



# USER MANUAL



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## CONGRATULATIONS

Congratulations with the purchase of your new Prolyft Nero hoist.

### Lifetime Warranty

Prolyte offers a unique Lifetime Warranty system. Each Prolyft hoist is equipped with an electronic tag, which enables the owner to keep track of the hoists' history in an easy accessible Prolyft Service Base. For registration ask your nearest service point or send an email to [service@prolyft.com](mailto:service@prolyft.com).

The Lifetime Warranty program is applicable as long as you service and re-certify your hoist yearly at a Prolyft Service Point. Your nearest Service Point can be found at the back of this manual, or through our website.

### Content of the box or flight case

You have received the hoist in a box or a flight case. The following should be included:

- Pre-assembled hoist.
- 1 chain bag.
- The required length of chain.
- Test certification document.
- Manual.

### Before you start using the hoist

Before starting to use the hoist please take care of the following:

- Check the carton box or the flight case for any transport damage. Contact your supplier if there is any damage found.
- Look in the box for the test-certificate with the serial number.
- Read the manual carefully.
- Check the voltage settings of the hoist. All hoist come standard with a 400V/3ph/50Hz setting.
- Take care of the proper safety features for lifting loads.
- Enjoy using the hoist.



## TECHNICAL SPECIFICATIONS

Load capacity	250 kg	500 kg	1000 kg	2000 kg
Model	D8+	D8+	D8+	D8+
Type of Control	Direct or Low Voltage	Direct or Low Voltage	Direct or Low Voltage	Direct or Low Voltage
FEM Class	2m	2m	2m	2m
Duty Factor	40%	40%	40%	40%
Start per Hour	240	240	240	240
Breaking time / 10 years	6300 h	6300 h	6300 h	6300 h
Falls of Chain	1	1	1	2
Type of Chain	DIN EN 818-7 - type DAT - Zinc galvanized steel 80 grade	DIN EN 818-7 - type DAT - Zinc galvanized steel 80 grade	DIN EN 818-7 - type DAT - Zinc galvanized steel 80 grade	DIN EN 818-7 - type DAT - Zinc galvanized steel 80 grade
Size of Chain	5x15 mm	6x18 mm	8x24 mm	8x24 mm
Chain Self-Weight	0.53 kg/m	0.78 kg/m	1.39 kg/m	1.39 kg/m
Safety Factor	8.1	8.1	8.1	8.1
IP Rate	55	55	55	55
Insulation Class (Temperature Class)	F in according to CEI 15-26	F in according to CEI 15-26	F in according to CEI 15-26	F in according to CEI 15-26
Load Wheel	5 pockets	5 pockets	5 pockets	5 pockets
Noise Level	67.5 dB @ full load	67.5 dB @ full load	67.5 dB @ full load	67.5 dB @ full load
Connection Cable Length	(75 ± 5) cm	(75 ± 5) cm	(75 ± 5) cm	(75 ± 5) cm
WLL	250 kg	500 kg	1000 kg	2000 kg
Frequency	50 Hz	50 Hz	50 Hz	50 Hz
Motor power	0.5 kW	0.8 kW	1 kW	1.6 kW
Number of brakes	2	2	2	2
Brake size	06	06	08	10
Self-weight	21 kg	24 kg	43 kg	45 kg
Lifting speed	4m/min	4m/min	4m/min	4m/min

Table 1



## 1. GENERAL INFORMATION

**Attention: All users must read these operating instructions carefully prior to the initial operation. These instructions are intended to acquaint the user with the hoist and enable him to use it to the full extent of its intended capabilities.**

The operating instructions contain important information on how to handle the hoist in a safe, correct and economic way. Acting in accordance with these instructions helps to avoid dangers, reduce repair costs and downtime and to increase the reliability and lifetime of the hoist.

Anyone involved in doing any of the following work with the hoist must read the operating instructions and act accordingly:

- Operation, including preparation, trouble shooting and cleaning.
- Maintenance, inspection, repair.
- Transport.

Apart from the operating instructions and the accident prevention act valid for the respective country and area where the hoist is used, also the commonly accepted regulations for safe and professional work must be adhered to.

The user is responsible for the proper and professional instruction of the operating personnel.

Every unit leaving the factory is furnished with a test certificate that shows the serial number of the hoist. This certificate has to be filed together with the inspection manual.

## 2. CORRECT OPERATION

### Lifting capacity

The Prolyft electric chain hoist series Nero has been designed to lift and lower loads up to the rated capacity. The lifting capacity indicated on the hoist is the maximum safe working load which must not be exceeded.

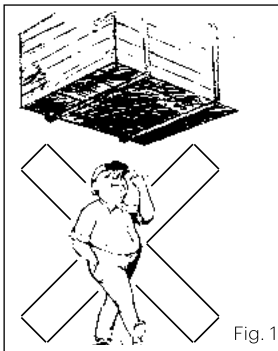


Fig. 1

### Danger zones

- Do not allow personnel to pass under a moving load.
- After lifting or tensioning, a load must not be left unattended for a longer period of time.
- Start moving the load only after it has been attached correctly and all personnel are clear of the danger zone.

### Suitable for entertainment use

The Prolyft electric chain hoist series Nero are specially designed for use in the Entertainment industry. The hoists are standard configured for motor down use. The chain bag bracket is designed to guide the chain in to the chain bag properly.

When the hoist is used in a motor up situation the chain bag bracket will slide to the right position without any adaptations. We recommend to rotate the covers with handgrips 180 degrees when the hoists are used motor up.

### Lifting or suspending loads above people

The Prolyft Nero electric chain hoist has been designed for use in the entertainment industry. In the entertainment industry loads are often suspended or lifted over people. The Prolyft Nero electric chain hoist is designed for suspending loads above people as specified in the reference procedure code IGWW SQP2:2018 and technical document EN 17206:2018 for UC1 and UC2 classes.

The Prolyft Nero electric chainhoist cannot be used to move people. (See Fig. 2)

### Attaching the hoist

The installation of the hoist must be done by a competent person specialized in the assembly and placement of suspension systems for the installation of machines for the operation of stage equipment.

The operator must ensure that the hoist is attached in a manner that does not expose himself or other personnel to danger by the hoist, the chain(s) or the load.

Do not move the hoist by handling it from the power and/ or control cable.

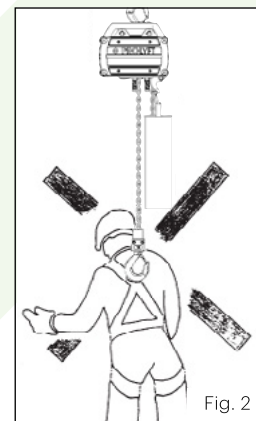


Fig. 2

### Protection against rain and humidity

The Prolyft Nero hoists have a protection class of IP55. If the hoists are intended for outdoor use, they must be protected from weather conditions. Suitable rain covers can be ordered from Prolyte.

