

Motorized Trolley

Operation Manual & Parts List

Series:

- | | |
|--------------------------------------|--------------------------------------|
| ☐ NT(D)-050-2 | ☐ NT(D)-200-1 |
| ☐ NT(D)-050-1 | ☐ NT(D)-250-1 |
| ☐ NT(D)-100-2 | ☐ NT(D)-300-2 |
| ☐ NT(D)-100-1 | ☐ NT(D)-500-2 |
| ☐ NT(D)-200-2 | |



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" MOTORIZED TROLLEY.



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I. FOREWORD

This manual contains important information to help you properly install, operate and maintain the Black Bear 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 "Black Bear" trolley satisfies your requirements.

Should you have any queries, please contact:



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

II. OPERATING AND SAFETY PROCEDURES

The following are operating and safety procedures for safe operation of the Black Bear 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 or 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 Black Bear motorized trolleys are designed for use with the Black Bear Electric Chain Hoists. The trolleys are available in the following capacities: 0.5-Ton~5-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 track wheels 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 3-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.

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 and brake (3-phase model) 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.

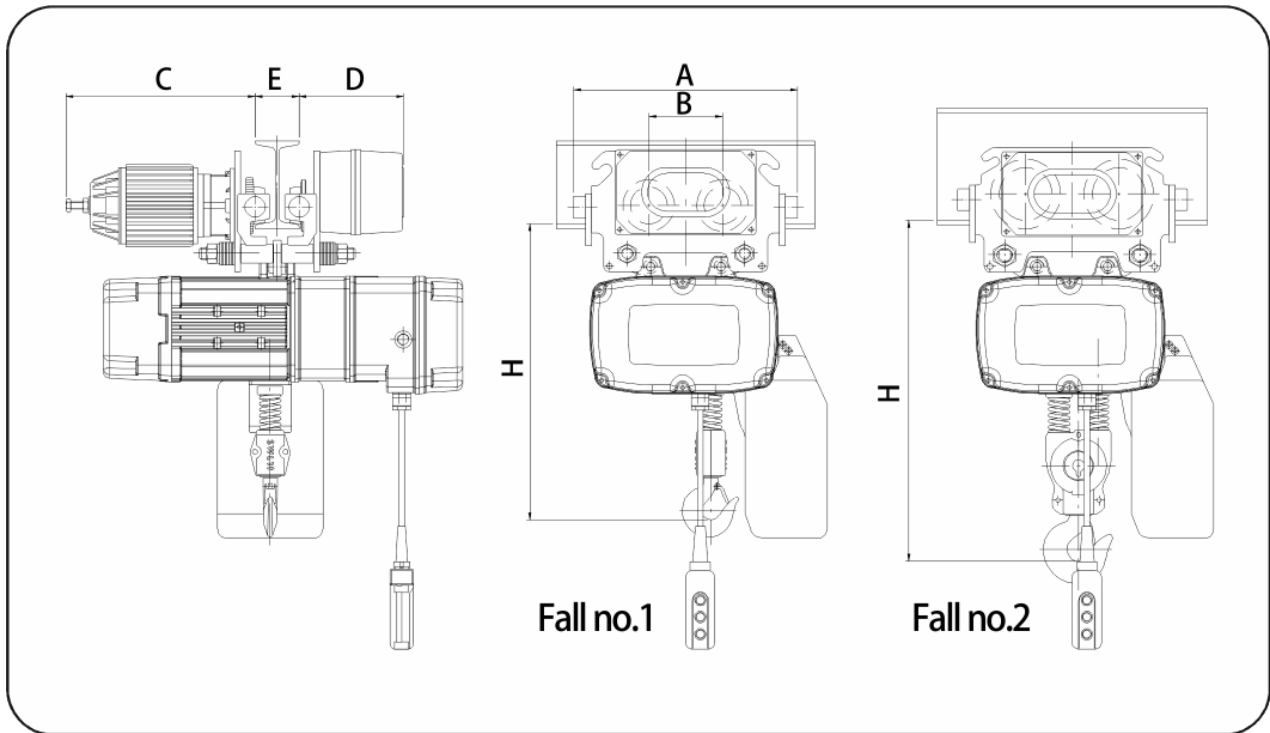
WARNING

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 track wheel 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.

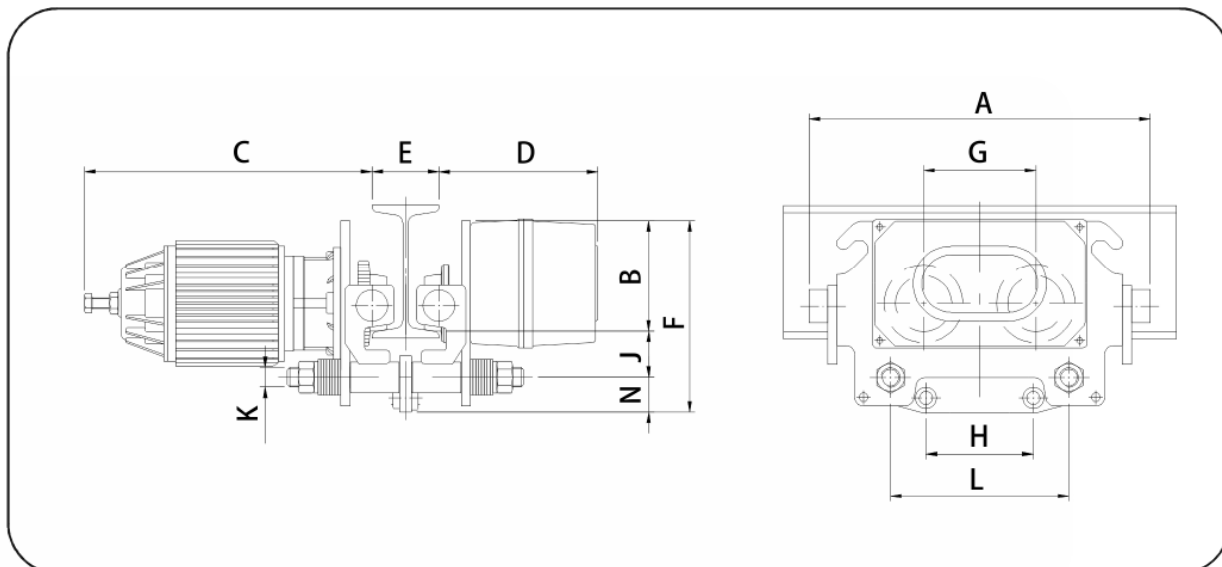
Now install the trolley on the beam by sliding one side frame out far enough to allow the track wheels to clear beam flange. Lift the trolley up so that the track wheels are riding on the beam and draw the side frames together and tighten the nuts snugly.

3. HOIST WITH MOTORIZED NTD TROLLEY



Model	Dimension (mm)						Fall No.
	H	A	B	C	D	E	
NHD-050-1+NTD-050-1	500	385	126	325	180	75~125	1
NHD-100-2+NTD-100-2	565	385	126	325	180	75~125	2
NHD-100-1+NTD-100-1	550	385	126	325	180	75~125	1
NHD-200-2+NTD-200-2	625	395	159	360	185	100~150	2
NHD-200-1+NTD-200-1	990	395	159	360	185	100~150	1
NHD-250-1+NTD-250-1	953	445	185	400	195	125~175	1
NHD-300-2+NTD-300-2	1000	445	183	400	195	125~175	2
NHD-500-2+NTD-500-2	1050	445	183	400	195	125~175	2

