200347	Axle Sleeve	1
6	200391	Reducing Gear Frame Ass'y	1
7	400669	Flat Washer <Ø21 × Ø11 × 2t>	3
8	200337	Planetary Gear	3
9	400188	Retaining Ring <S-10>	3
10	408337	Hex. Head Bolt <M6 × 1 × 60L>	4
11	400855	Spring Washer <M6>	4
12	107896	Motor Stator Ass'y <0.18KW 1 Phase 50HZ 240V 4P>	1
13	402513	Gear Box Gasket	2
14	200334	Internal Ring Gear	1
15	200320	Gear Box	1
16	201772	Transmission Shaft With Pinion <M2.0 × 16T>	1

ELECTRIC EXPLOSION



ELECTRIC PARTS B.O.M.

NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT
1	400006	Hex. Recess Bolt <M6×1.0×16L>	6
2	400094	Spring Washer <M6>	6
3	300348	Electric Housing Cover	1
4	402515	Gasket #15	1
5	400266	Rubber Band	1
6	301104	Magnetic Contactor 48V <LC1-D09-M7>	2
	300800	Mechanical Interlock	1
7	300091	Contactor Rail	1
8	302342	Terminal Block (PT 2,5-QUATTRO)	7
	302343	Terminal Block (PT 2,5-QUATTRO-PE)	1
9	400211	Spring Pin <Ø3×14L>	1
10	F230007831003	Electric Housing	1
11	301917	Plastic Plug <SPG-M25B M25×1.5>	1
12	400222	Cable Gland <M20>	3
13	403367	Cable Gland < MG25A>	1
14	402516	Gasket #16	1



EC Declaration of Conformity

PACIFIC HOISTS PTY LTD.,

24 Foundry Rd., Seven Hills, NSW 2147, Australia.

Tel: +61 2 8825 6900 Fax: +61 2 8825 6999

According to the following EU Directives:

- Machinery Directive: 2006/42/EC
- Low Voltage Directive: 2006/95/EC

We, PACIFIC HOISTS PTY LTD.,

declare that the machines mentioned hereafter:

©Product: Electric chain hoist

Model No: PEH050S, PEH100S, PEH200S

©Product : Electric Motorized:

Model No: PET050S, PET100S, PET200S

©Functions:

Lifting equipment

They are designed and manufactured in compliance with the essential health and safety requirements of the Machinery Directive and Low Voltage Directive.

They are based on the following European harmonized standards:

- EN ISO 12100:2010, Safety of machinery - Basic concepts, general principles for design Part 1: Basic terminology, methodology.
- EN 14492-2:2019, Cranes - Power driven winches and hoists - Part 2: Power driven hoists.
- EN 60204-32:2008, Safety of machinery - Electrical equipment of machines - Part 32 Requirements for hoisting machines
- FEM 9.511 (Classification of mechanisms)
- FEM 9.681 (Selection of travel motors)
- FEM 9.682 (Selection of lifting motors)
- FEM 1.001 (Rules for the design of hoisting appliances)

Representative : *Steve Purves*

Title: *DIRECTOR*

Place / Date : Australia / Sept .11, 2023.