The cabinet of the chain guide is, due to its position, gathering water when the hoist is used in the rain. The bottom of the cabinet is equipped with drain holes. Drain holes must be checked regularly to avoid them from being blocked by dirt.

Apart from direct water, the hoists need to be protected against high humidity levels. These can be caused by temperature changes when hoists are moved from high humidity/temperature environments (indoor event area's) to environments with a much lower temperature (trucks after a load out). We strongly recommend to dry the hoists after this happens, either by air or with a cotton cloth. Flight cases or other type of transport boxes should be opened or equipped with ventilation holes.

#### Theoretical service life

The electric chain hoist is classified to group 2m according to FEM 9.511. Basic principles for the calculation of the theoretical remaining service life are given in BGV D8. When the theoretical remaining service life has been reached, the electric chain hoist should be subjected to a general overhaul (also refer to paragraph 8. Service).

#### Maintenance/Repair

In order to ensure correct operation, not only the operating instructions, but also the conditions for inspection and maintenance must be complied with. If defects are found or abnormal noise is to be heard stop using the hoist immediately.

**Attention: Before starting to work on electrical components the power-supply is to be cut off.**

- **Do not** attach more than one load lifting attachment to the load hook of the hoist.
- The bottom blocks are provided with swivel hooks supported by axial bearings. When turning a lifted load the load chain **must not** rotate in any circumstances.

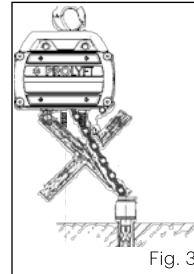


Fig. 3

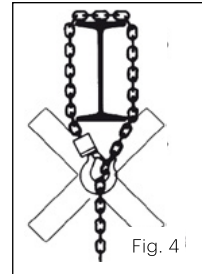


Fig. 4

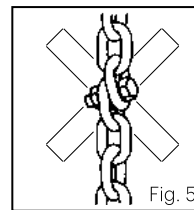


Fig. 5

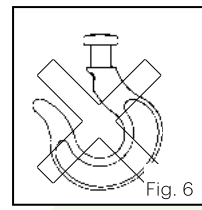


Fig. 6

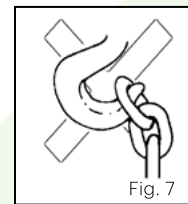


Fig. 7

## 3. INCORRECT OPERATION

- **Do not** exceed the rated capacity of the hoist.
- **Do not** lift stuck or jammed loads.
- **Do not** shortly and frequently actuate the control switch.
- **Do not** use the hoist for the transportation of people.
- **Do not** allow any lateral load on either housing or bottom block. (See Fig. 3)
- **Do not** lift when the load chain is not in a straight line between suspension bracket and hook.
- **Do not** use the load chain for lashing purposes (sling chain). (See Fig. 4).
- **Do not** knot or shorten the load chain by using bolts, screws, screw drivers or other devices (See Fig. 5).
- **Do not** repair chains installed in the hoist.
- **Do not** remove the safety latch from the load hook. (See Fig. 6).
- **Do not** throw the hoist down. Always place it properly in a flightcase.
- **Do not** move the hoist by handling it from the power and/or control cable.
- **Do not** operate the hoist if the power and/or control cable and relative cable glands are damaged.
- **Do not** operate the hoist in potentially explosive atmospheres.
- **Do not** modify the hoist except for modifications available through Prolyft.
- **Do not** drop any load into the loose chain. Risk of chain break!
- **Do not** attach the load to the tip of the hook (Fig. 7). The load must always be seated in the saddle of the hook. This also applies to the suspension hook.

## 4. ASSEMBLY

### 4.1. INSPECTION BEFORE ASSEMBLY

- Check for transport damage.
- Check for completeness.
- Check that the capacity indication on hoist and hook block match.
- Check the proper power supply voltage setting

### 4.2. ELECTRICAL CONNECTION

**Attention: Work at electrical installations may be carried out by electrical experts only. The local regulations have to be strictly observed, e.g. EN 60204-32/VDE 0113.**

#### Preparation

Before beginning to work on electrical components the hoist must be disconnected from power.

Before connecting the chain hoist ensure that the voltage setting of the hoist matches the local supply specifications. All Prolyft Nero hoist are standard set to 400V/3phase/50Hz.

Wiring diagrams are included with the hoist.

**Mains supply connection 3 phases**

- All Nero hoist are standard supplied with a red 16Amp/400V 4 pin connector for the mains supply.
- If the standard connector is removed ensure the following:  
The mains supply cable must be an insulated cable with 4 flexible leads. The ground (earth) lead must be longer than the live leads. The cross-section should be mm. 1,5 mm<sup>2</sup>, the cable length should be max. 50 m.
- Regarding the electrical power consumption of the various models see table 1 on page 4.
- Cable ends have to be provided with end sleeves.

**Connecting to the power supply**

- The mains supply cable must be connected to the electric chain hoist before it is connected to the mains supply.

**Direction of rotation**

- Check the motor's direction of rotation.
- The wiring diagram included has been drawn for a normal, clock- $\rightarrow$  wise rotating installation. Should the users mains supply not fulfil these requirements, e.g. the hoist lowers when lift is selected (or vice versa), switch the unit OFF immediately and exchange two of the three phase connections in the power supply.
- **Under no circumstances** may the wiring in the pendant control or the extension cable between the control and the hoist be tampered with, to avoid future operation mistakes when using the control or the extension cable with other hoists. or the extension cable with other hoists.

**4.3. DIRECT CONTROLLED HOISTS**

- With direct controlled hoists the hoist will lift or lower "direct" after switching on - or connecting the mains supply.
- When the phases of the mains supply rotate clockwise, the hoist will lift. The hoist will lower when the phases of the mains supply rotate anti-clockwise.
- The order of the phases is switched in the pendant control.
- UP and DOWN buttons on the pendant control must have a "dead man" functionality. Releasing the button will switch of the power.
- Switching on the mains supply will release the brake, independent from the rotation of the mains supply.
- Pressing the E-stop button on the pendant control MUST always switch off the mains supply.

- It is not ALLOWED to operate hoists without having an E-stop button in the mains supply circuit.
- **Never** connect a "direct control" hoist to the mains supply without any (pendant) control. The hoist will start to run without control!!