4. MOTORIZED NTD TROLLEY



Model	Speed (m/min)		Motor kw x pole	Dimension (mm)												N.W. (kg)	Min radius of curve (m)
	60Hz	50Hz		A	B	C	D	E	F	G	H	L	J	N	K		
NT-050-1	24	20	0.12 x 2P	385	125	325	180	75~ 125	217	126	95.5	200	52	41	7/8"~9UNC (Ø22.2)	45	1.3
NTD-050-1	24/6	20/5	0.12/0.03 x 2/8P														
NT-100-1	24	20	0.18 x 2P	385	112	325	180	75~ 125	217	126	120	210	67	39	1"~8 UNC (Ø25.4)	45	1.3
NTD-100-1	24/6	20/5	0.18/0.04 x 2/8P														
NT-100-2	24	20	0.18 x 2P	385	112	325	180	75~ 125	217	126	95.5	210	67	39	1"~8 UNC (Ø25.4)	45	1.3
NTD-100-2	24/6	20/5	0.18/0.04 x 2/8P														
NT-200-2	24	20	0.37 x 2P	395	125	360	185	100~ 150	236	159	120	230	75	36	1 1/4"~7UNC (Ø31.8)	50	1.7
NTD-200-2	24/6	20/5	0.37/0.09 x 2/8P														
NT-200-1	24	20	0.37 x 2P	395	125	360	185	100~ 150	251	159	52.5	230	75	51	1 1/4"~7UNC (Ø31.8)	50	1.7
NTD-200-1	24/6	20/5	0.37/0.09 x 2/8P														
NT-250-1	24	20	0.6 x 2P	445	154	400	195	125~ 175	283	183	52.5	250	71	58	1 1/2"~6UNC (Ø38.1)	65	2.0
NTD-250-1	24/6	20/5	0.6/0.15 x 2/8P														
NT-300-2	24	20	0.6 x 2P	445	154	400	195	125~ 175	283	183	52.5	250	71	58	1 1/2"~6UNC (Ø38.1)	65	2.0
NTD-300-2	24/6	20/5	0.6/0.15 x 2/8P														
NT-500-2	24	20	0.6 x 2P	445	154	400	195	125~ 175	283	183	52.5	250	71	58	1 3/4"~5UNC (Ø44.5)	65	2.0
NTD-500-2	24/6	20/5	0.6/0.15 x 2/8P														

*Different flange width options available on request. Maximum:310mm.

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. Also be noted that the above mentioned diagrams only acceptable for the standard units of 3-phase.

Hoist with trolley wiring diagram shown example as follows:

A20199 is 3 phases, dual speed model, Please refer to page 11.

SF22000145-2101 is 3 phases, single speed model, Please refer to page 11.

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



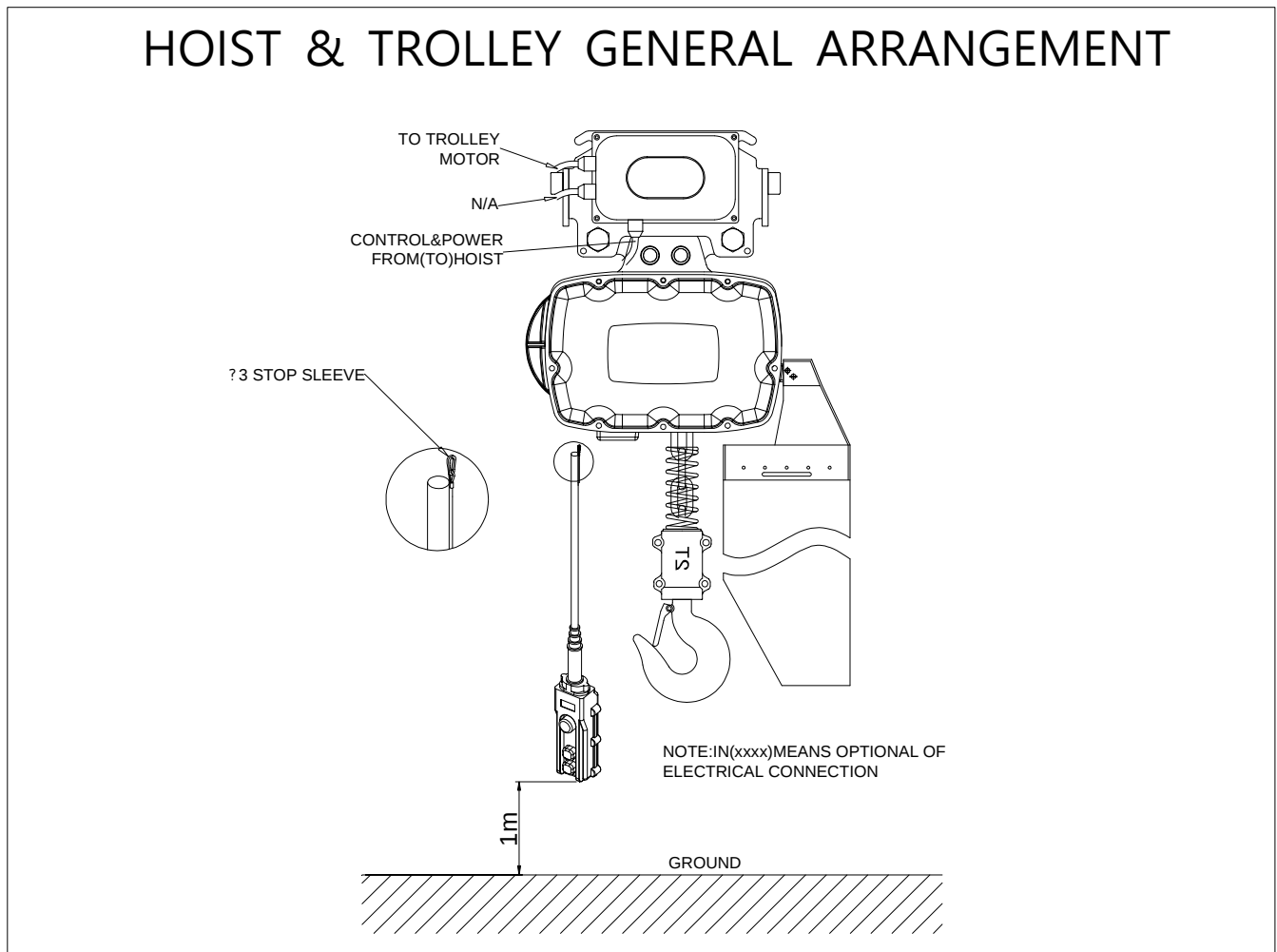
Power should be disconnected when making or changing connections, also proper grounding should be accomplished.

Warranty Details:

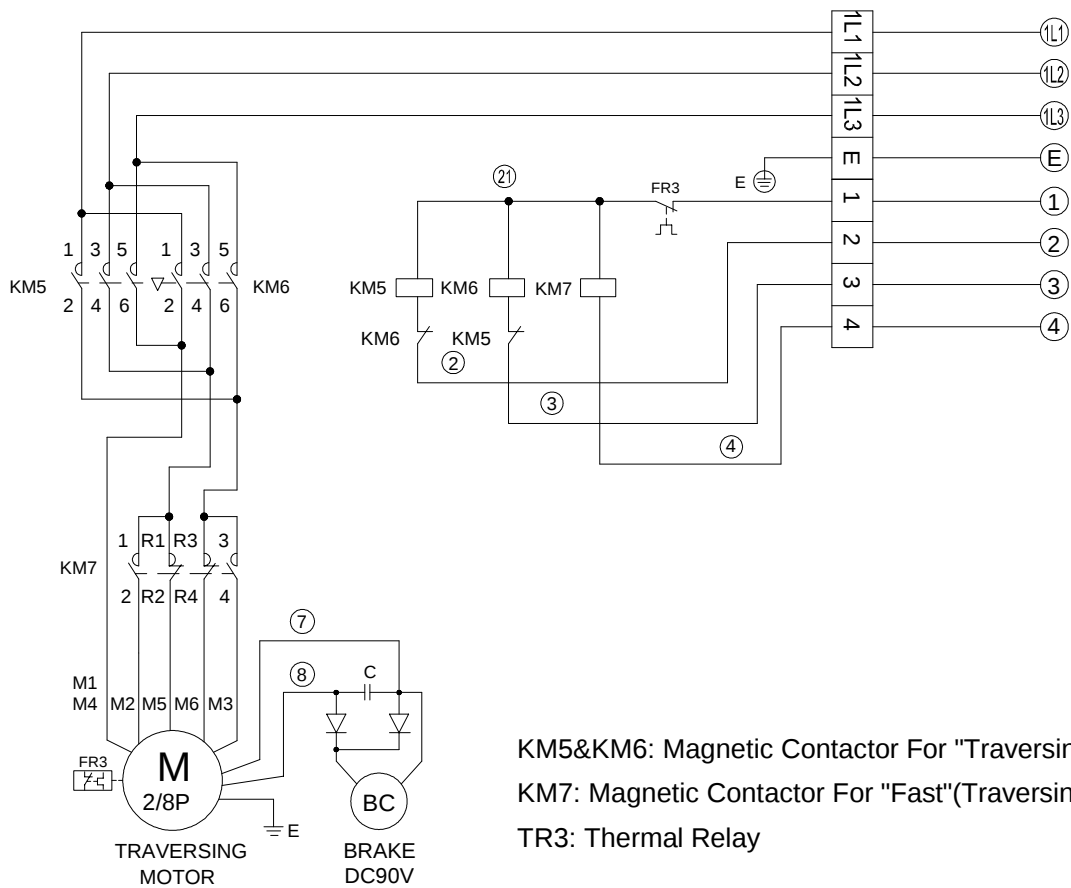
1. Warranty Period : One year for Mechanical Spare Parts after purchase the product.
2. Non-Warranty Scope:
 - a. Electrical Spare Parts (ex. Contactor, Pendant, Phase Error Relay, etc.)
 - b. Expense Spare Parts (ex. Chain Bucket, Brake Lining, etc.)
 - c. Damage caused by unsuitable operation.
(galvanize 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

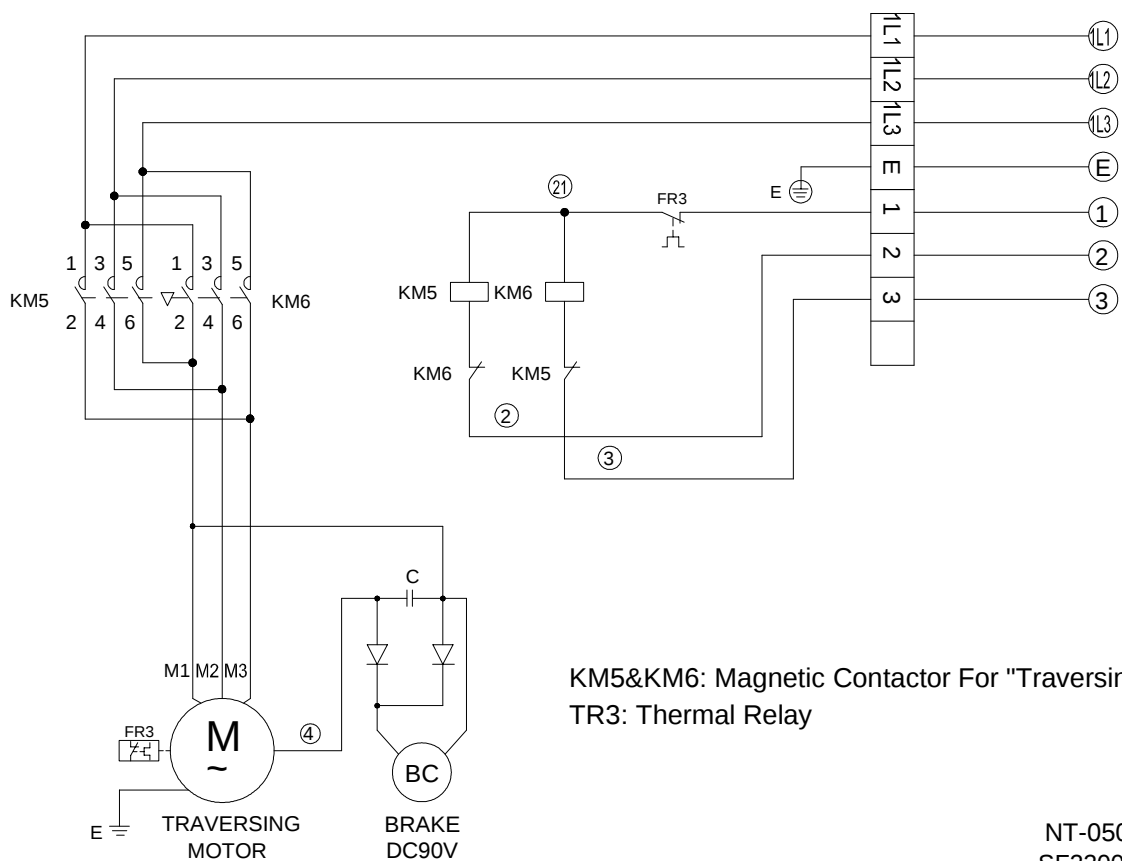
After trolley to beam, hoist hook to trolley and wiring connection completed, operate the trolley forward and backward over a short distance. Then you can operate the trolley over the entire length of runway or monorail system to be sure that all adjustment and operations are satisfactory.



Illust.1



NTD-050~500
A20199



NT-050~500
SF22000145-2101

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. If type "E" & "A" rigid hook are used, check the condition of those parts.
8. Collector or power supply system for damage, wear corrosion and proper operation.
9. 3-phase trolley is usually equipped with motor brake. Check the wear of brake lining and adjusting the gap between lining and drum to assure brake efficiency.

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

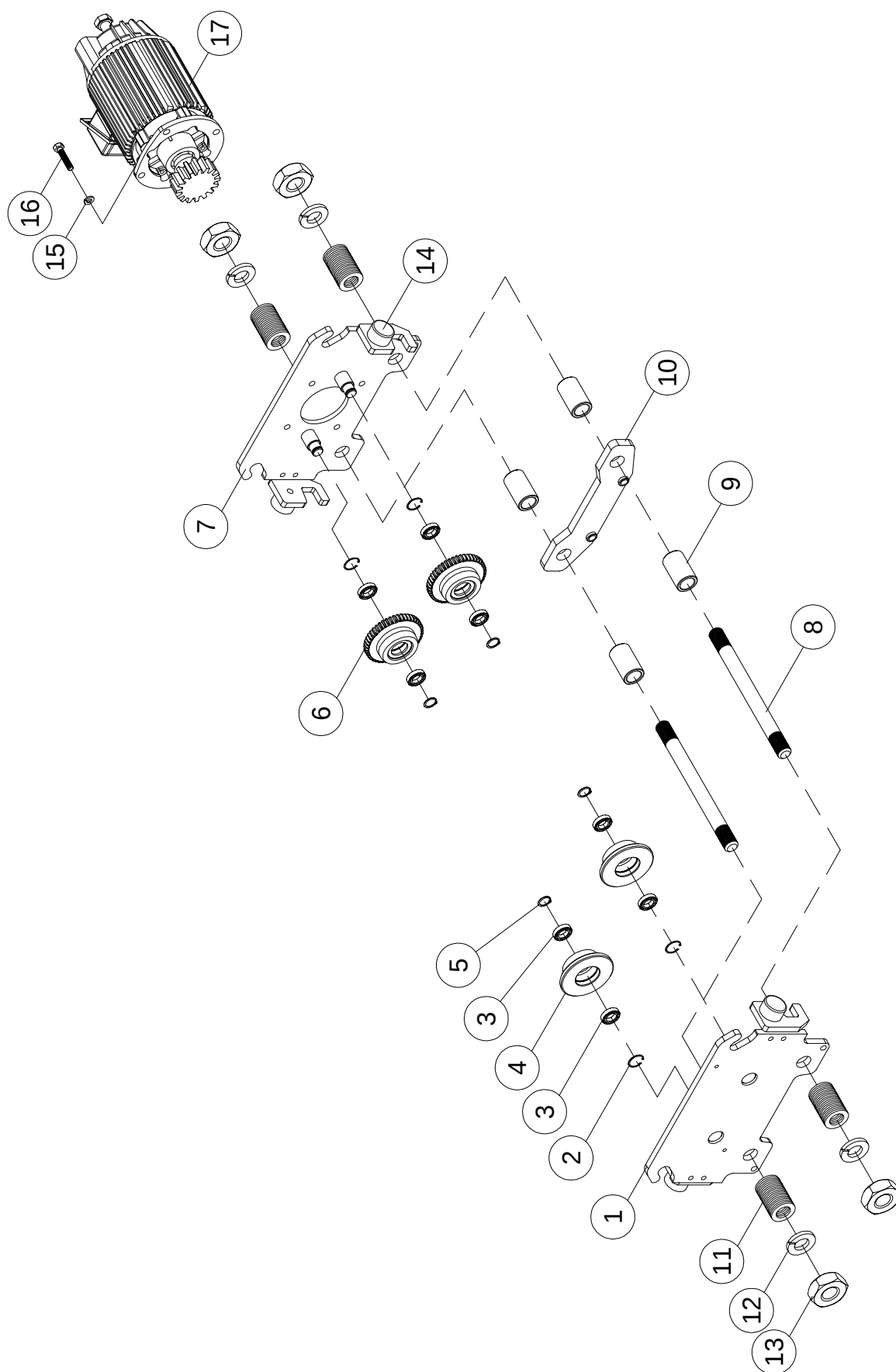
Please refer to table 1 on page 14.