**4.4. LOW VOLTAGE CONTROLLED HOISTS**

- With Low Voltage controlled hoists the mains supply is connected to a reversing contactor inside the hoist. Connecting the hoist to the mains supply will not cause lifting or lowering of the hoist.
- A separate connector is provided on the hoist (Yellow 16Amp/115V/4pin female) to connect a pendant control.
- This pendant control will either close the circuit inside the hoist for lifting, when the UP button is pressed or the circuit inside the hoist for lowering when the DOWN button is pressed.
- Pressing the UP or DOWN button on the pendant control, closing the lifting or lowering circuit in the hoist, will release the brake.
- UP and DOWN buttons on the pendant control must have a "dead man" functionality. Releasing the button will open the circuit.
- The mains supply should always have clockwise rotating phases.
- Pressing the E-stop button on the pendant control MUST always switch off the mains supply.
- It is NOT ALLOWED to have E-stops on Low Voltage pendant controls that only open the circuit for lowering or lifting.
- It is NOT ALLOWED to operate hoists without having an E-stop button in the mains supply circuit.

**4.5. CHAIN BAGS.**

- Only use chain bags suitable for the total length and weight of the chain. You can find this on the label inside the bag. Table 2 shows all available chainbags and their capacity.
- Use only certified quick links to connected the chain bag to the bracket.
- When using the hoist in the motor UP position the chain bag bracket will position the chain bag properly underneath the chain output.
- Make sure only gravity is needed to guide the chain into the chain bag.

Table 2

Chain Baigs NERO hoists						
Catalogue number	WLL	Chain diameter				
		4x12mm	5x15mm	6x18mm	7,1x20,5mm	8x24mm
PLA-10-S	25	40m	25m	20m	15m	10m
PLA-10-M	75	50m	30m	25m	20m	15m
PLA-10-L	75		75m	60m	30m	25m
PLA-10-XX	75			75m	65m	50m
PLA-10-XXL	90				80m	60m



#### 4.6. CIRCUIT DIAGRAM

See on this page the figures for the circuit diagram.

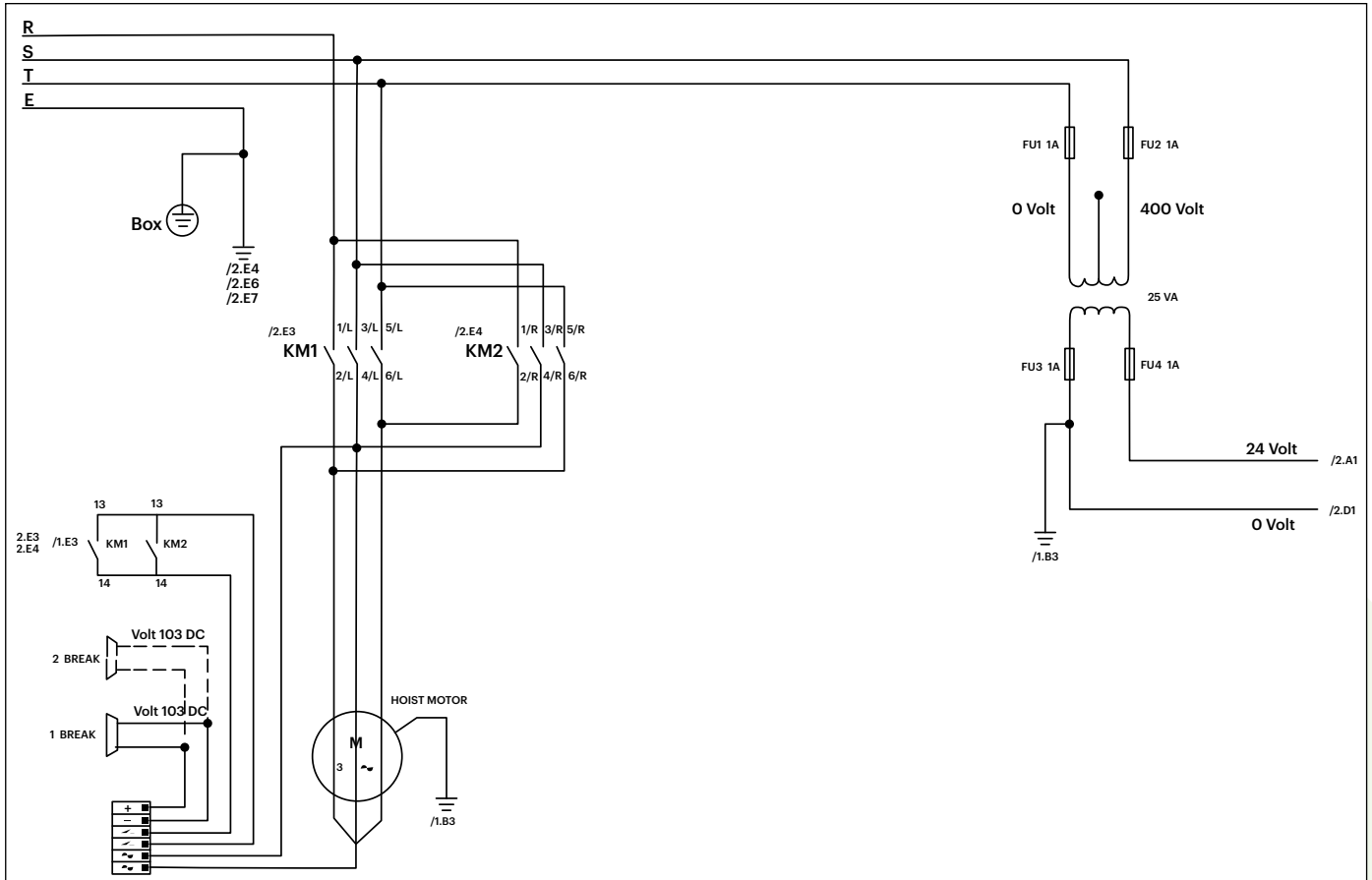
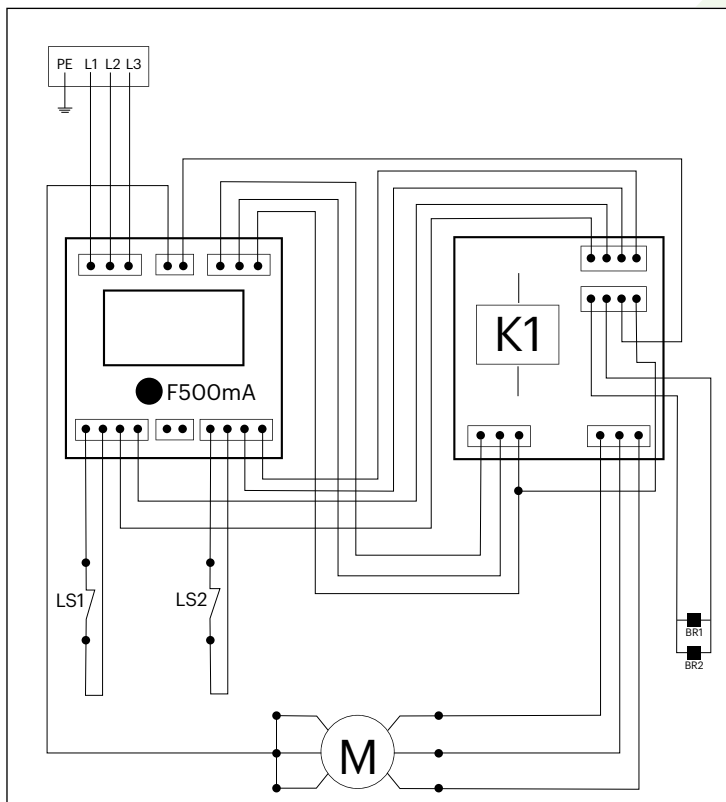