VIII. PARTS LIST (BOM)

- | | |
|--|-----------|
| 1. Motorized Trolley Exploded, 0.5~2ton..... | P.15~P.18 |
| 2. Motorized Trolley Exploded, 3~5ton..... | P.19~P.21 |
| 3. Motor Assembly, 0.12kw~0.37kW | P.22~P.24 |
| 4. Reducing Gear Motor,0.6kW | P.25~P.26 |
| 5. Electric Explosion, 0.5~5ton | P.27~P.27 |

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			
			NT(D)-050-2	NT(D)-050-1	NT(D)-100-2	NT(D)-100-1
1	210311K	Electric Frame Ass'y	1	1		
	217577K				1	1
2	400922	Retaining Ring <R-40>	4	4	4	4
3	407850	Bearing <6203 ZZ>	4	4	4	4
4	203128	Idler Wheel<Ø88×28L>	2	2	2	2
5	404184	Retaining Ring <S-17>	4	4	4	4
6	203110	Drive Wheel <M2×46T×33L>	2	2	2	2
7	210312K	Motor Frame Ass'y	1	1		
	217576K				1	1
8	408366	Stay Bolt <7/8"×9UNC×265L> Beam 75~125	2	2		
	408367	Stay Bolt <7/8"×9UNC×340L> Beam 75~210	2	2		
	408368	Stay Bolt <7/8"×9UNC×440L> Beam 75~310	2	2		
	408411	Stay Bolt <1"×8UNC×265L> Beam 75~125			2	2
	408412	Stay Bolt <1"×8UNC×355L> Beam 75~210			2	2
	408370	Stay Bolt <1"×8UNC×450L> Beam 75~310			2	2
9	203151	Position Tube <Ø34×Ø24×56L>	4	4	4	4
10	210324	Load Bracket	1			
	210314K			1		
	217583K				1	
	217569K					1
11	203221	Spacer Washer < Ø40×Ø24×1/8"> Beam 75~125	32	32		
	203221	Spacer Washer < Ø40×Ø24×1/8"> Beam 75~210	84	84		
	203221	Spacer Washer < Ø40×Ø24×1/8"> Beam 75~310	148	148		
	203222	Spacer Washer < Ø46×Ø27×1/8"> Beam 75~125			32	32
	203222	Spacer Washer < Ø46×Ø27×1/8"> Beam 75~210			84	84
	203222	Spacer Washer < Ø46×Ø27×1/8"> Beam 75~310			148	148

TROLLEY ASSEMBLY

NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT			
			NT(D)-050-2	NT(D)-050-1	NT(D)-100-2	NT(D)-100-1
12	400102	Spring Washer <7/8">	4	4		
	400103	Spring Washer <1">			4	4
13	400070	Hex. Nut <7/8"×9UNC>	4	4		
	400071	Hex. Nut <1"×8UNC>			4	4
14	206185	Bumper	4	4	4	4
15	400857	Spring Washer <M10>	4	4	4	4
16	408364	Hex. Head Bolt <M10×1.5×20L>	4	4	4	4
17	A	Motor Ass'y <0.12/0.03kW>	1	1		
		Motor Ass'y <0.18/0.04kW>			1	1
	B	Motor Ass'y <0.12kW>	1	1		
		Motor Ass'y <0.18kW>			1	1

MOTOR ASSEMBLY

NO.	PARTS CODE		DESCRIPTION	Ø - Hz- V	
17	A	104173	Motor Ass'y <0.12/0.03kW>	3Ø 50Hz	380V
		101440			400V
		101376			415V
		104175	Motor Ass'y <0.18/0.04kW>	3Ø 50Hz	380V
		101379			400V
		101378			415V
	B	101353	Motor Ass'y <0.12kW>	3Ø 50Hz	220V/380V
		101366			400V
		101365			415V
		101354	Motor Ass'y <0.18kW>	3Ø 50Hz	220V/380V
		101381			400V
		101382			415V

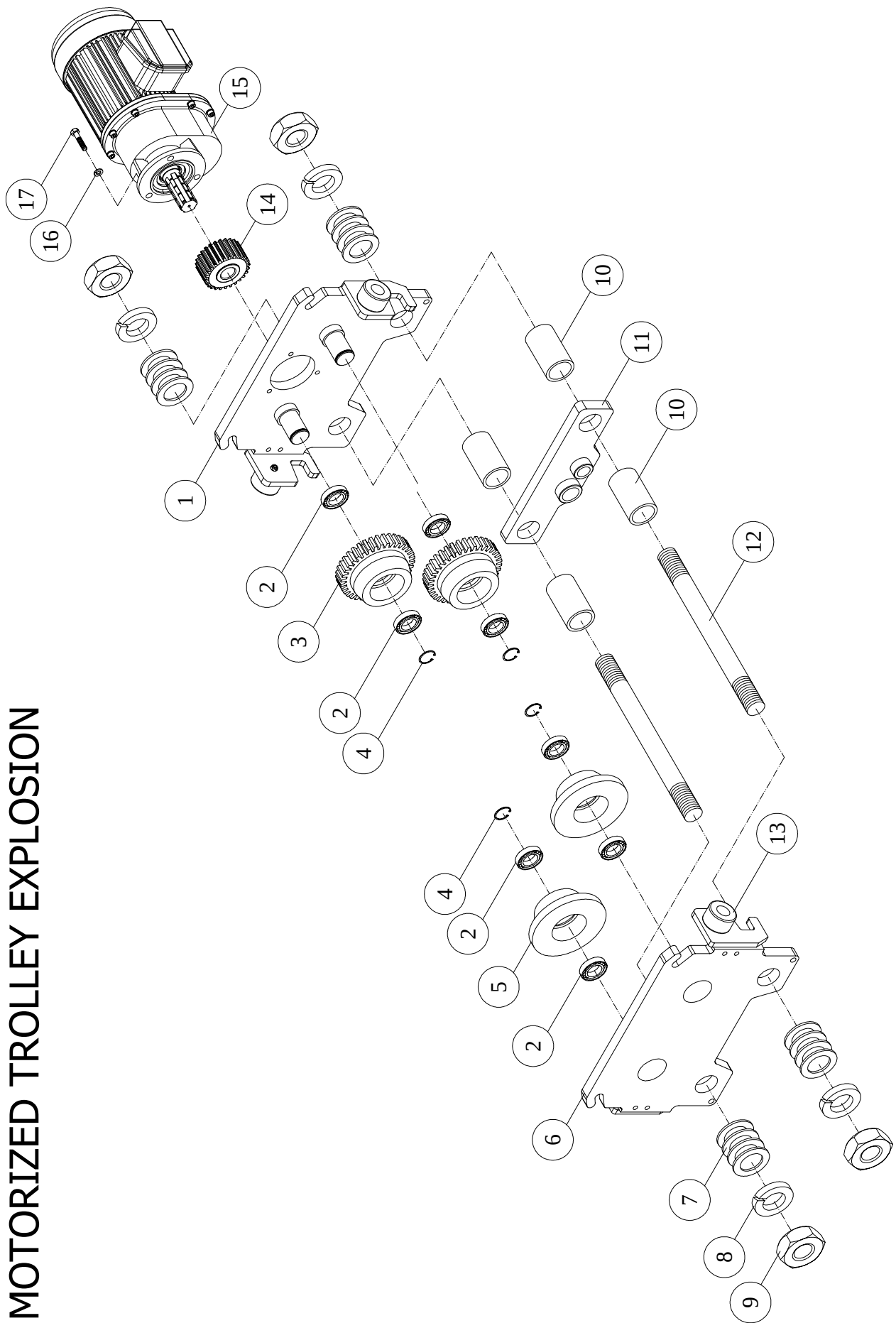
TROLLEY ASSEMBLY

NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT	
			NT(D)-200-2	NT(D)-200-1
1	217579K	Electric Frame Ass'y	1	1
2	400922	Retaining Ring <R-40>	-	-
3	407715	Bearing <6205 ZZ>	8	8
4	203510	Idler Wheel<Ø119×49L>	2	2
5	400192	Retaining Ring <S-25>	4	4
6	210323	Drive Wheel < Ø130×54L>	2	2
7	217578K	Motor Frame Ass'y	1	1
8	400394	Stay Bolt <1 1/4"×7UNC×335L>Beam 100~150	2	2
	400410	Stay Bolt <1 1/4"×7UNC×395L>Beam 100~225	2	2
	408307	Stay Bolt <1 1/4"×7UNC×480L>Beam 100~310	2	2
9	217566	Position Tube <Ø48×Ø34×69L>	4	4
10	217570K	Load Bracket	1	
	217595K			1
11	203223	Spacer Washer < Ø54×Ø34×1/8">Beam 100~150	32	32
	203223	Spacer Washer < Ø54×Ø34×1/8">Beam 100~225	80	80
	203223	Spacer Washer < Ø54×Ø34×1/8">Beam 100~310	132	132
12	400105	Spring Washer <1 1/4">	4	4
13	400072	Hex. Nut <1 1/4"×7UNC>	4	4
14	206185	Bumper	4	4
15	400857	Spring Washer <M10>	4	4
16	408358	Hex. Headed Bolt <M10×1.5×25L>	4	4
17	C	Motor Ass'y <0.37/0.09kW>	1	1
	D	Motor Ass'y <0.37kW>	1	1

MOTOR ASSEMBLY

NO.	PARTS CODE		DESCRIPTION	Ø - Hz- V	
17	C	104176	Motor Ass'y <0.37/0.09kW>	3Ø 50Hz	380V
		101372			400V
		101374			415V
		104188		3Ø 60Hz	460V
	D	101356	Motor Ass'y <0.37kW>	3Ø 50Hz	220V/380V
		101351			400V
		101352			415V

MOTORIZED TROLLEY EXPLOSION



MOTORIZED TROLLEY ASSEMBLY

NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT		
			NT(D)-250-1	NT(D)-300-2	NT(D)-500-2
1	208144K	Motor Frame Ass'y	1	1	
	215096K				1
2	407808	Bearing <6207 Z>	8	8	8
3	203499	Drive Wheel <M3.5 × 39T × 67L>	2	2	2
4	400194	Retaining Ring <S-35>	4	4	4
5	203517	Idler Wheel<Ø143.5 × 59L>	2	2	2
6	208192K	Electric Frame Ass'y	1	1	
	215093K				1
7	203224	Spacer Washer <Ø60 × Ø40 × 1/8"> Beam 125~175	32	32	
	203224	Spacer Washer <Ø60 × Ø40 × 1/8"> Beam 125~250	80	80	
	203224	Spacer Washer <Ø60 × Ø40 × 1/8"> Beam 125~310	152	152	
	269913	Spacer Washer <Ø70 × Ø47 × 1/4"> Beam 125~175			16
	269913	Spacer Washer <Ø70 × Ø47 × 1/4"> Beam 125~250			38
	269913	Spacer Washer <Ø70 × Ø47 × 1/4"> Beam 125~310			56
8	400106	Spring Washer <1 1/2">	4	4	
	400104	Spring Washer <1 3/4">			4
9	400073	Hex. Nut <1 1/2" × 6UNC >	4	4	
	400644	Hex. Nut <1 3/4" × 5UNC >			4
10	203153	Position Tube <Ø50 × Ø40 × 83.5L>	4	4	
	215097	Position Tube <Ø60 × Ø47 × 83>			4
11	208097	Load Bracket	1		
	202900K			1	
	215095K				1
12	400067	Stay Bolt <1 1/2" × 6UNC × 390L>Beam125~175	2	2	
	400408	Stay Bolt <1 1/2" × 6UNC × 485> Beam 125~250	2	2	
	408304	Stay Bolt <1 1/2" × 6UNC × 580L> Beam 125~310	2	2	
	401389	Stay Bolt <1 3/4" × 5UNC × 415> Beam 125~175			2
	400069	Stay Bolt <1 3/4" × 5UNC × 490L> Beam 125~250			2
	400413	Stay Bolt <1 3/4" × 5UNC × 560L> Beam 125~310			2
13	206185	Bumper	4	4	4

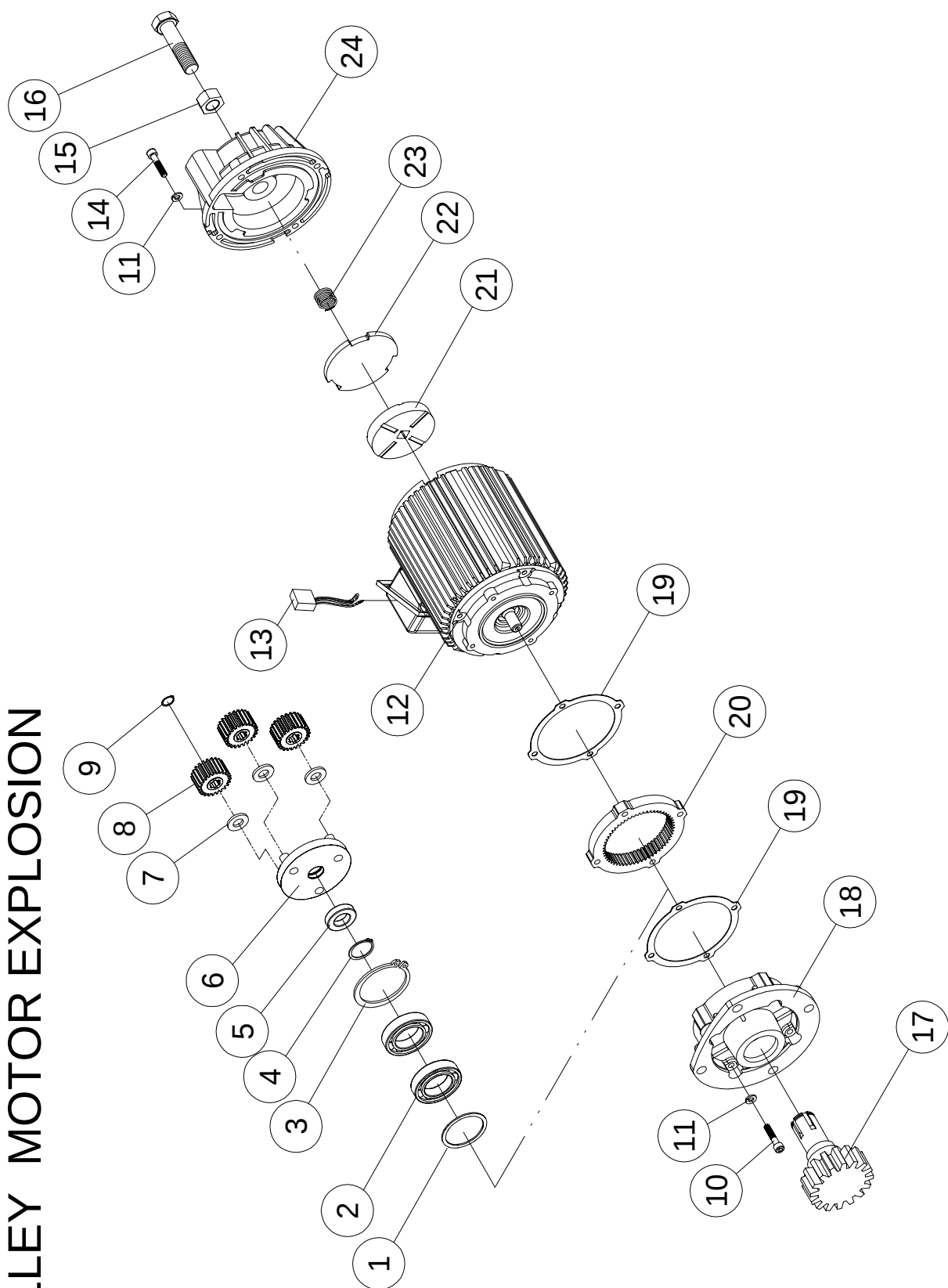
MOTORIZED TROLLEY ASSEMBLY

NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT		
			NT(D)-250-1	NT(D)-300-2	NT(D)-500-2
14	201755	Pinion <M3.5 × 16T × 49L>	1	1	1
15	E	Reducing Gear Motor Ass'y <0.6/0.15kW >	1	1	1
	F	Reducing Gear Motor Ass'y <0.6kW>	1	1	1
16	400095	Spring Washer <M8>	3	3	3
17	406803	Hex. Bolt<M8 × 1.25 × 30L>	3	3	3