Fig 8. Electrical drawing: Direct Control







## 5. FUNCTIONAL CHECK BEFORE EVERY INSTALL

Prior to initial operation of the hoist lubricate the load chain when it is not under load (see chapter 8.6).

Before the hoist is put into regular service, the following additional inspections must be made:

- Are all screwed connections on the hoist tight and are all locking devices in place and secure?
- Is the chain drive correctly reeved?
- Is the chain bag bracket fitted correctly?
- The chain end stop must be correctly fitted to the loose end of the load chain.
- The dead-end of the chain must be correctly fitted to the dead-end of chain connection on the chain bag bracket.
- Does the chain bag have the chain bag the right capacity? Is the chain bag fitted correctly to the chain bag bracket?
- All units equipped with two or more chain strands should be inspected before initial operation for twisted or kinked chains. The chains of 2-strand/double reeved hoists may e.g. be twisted if the hook block is rolled over.
- Check the function of the limit switches by running the buffers of the chain end stop resp. hook block against the limit switch underneath the housing. The lifting respectively lowering operation must be stopped immediately.
- Check the brake function when lifting and lowering.

## 6. COMMISSIONING

### Inspection before each initial operation

Each hoist must be inspected prior to each initial operation by a competent person and any failures be removed. The inspection is visual and functional. These inspections have to assure that the hoist is safe and has not been damaged by incorrect transport or storage. Inspections should be made by suitably trained personnel. Inspections are instigated by the user or operating company.

\*In the Entertainment industry hoists are often moved from one position or venue, transported and installed at another position or venue. After every "re-installation of a hoist it must be inspected as with an initial installation as described above. Inspections are always instigated by the user or operating company.

## 7. OPERATION / USE

### Operator skills

Operators delegated to install, service or independently operate the hoist must have had suitable training and be competent.

Operators are to be specifically nominated by the company and must be familiar with all relevant safety regulations of the country of use.

### Visual inspection before starting work

Before starting work inspect the hoist, chains and all load bearing components every time for visual defects. Furthermore test the brake and make sure that the load and hoist are correctly attached by carrying out a short work cycle of lifting and lowering. Selection and calculation of the proper suspension point and beam construction are the responsibility of the operating company.

### Inspection of load chain

Inspect the chain for sufficient lubrication and visually check for external defects, deformations, superficial cracks, wear or signs of corrosion.

### Inspection of chain end stop

The chain end stop must be connected to the dead (idle) end of the chain strand.

### Inspection of chain reeving

All units with two or more chain strands should be inspected prior to initial operation for twisted or kinked chains. The chains of 2-strand hoists may be twisted if the hook block was rolled over. (See Fig. 8).

### Inspecting the hooks

Check the load hook and the suspension hook for deformations, cracks, damages, abrasion and signs of corrosion.

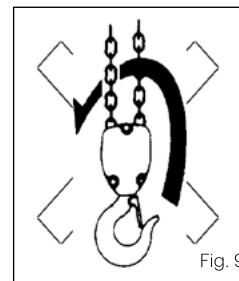


Fig. 9

### Attaching the load

Attach the load to the hoist using only approved and certified slings or lashing devices. Never use the load chain as sling chain. The load must always be seated in the saddle of the hook. (See Fig. 8).

Never attach the load to the tip of the hook. Two parts of a bridles of slings or steels must not exceed an angle of 45 degrees. Use a shackle to attach the bridle. Do not remove the safety latch from the load hook. Always check the attachment of the load after the load has "landed".

### Lifting/lowering the load

- Never lift a load without direct visual contact with the load.
- The chain end stop may not be used as operational limit switch.
- Always follow the instructions in the manual of the operating/control device.

### Emergency stop

- All movement can be immediately stopped by pushing the red, mushroom shaped button on the pendant control.
- Attention: Operating the red emergency button does NOT ALWAYS automatically disconnect the mains supply to the hoist. To release the emergency stop, rotate the button in a clockwise direction.

### End limit switch

- This hoist is provided with an end limit switch for the lowest and highest hook position as standard. This limit switch is a safety device and may not be used as operational limiting device.

## 8.SERVICE

### 8.1. GENERAL

- Service and inspections may only be carried out by a competent person.
- The inspection must determine that all safety devices are present and fully operational and covers the condition of the hoist, lifting gear, accessories and supporting constructions.
- The service intervals and inspections noted are for normal working conditions. Adverse working conditions, e.g. heat, high humidity, or chemical environments, and regular transportation can dictate shorter periods.
- The Prolyft chainhoist NERO series conform to FEM group 2m in accordance with FEM 9.511. This results in a theoretical service lifetime of 6300 operating hours under full load.

- This is equivalent to minimum 10 years under normal operating conditions. After this period the hoist requires a general overhaul. Further information is contained in BGV D6 resp. FEM 9.755.
- **Attention: Maintenance work requires subsequent function testing with nominal load.**

### 8.2. PROLYFT SERVICE PROGRAM / LIFETIME WARRANTY

#### Initial Certificate

- All Prolyft hoist are provided with a test certificate, describing the hoist and showing the results of the load test. The graph of the load test shows a minimum lifting capacity of 125% of the nominal load.
- All Prolyft hoist are equipped with an RFID tag with a unique number. The number of the tag refers to the record of the hoist and the result of the load test in the Prolyft database.

#### Registration

- After purchasing the hoist ask your local Prolyft service point for access to the Prolyft service base or send an email to [service@prolyft.com](mailto:service@prolyft.com).
- Once your account is made you have to register your hoist by sending a copy of the initial test certificate.
- After registration you have access to all recorded information, certificates, history and load tests connected to your hoist.