MOTOR ASSEMBLY

NO.	PARTS CODE		DESCRIPTION	Ø - Hz- V	
15	E	108684K	Reducing Gear Motor Ass'y <0.6/0.15kW >	3Ø 50Hz	380V
		108687K			400V
		108230K			415V
	F	108698K	Reducing Gear Motor Ass'y <0.6kW>	3Ø 50Hz	380V
		108775K			400V
		108776K			415V

TROLLEY MOTOR EXPLOSION

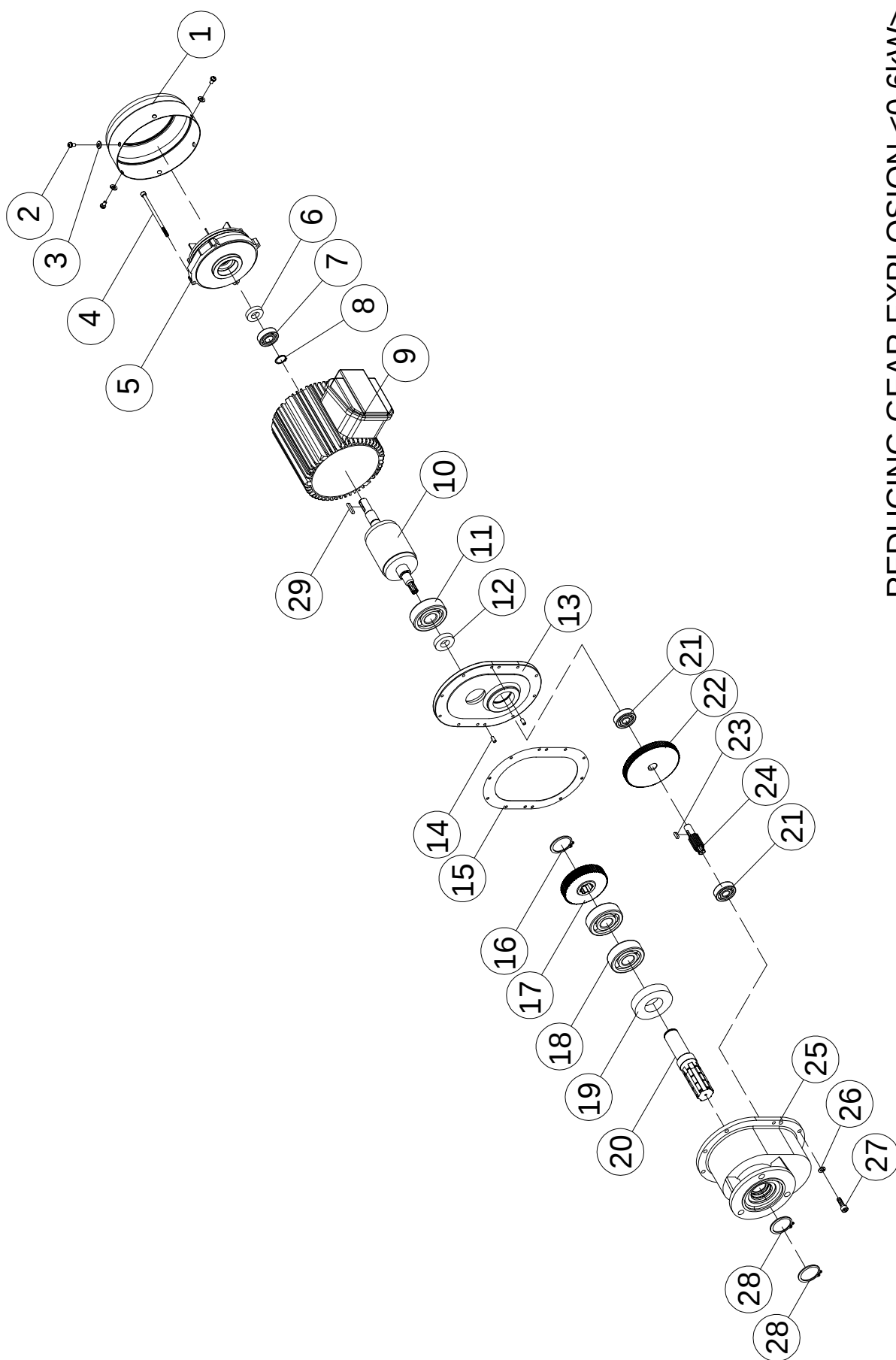


TROLLEY MOTOR ASSEMBLY

NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT		
			0.12kW	0.18kW	0.37kW
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>	8		
12	E	Motor Stator Ass'y <0.12/0.03kW>	1		
		Motor Stator Ass'y <0.18/0.04kW>		1	
		Motor Stator Ass'y <0.37/0.09kW>			1
	F	Motor Stator Ass'y <0.12kW>	1		
		Motor Stator Ass'y <0.18kW>		1	
		Motor Stator Ass'y <0.37kW>			1
13	300152	Rectifier	1		
14	408357	Hex. Head Bolt <M6 × 1.0 × 20L>	4		
15	400084	Nut <M12 × 1.75>	1		
16	400030	Hex. Head Bolt <M12 × 1.75 × 30L>	1		
17	201772	Transmission Shaft With Pinion	1	1	
	210329				1
18	200320K	Gear Box	1		
19	402513	Gear Box Gasket	2		
20	200334K	Internal Ring Gear	1		
21	100805	Brake Lining Ass'y	1		
22	100807	Brake Disc	1		
23	400239	Brake Spring	1		
24	100530	Brake Drum Ass'y	1		

MOTOR STATOR ASSEMBLY

NO.	PARTS CODE		DESCRIPTION	Ø - Hz- V	
14	E	106622	Motor Stator Ass'y <0.12/0.03kW>	3Ø 50Hz	380V
		106445			400V
		106447			415V
		102329		3Ø 60Hz	220V
		102330			380V
		106623	Motor Stator Ass'y <0.18/0.04kW>	3Ø 50Hz	380V
		106449			400V
		106448			415V
		102328		3Ø 60Hz	220V
		102327			380V
		106625	Motor Stator Ass'y <0.37/0.09kW>	3Ø 50Hz	380V
		106440			400V
		106469			415V
		104225		3Ø 60Hz	220V
		104226			380V
		101817			460V
	F	106436	Motor Stator Ass'y <0.12kW>	3Ø 50Hz	220V/380V
		106446			400V
		106452			415V
		106437	Motor Stator Ass'y <0.18kW>	3Ø 50Hz	220V/380V
		106433			400V
		106432			415V
		106438	Motor Stator Ass'y <0.37kW>	3Ø 50Hz	220V/380V
		106434			400V
		106435			415V



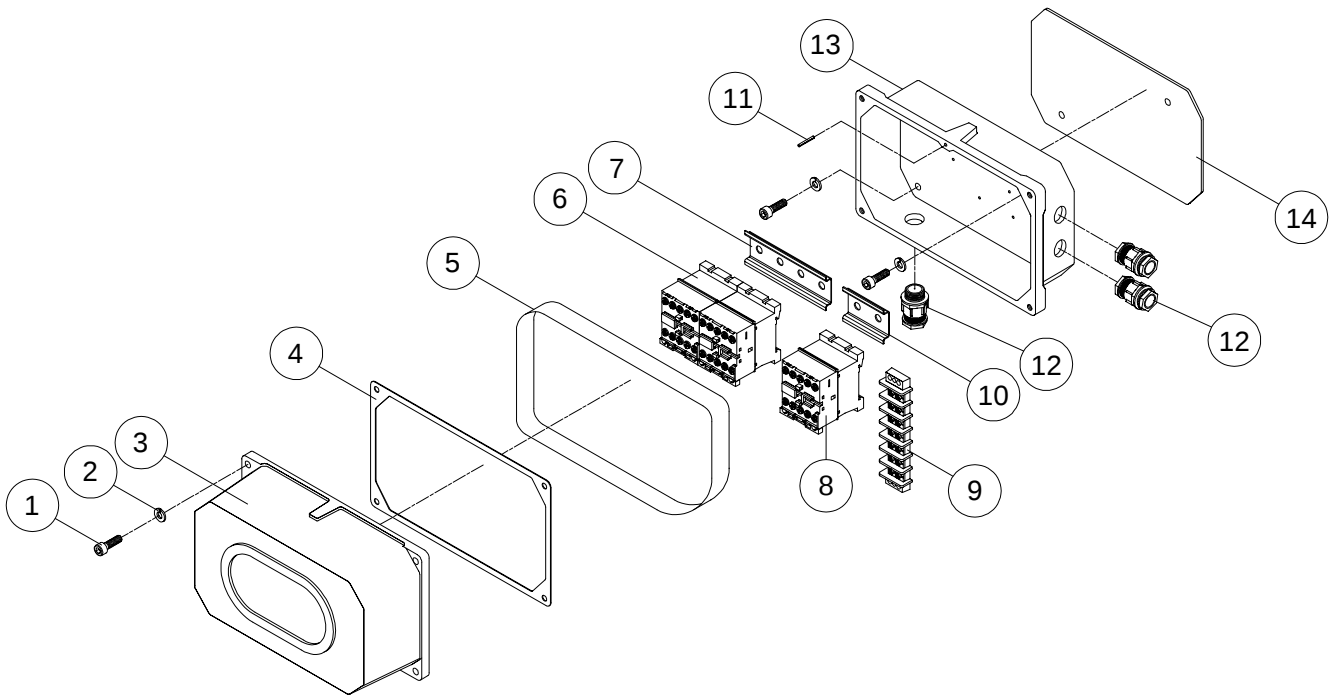
REDUCING GEAR EXPLOSION <0.6kW>

REDUCING GEAR MOTOR B.O.M.

NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT
			0.6kW
1	108098	Brake End Cover	1
2	400620	Cross Headed Screw < M5 × 0.8 × 8L>	4
3	400093	Spring Washer <M5>	4
4	408636	Hex. Bolt <M5 × 0.8 × 160>	4
5	108096	Brake Ass'y (SBV-YS-071A)	1
6	404413	Oil Seal < Ø17 × Ø35 × 8t>	1
7	400732	Bearing <6203 ZZ >	1
8	404184	Retaining Ring <S-17>	1
9	G	Motor Stator Ass'y < 0.6/0.15kW>	1
	H	Motor Stator Ass'y < 0.6kW>	
10	100617	Motor Rotor <Ø64 × 80 × 228>	1
11	400130	Bearing <6204 ZZ >	1
12	400186	Oil Seal <Ø35 × Ø20 × 8t>	1
13	200063	Flange	1
14	400212	Spring Pin <Ø5 × 16L>	2
15	402679	Gearbox Gasket	1
16	400192	Retaining Ring <S-25>	1
17	228639	4th Gear <M1.75x47T>	1
18	407807	Bearing <6205 ZZ >	2
19	404493	Oil Seal < Ø52 × Ø32 × 11t >	1
20	217110	Transmission Shaft < Ø32 × 147.5>	1
21	407850	Bearing <6203 ZZ >	2
22	228637	2nd Gear <M1.25 × 71T>	1
23	400963	Key <6 × 6 × 15>	1
24	228638	3rd Gear <M1.75 × 13T>	1
25	271838	Gearbox A	1
26	400094	Spring Washer <M6>	8
27	400006	Hex. Recess Bolt < M6 × 1.0 × 16>	8
28	400193	Retaining<S-30>	2
29	400947	Key <5 × 5 × 25>	1

NO.	PARTS CODE		DESCRIPTION	Ø - Hz- V	
9	G	108089K	Motor Stator Ass'y <0.6/0.15kW>	3Ø 50Hz	380V
		108688K			400V
		108165K			415V
	H	108699K	Motor Stator Ass'y <0.6kW>	3Ø 50Hz	380V
		108777K			400V
		108778K			415V

ELECTRIC EXPLOSION

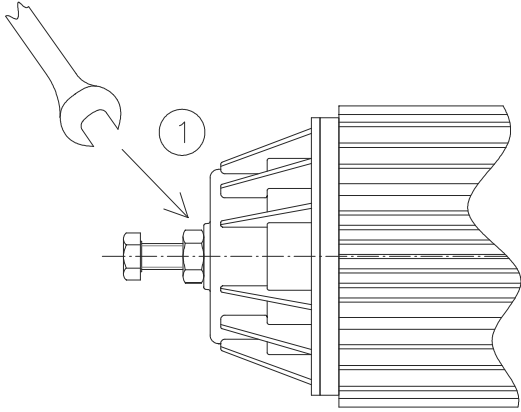
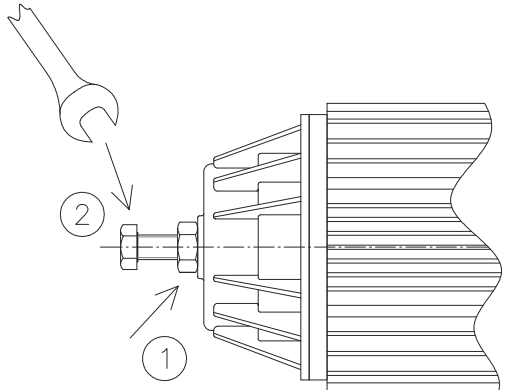


ELECTRIC PARTS B.O.M.

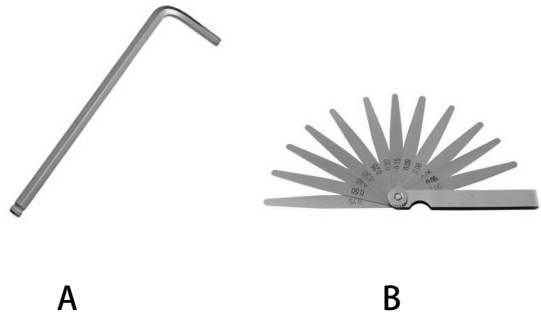
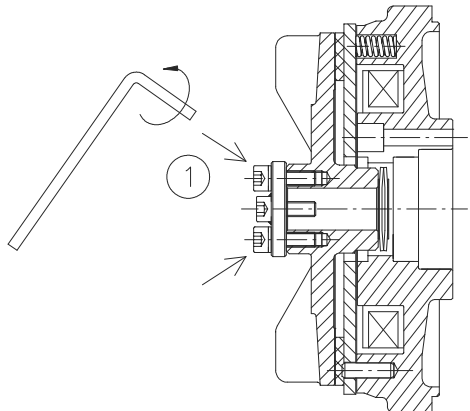
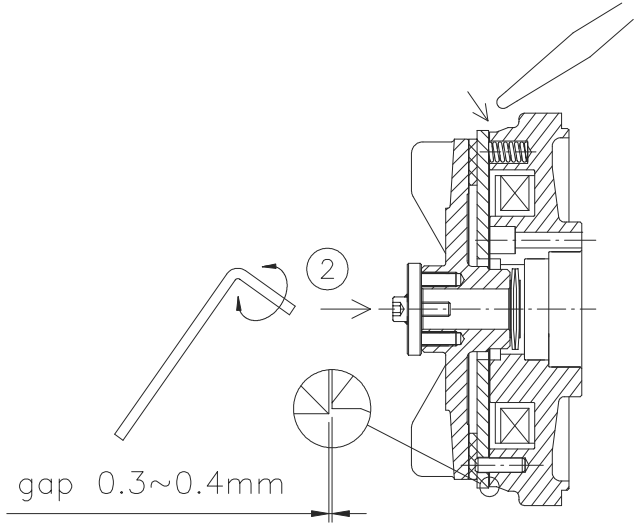
D : DUAL SPEED