#### Yearly inspection and re-certification

- Every owner of registered hoists will receive an automatic reminder for the yearly inspection and re-certification of the hoist.
- The yearly inspection and re-certification can be done at any Prolyft Service Point as you can find on the back of this manual or on our website.
- The yearly inspection and re-certification of the hoist guarantees a full visual check of the hoist and the chain, a brake test, and a load test.
- After passing the inspection a new certificate proving the quality of the hoist, including a graph of the load test will be recorded in the database.
- A yearly certified hoist will keep Lifetime Warranty.

### 8.3. DAILY CHECKS

- Visually check the pendant control switch and cable for damage.
- Function test of brake.
- Function test of end limit switch.
- Function test of lifting / lowering.

**8.4. INSPECTION AND MAINTENANCE CHECKLIST**

Serial number: \_\_\_\_\_

Name of inspector: \_\_\_\_\_

Date: \_\_\_\_\_

Inspection and Maintenance		Initial checks			Periodical Checks		
		During commissioning	After 50 operating hours	After 200 operating hours	Daily	After 200 operating hours	Annually
Chain bag	Inspect chain bag for proper mounting, size, and presence of rips and tears	*	*	*	*	*	*
Nameplates, decals, warning labels	Missing, damaged or illegible			*			*
RFID tag	Missing, damaged or not readable			*			*
Operating controls	Any deficiency causing improper operation. Check operation of hoist with no load present (up, down, abnormal noises)	*	*	*	*	*	*
Function test of limit switches	Any deficiency causing improper operation. Press them manually to check functionality.	*	*	*	*	*	*
Brake mechanism	Slipping, excessive drift, glazing, contamination or excessive wear. Brake gap	*	*	*	*	*	*
Hooks	Excessive throat opening, damaged latch, chemical damage, worn hook bearing, cracks.	*	*	*	*	*	*
Suspension lugs (when used)	Cracks, excessive wear, stretch	*	*	*	*	*	*
Chain	Inadequate lubrication, excessive wear, stretch, cracked- damaged or twisted links, corrosion or foreign substance	*	*	*	*	*	*
Double reeving (if configured)	Twisting, damage or wear on hook load wheel	*	*	*	*	*	*
Pins, Bearings, Bushing shafts, Couplings	Excessive wear, corrosion, cracks, distortion		*	*			*
Nuts, bolts, Rivets	Looseness, stripped and damaged threads, corrosion, locking		*	*			*
Sheaves	Distortion, cracks, excessive wear, build up of foreign substances			*			*
Housing, Load block	Distortion, cracks, excessive wear, build up of foreign substances		*	*		*	*
Wiring, terminals, grommets, strain relief	Fraying, defective insulation, correct mounting, grounding			*		*	*
Circuit board, contactor, transformer	Loose connections, burned or pitted contacts			*			*
Drain holes	Clear from dirt	*	*	*	*	*	*
Seals and gaskets	Good alignment, leakage			*		*	*
Motor	Visual inspection for signs of wear, deterioration, improper operation, excessive heat.			*			*
Slip clutch	Correct slippage level and load holding level	*	*	*			*
Additional remarks							



### 8.5. REGULAR INSPECTIONS, SERVICE AND TESTING

According to prevailing national/international occupational safety and health regulations, hoisting equipment must be inspected at least annually by a competent person. Adverse working conditions may dictate shorter inspection periods.

The commissioning and inspection details can be noted on the test certificate delivered with the hoist or on page 11 of this manual. Repairs may only be carried out by Prolyft Service Points that use original Prolyft spare parts.

The inspection must determine that all safety devices are present and fully operational and cover the condition of the hoist, lifting gear, accessories and supporting constructions. If required by the Occupational Health and Safety Organization, the results of the adequate inspections and competent performance of repairs have to be substantiated. If the electric hoist (with capacity of 1 t and up) is installed in a carriage, or if the load is moved in one or several directions, the installation is considered as crane and inspections have to be carried out in accordance with BGV D6-Cranes.

### 8.6. LOAD CHAIN

The load chains are case-hardened and carry the designations 5x15mm, 6x18mm and 8x24mm.

The Nero electric hoists are specially designed to use this type of chain. For this reason only chains that have been approved by the manufacturer may be used in the Nero hoists.

#### Lubricating the load chain

The load chain is to be lubricated before initial operation and every month, however, latest after 50 operating hours. Adverse working conditions, e.g. excessive dust or continued heavy duty can dictate shorter periods between lubrication.

- Before the chain is lubricated it must be cleaned. Flame cleaning is forbidden. Use only cleansing methods and agents that do not corrode the chain material. Avoid cleansing methods that can lead to hydrogen brittleness, e.g. spraying or dipping chain in caustic solvents. Also avoid surface treatments that can hide cracks and flaws or other surface damage.
- The chain must be lubricated in a no-load condition so that lubricant can enter between the links, e.g. by dipping in oil.
- Either motor oil of the viscosity 100, e.g. Shell Tonna T68 or Rocol DRY PTFE Spray can be used to lubricate the chain. For very dusty applications use a dry lubricant.

#### Inspecting the load chain for wear

Load chains must be inspected every 3 months or the latest after 200 operating hours.

Visually inspect the chain over its full length for deformation, cracks, flaws, elongation, wear or corrosive pitting.

Link chains must be replaced when the nominal thickness  $d$  on any part of the chain has been reduced by more than 10% or when the pitch  $t$  is elongated by more than 5% or over 11 pitches ( $11 \times t$ ) by 2%. Nominal dimensions and wear limits are shown in the following table 3. Chains that do not fulfil all requirements must be replaced immediately.

### Functional test

All units with two or more chain strands must be inspected before every operation for twisted or kinked chains. Chains on 2-strand units may become twisted if the bottom block is rolled over. If a strand is twisted disconnect it and roll it back correctly.

Before initial operation lubricate the unloaded chain and test all hoist functions under a no-load condition.

### 8.7. MAINTENANCE LOAD HOOK

Inspect the hooks for deformation, damage, surface cracks, wear and signs of corrosion as required but at least annually. Adverse working conditions may dictate shorter periods. Hooks that do not fulfil all requirements must be replaced immediately. Welding on hooks to compensate for wear or damage is not permissible. Hooks must be replaced when the mouth of the hook has opened more than 10% (Fig. 15) or the nominal value of other dimensions has decreased by 5% due to wear. Nominal dimensions and wear limits are shown in the following table.

See table 3.

## 9.ELECTRIC CHAIN HOIST IN GENERAL

In particular check following parts:

- Threaded connections in general
- Check all nuts, screws and locking devices for tightness.
- Chain bag
- Ensure the chain bag is securely fastened. Check for cracks or wear.
- Suspension bolt
- (Connection between hoist and suspension bracket resp. trolley) Check for cracks or wear. Ensure all safety devices are in place and secure.

Table 3

Chain size	5x15mm	6x18mm	8x24mm
Code	XRC062	XRC0618	XRC0824
Weight/metre	0,54kg/m	0,78kg/m	1,39kg/m
Nominal diameter (dn)	5mm +0,1/ -0,2mm	6mm +0,1/ -0,2mm	8mm +0,1/ -0,2mm
Rated pitch (1t)	15mm +0,2/ -0,1mm	18mm +0,25/ -0,1mm	24mm +0,3/ -0,15mm
Gauge length (11t)	165mm +0,5/ -0,0mm	198mm +1,0/ -0,0mm	264mm +0,6/ -0,4mm
Min. inner width (bimin)	6mm	7,2mm	9,6mm
Min. outer width (bmax)	16,9mm	20,2mm	27mm
Max. welding diameter (dsmax)	5,4mm	6,5mm	8,6mm
Min. stress at breaking strength (omin)	800N/mm <sup>2</sup>	800N/mm <sup>2</sup>	800N/mm <sup>2</sup>
Min. breaking strength (Fbmin)	31,4kN	45,2kN	80,4kN

Each chain length is identified by an indelible and +E400:E414 legible mark at regular intervals on the chain's links, which includes (see fig 3.5):

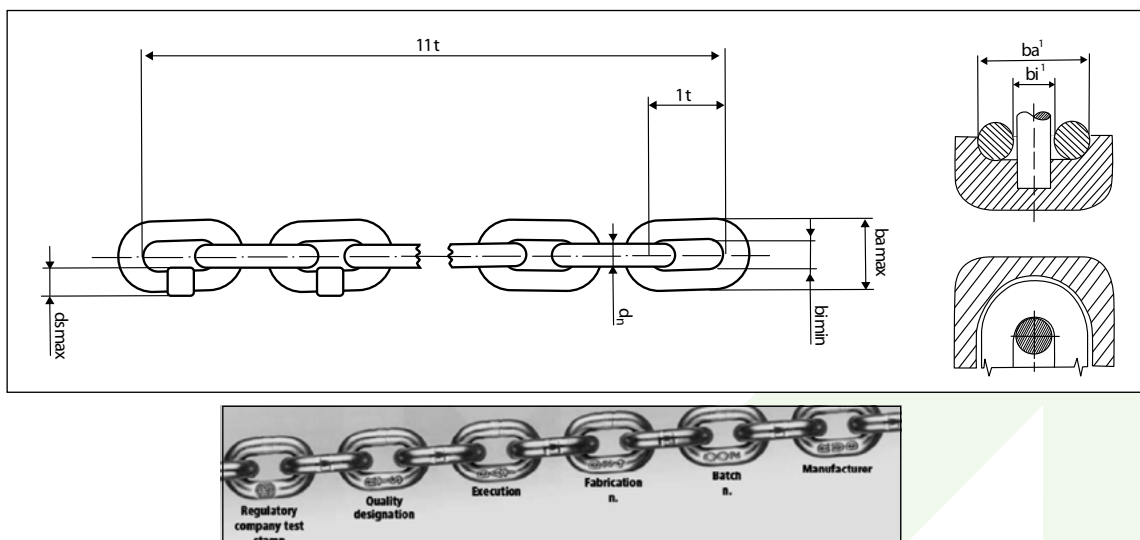
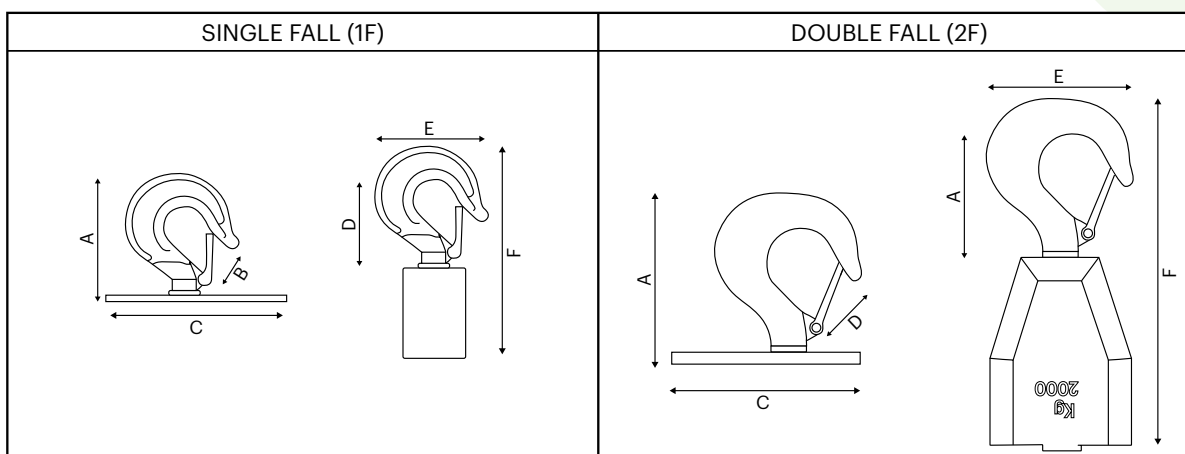