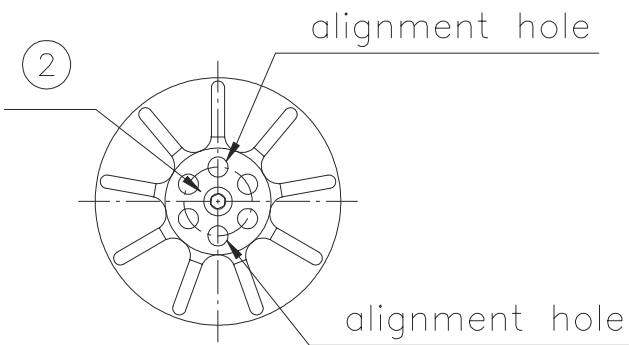
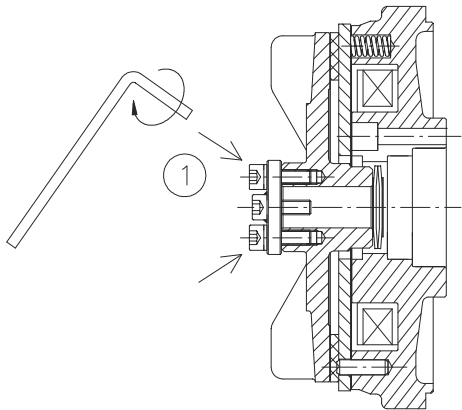
NO.	PARTS CODE	DESCRIPTION	Q'TY REQ'D EACH UNIT
1	400006	Hex. Recess Bolt <M6 × 1.0 × 16L>	6
2	400094	Spring Washer <M6>	6
3	300348K	Electric Housing Cover	1
4	402515	Gasket #15	1
5	400266	Rubber Band	1
6	301102	Magnetic Contactor 48V <LC1-D09-E7>	2
	301101	Magnetic Contactor 24V< LC1-D09-B7>	
7	300079	Contactor Rail <2PC>	1
8	300036	Magnetic Contactor 48V<LC1-D128-E7>	1D
	300035	Magnetic Contactor 24V<LC1-D128-F7>	
9	300636	Terminal Block	1
10	300078	Contactor Rail <1PC>	1D
11	400211	Spring Pin <Ø3 × 14L>	1
12	400222	Cable Gland <M20>	3
13	300303K	Electric Housing	1
14	402516	Gasket #16	1

IX.Method of adjusting motor brake gap <NT(D)-050-1/100-2/100-1/200-2/200-1>

Time to adjust	
1.When the brake function affects the operation of hoist 2.Brake lining motion causes abnormal noise ※Note : To prevent risks , the hoist must be in unload and power-off during the adjustment	
Tools needed	Figure
Open-end wrench	
Method of adjusting	Figure
(1) Use open-end wrench to loosen ① nut.	
(2) Tighten ② set screw and then back off 2 turns. (3) Tighten ① nut again	

IX.Method of adjusting motor brake gap <NT(D)-300-2/500-2>

Time to adjust	
1. When the brake function affects the operation of hoist. 2. Brake lining motion causes abnormal noise. 3. Brake gap is over 0.7mm. ※Note : To prevent risks , the hoist must be in unload and power-off during the adjustment	
Tools needed	Figure
A. Hex Wrench B. Thickness gauge	 Figure showing tools A (Hex Wrench) and B (Thickness gauge).
Method of adjusting	Figure
(1) Use Hex wrench to loosen ① set screw and take it off.	 Figure showing the first step of adjustment: loosening set screw ①.
(2) Use Hex wrench to adjust ② gap screw. (3) Apply with thickness gauge when adjusting the gap. (4) Gap value : about 0.3~0.4mm.	 Figure showing the second step of adjustment: adjusting gap screw ② and measuring the gap with a thickness gauge. The gap value is indicated as 0.3~0.4mm.

(5) Adjust ② gap screw slightly, align the holes.	
(6) Reinstall ① set screw and tighten it.	



Product Service

Attestation of Conformity

No. M8A 004703 0007 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.: 615202002301

Date, 2021-03-18

Li Taiwei
(Taiwei LI)

Page 1 of 4

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

TUV®



Product Service

Attestation of Conformity

No. M8A 004703 0007 Rev. 00

Trade name:

Black Bear, U-MEGA, Yong Sheng



Black Bear



U-MEGA



Yong Sheng

Page 3 of 4

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®



Product Service

Attestation of Conformity

No. N8MA 004703 0012 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.: 615202002301

Date, 2021-03-18

Li Taiwei

(Taiwei LI)

Page 1 of 4

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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TUV®



Product Service

Attestation of Conformity

No. N8MA 004703 0012 Rev. 00

Model(s):

N Series

NH-012-1, NH-025-1, NH-050-2, NH-050-1,
NH-100-2, NH-100-1, NH-200-2, NH-200-1,
NH-250-1, NH-300-2, NH-500-2

NHD-012-1, NHD-025-1, NHD-050-2, NHD-050-1,
NHD-100-2, NHD-100-1, NHD-200-2, NHD-200-1,
NHD-250-1, NHD-300-2, NHD-500-2

NHV-012-1, NHV-025-1, NHV-050-2, NHV-050-1,
NHV-100-2, NHV-100-1, NHV-200-2, NHV-200-1,
NHV-250-1, NHV-300-2, NHV-500-2

NHT-025-1, NHT-050-2, NHT-050-1, NHT-100-2,
NHT-100-1, NHT-200-2

NHTD-025-1, NHTD-050-2, NHTD-050-1,
NHTD-100-2, NHTD-100-1, NHTD-200-2

NHTV-025-1, NHTV-050-2, NHTV-050-1,
NHTV-100-2, NHTV-100-1, NHTV-200-2

WNH-012, WNH-025, WNH-050, WNH-100

NT-012-1, NT-025-1, NT-050-2, NT-050-1, NT-100-2,
NT-100-1, NT-200-2, NT-200-1, NT-300-2, NT-500-2

NTD-012-1, NTD-025-1, NTD-050-2, NTD-050-1,
NTD-100-2, NTD-100-1, NTD-200-2, NTD-200-1,
NTD-300-2, NTD-500-2

NTV-012-1, NTV-025-1, NTV-050-2, NTV-050-1,
NTV-100-2, NTV-100-1, NTV-200-2, NTV-200-1,
NTV-300-2, NTV-500-2

WNT-012, WNT-025, WNT-050, WNT-100

SH-012-1-D8+, SH-025-1, SH-025-1-D8,
SH-025-1-D8+, SH-050-1, SH-050-1-D8+,
SH-100-1, SH-100-1-D8, SH-100-1-D8+,
SH-200-2, SH-200-1

Page 2 of 4

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TÜV®



Attestation of Conformity

No. N8MA 004703 0012 Rev. 00

Brand:

Black Bear, U-MEGA, Yong Sheng



Black Bear



U-MEGA



Yong Sheng

Page 3 of 4

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TUV®



Product Service

Attestation of Conformity

No. N8MA 004703 0012 Rev. 00

Parameters:

Rated voltage: 230/400 Vac
 Rated frequency: 50 Hz
 Rated power: As below
 0.12kW (NT-012-1, NT-025-1, NT-050-2, NT-050-1, NTD-012-1, NTD-025-1, NTD-050-2, NTD-050-1, NTV-012-1, NTV-025-1, NTV-050-2, NTV-050-1, WNT-012, WNT-025)
 0.18kW (NT-100-2, NT-100-1, NTD-100-2, NTD-100-1, NTV-100-2, NTV-100-1, WNT-050, WNT-100)
 0.2kW (SH-012-1-D8+, SH-025-1-D8)
 0.25kW (SH-025-1)
 0.37kW (NT-200-2, NT-200-1, NTD-200-2, NTD-200-1, NTV-200-2, NTV-200-1)
 0.4kW (SH-025-1-D8+, SH-050-1)
 0.6kW (NH-012-1, NH-025-1, NH-050-2, NHD-012-1, NHD-025-1, NHD-050-2, NHV-012-1, NHV-025-1, NHV-050-2, WNH-012, NT-300-2, NT-500-2, NTD-300-2, NTD-500-2, NTV-300-2, NTV-500-2)
 0.72kW (NHT-025-1, NHT-050-2, NHTD-025-1, NHTD-050-2, NHTV-025-1, NHTV-025-2)
 0.75kW (SH-050-1-D8+, SH-100-1, SH-100-1-D8)
 1.1kW (NH-050-1, NH-100-2, NHD-050-1, NHD-100-2, NHV-050-1, NHV-100-2)
 1.22kW (NHT-050-1, NHTD-050-1, NHTV-050-1)
 1.28kW (NHT-100-2, NHTD-100-2, NHTV-100-2)
 1.5kW (NH-100-1, NH-200-2, SH-100-1-D8+, SH-200-2, SH-200-1, NHD-100-1, NHD-200-2, NHV-100-1, NHV-200-2)
 1.6kW (WNH-025)
 1.68kW (NHT-100-1, NHT-200-2, NHTD-100-1, NHTD-200-2, NHTV-100-1, NHTV-200-2)
 2.5kW (WNH-050, WNH-100)
 3.7kW (NH-200-1, NH-250-1, NH-300-2, NH-500-2, NHD-200-1, NHD-250-1, NHD-300-2, NHD-500-2, NHV-200-1, NHV-250-1, NHV-300-2, NHV-500-2)

Tested according to:

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

Page 4 of 4

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