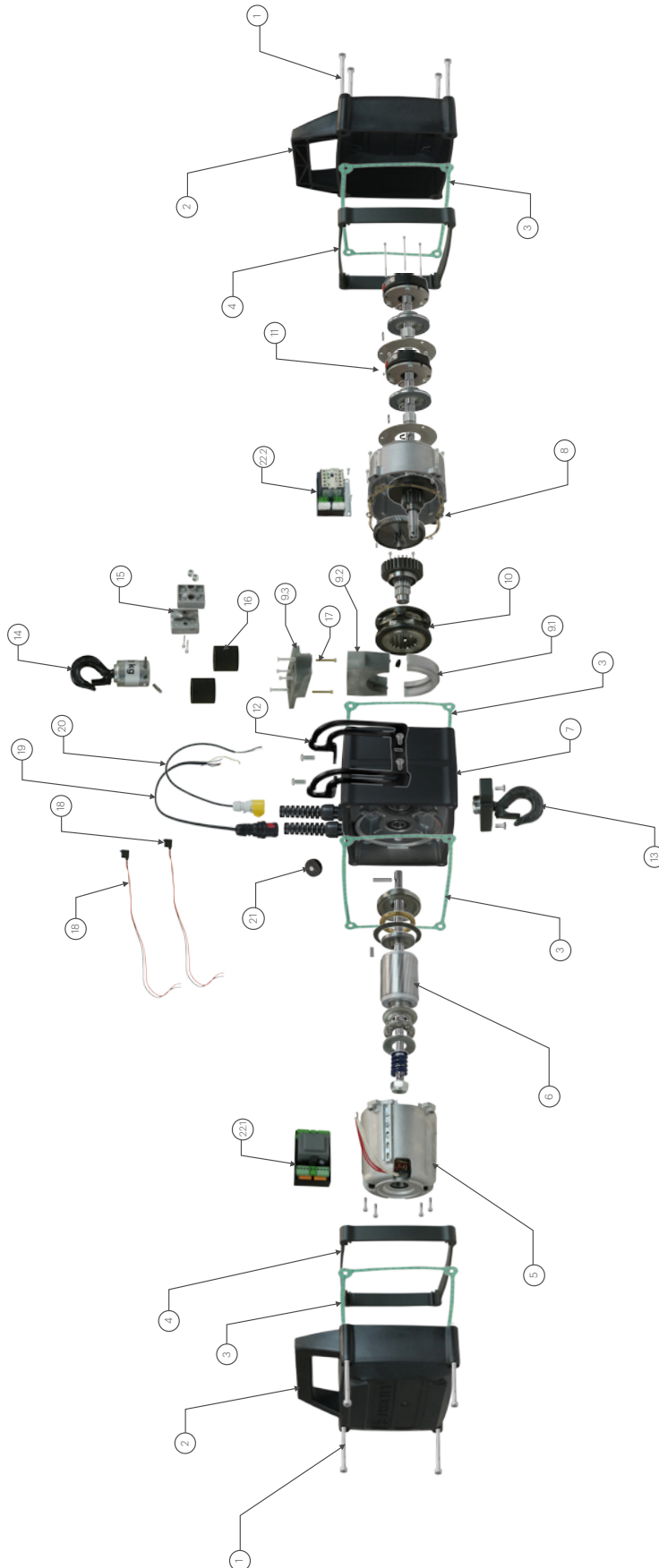
Table 4

Hoist	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
250/ 500	95	18	143	64	73	153
1000	112	24	143	72	92	177
2000	154	33	143	97	122	296



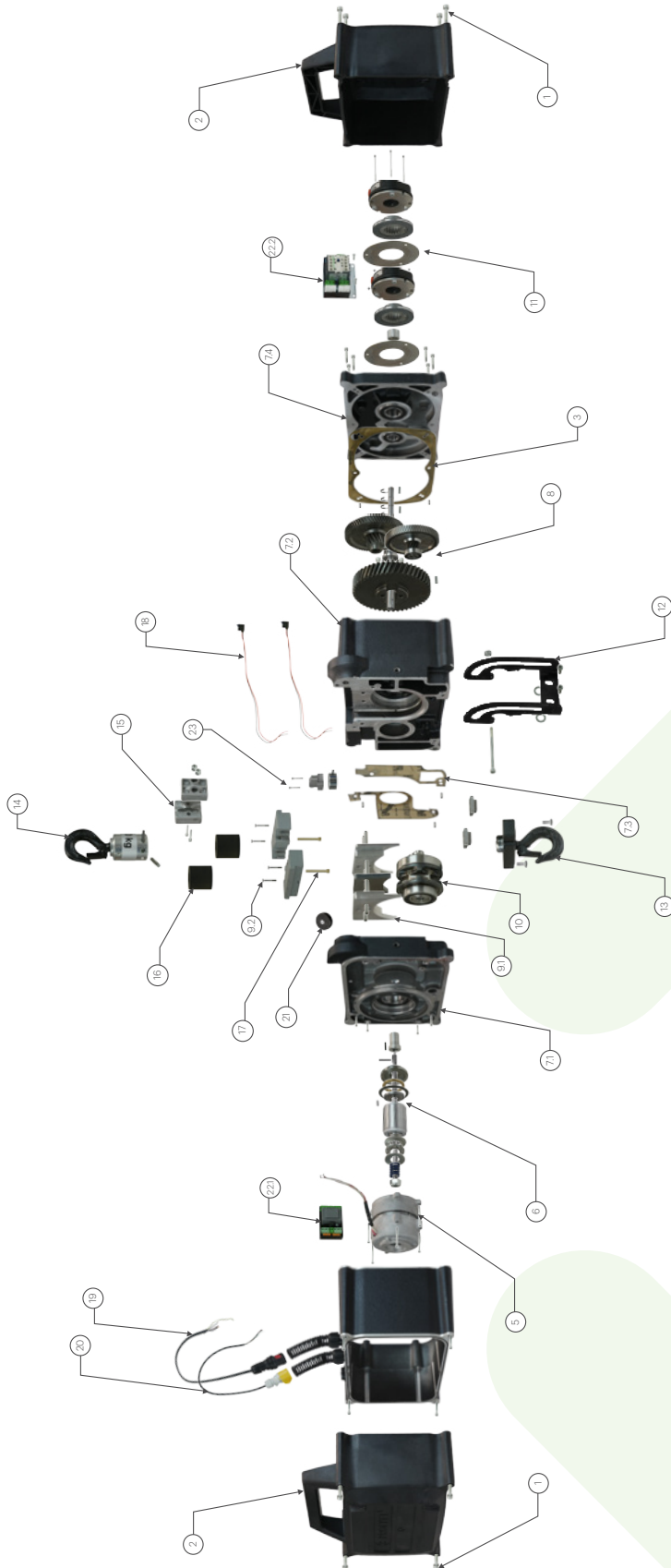
## 10. EXPLODED VIEW NERO 250KG/500KG

### Direct Control/Low Voltage Control Parts



Part #	Description	Part #	Description	Part #	Description	Part #	Description	Part #	Description
1	Cover bolts	6	Clutch assembly	9.3	Outside chainguide	14	Chain hook	19	Power cable
2	Cover	7	Gearbox housing	10	Loadwheel	15	Chain end stop	20	Control cable
3	Gasket	8	Gearbox assembly	11	Brake kit	16	Foam stopper	21	Rfid tag
4	Spacer	9.1	Lower chainguide	12	Bracket chainbag	17	Limit switch pin	22.1	Control board 1 (LV or DC)
5	Motor assembly	9.2	Upper chainguide	13	Suspension hook	18	Limit switch	22.2	Control board 2 (LV or DC)

## Direct Control/Low Voltage Control Parts



Part #	Description	Part #	Description	Part #	Description	Part #	Description	Part #	Description	Part #	Description		
1	Cover bolts	5	Motor assembly	7.3	Gasket	9.2	Outside chainguide	13	Suspension hook	17	Limit switch pin	21	Rfid tag
2	Cover	6	Clutch assembly	7.4	Gearbox cover 2	10	Loadwheel	14	Chain hook	18	Limit switch	22.1	Control board 1 (LV or DC)
3	Gasket	7.1	Gearbox cover 1	8	Gearbox assembly	11	Brake kit	15	Chain end stop	19	Power cable	22.2	Control board 2 (LV or DC)
4	Spacer	7.2	Gearbox housing	9.1	Upper chainguide	12	Bracket chainbag	16	Foam stopper	20	Control cable	23	Dead end block





Prolyte B.V.  
Industriepark 9  
9351 PA Leek

**EC DECLARATION OF CONFORMITY**  
**in accordance with Machinery Directive 2006/42/EC (Appendix II A)**

We,

Prolyte B.V.  
Industriepark 9  
9351 PA Leek

hereby declare, that the design, construction and commercialized execution of the below mentioned machine complies with the essential health and safety requirements of the EC Machinery Directive. The validity of this declaration will cease in case of any modification or supplement not being agreed with us previously.  
Furthermore, validity of this declaration will cease in case that the machine will not be operated correctly and in accordance with the operating instructions and/or not be inspected regularly.

Machine description:

Electric Chain Hoist Nero series  
PNE-2000DC-XXXX  
PNE-2000LV-XXXX  
PNE-1000DC-XXXX  
PNE-1000LV-XXXX  
PNE-500DC-XXXX  
PNE-500LV-XXXX  
PNE-250DC-XXXX  
PNE-250LV-XXXX

Capacity: 250 - 2000kg

Serial number:

Serial numbers for the individual units are recorded

Relevant EC directives:

EC Machine directive 2006/42/EC  
Electromagnetic Compatibility Directive 2014/30/EC

Transposed harmonized  
standards in particular:

EN 12100: 2010  
EN 818-7: 2002 + A1: 2008  
EN 14492-2: 2008  
UNI EN 14492-2

And that the following standards and technical  
Specifications have been applied:

EN-17206 – Entertainment technology - Machinery for stages and other  
production areas - Safety requirements and inspections

Authorized representative for technical data:

Prolyte BV, Industriepark 9, 9351 PA, Leek, The Netherlands  
[www.prolyte.com](http://www.prolyte.com)

Date of signing:

17-09-2022

Signed by:

Frantisek Zykan  
Director

EC DECLARATION OF CONFORMITY  
in accordance with Machinery Directive 2006/42/EC (Appendix II A)



## Prolyft Service Points

For our Service Points you can refer to this list or check our website: [www.prolyte.com/dealer-network](http://www.prolyte.com/dealer-network)

### **Finland**

#### **Oy Aku's Factory Ltd**

Address: Aurinkokuja 9, FI-33420

Tampere

Phone number: +358 (0)34108800

Website: [www.akuntehdas.fi](http://www.akuntehdas.fi)

### **Netherlands, The**

#### **Rolight**

Address: Josink Kolkweg 10

7545 PR Enschede

Phone number: +31 (0) 53 432 06 44

Website: [www.rolight.nl](http://www.rolight.nl)

### **Sweden**

#### **Bellalite AB**

Address: Mörners väg 122,

352 46 Växjö

Phone number: +46 10 470 02 00

Website: [www.bellalite.se](http://www.bellalite.se)

### **Finland**

#### **Helsinki rigging**

Address: Lämmittäjänkatu 4, 00880

Helsinki

Phone number: +358 40 8445222

Website: [www.helsinkiriggingcompany.fi](http://www.helsinkiriggingcompany.fi)

### **New Zealand**

#### **Metro Productions New Zealand**

Address: 41 Percy Cameron Street

Lower Hutt 5019

Phone number: +64 4-499 2226

Website: [www.metro.net.nz](http://www.metro.net.nz)

### **Taiwan**

#### **Starship engineering Co. Ltd**

Address: 33-3 Lane 46 Fong Jiang Road

Phone number: +886 2 2900 9898

Website: [www.ezstage.com.tw](http://www.ezstage.com.tw)

### **France**

#### **Expelec**

Address: 167 Rue des Peupliers, 74330

Epagny Metz-Tessy

Phone number: +33 4 50 60 80 20

Website: [www.market.site-expelec.fr](http://www.market.site-expelec.fr)

### **Norway**

#### **Rubicon AS**

Address: Orstadvengen 110,

4353 Klepp Stasjon

Phone number: +47 51 60 21 50

Website: [www.helsinkiriggingcompany.fi](http://www.helsinkiriggingcompany.fi)

### **Türkiye**

#### **Focus**

Address: Cendere Caddesi No:27,

34408 Kağıthane/İstanbul

Phone number: +90 212 321 6756

Website: [www.focus.com.tr](http://www.focus.com.tr)

### **Korea, South**

#### **Tongsuh Technology Co., Ltd**

Address: No 2001 Bldg B, Woolim Blue9

Biz Center 240-21

Yeomchang-dong, Gangseo-gu, Seoul

Phone number: +82-(0)2-2093-1003

Website: [www.tongsuhtech.com](http://www.tongsuhtech.com)

### **Poland**

#### **Prolight. Sp. z o.o. light Effect**

Address: 3 Maja 183, 05-800

Pruszków

Phone number: +48 22 648 04 07

Website: [www.prolight.com.pl](http://www.prolight.com.pl)

### **United Arab Emirates**

#### **Provision AVL General Trading LLC**

Address: X5P8+H25 - Dubai Investments

Park - Dubai

Phone number: +971 4 380 5656

Website: [www.provisionavl.com](http://www.provisionavl.com)

### **Latvia**

#### **PRO 1 STAGE**

Address: Mellužu iela 13-5, Kurzemes rajons,

Rīga, LV-1067

Phone number: +371 67 441 331

Website: [www.stage.lv](http://www.stage.lv)

### **Singapore**

#### **Loud Technologies Asia**

Address: 50 Serangoon North Ave 4,

#07-03 First Centre,

Singapore 555856

Phone number: +65 6483 5110

Website: [www.loudtechnologiesasia.com](http://www.loudtechnologiesasia.com)

### **United Kindom**

#### **Hawthorn Theatrical Ltd**

Address: Crown Business Park, Old Dalby,

Melton Mowbray, Leicestershire

Phone number: +44 (0) 1664 821 111

Website: [hire.hawthorn.biz](http://hire.hawthorn.biz)

### **Netherlands, The**

#### **Relight**

Address: JHoge Bergen 2, 4704 RH

Roosendaal

Phone number: +31 (0) 165 558 337

Website: [www.religh.nl](http://www.religh.nl)



NERO Hoists Manual v1.0