

CE

Bowl carriage
Bowl lifter
MAC/LIFT/2 - MAC/LIFT/3

Table of contents:

CE – DECLARATION OF CONFORMITY	4
INTRODUCTION.....	6
1. PROTECTION FROM ACCIDENTS	6
2. MAC/LIFT CHARACTERISTICS	7
2.1. INTENDED USE	7
2.2. GENERAL DATA	7
2.3. MACHINE CLEANING.....	8
Before cleaning the machine, lower the frame, unclip the bowl, press the STOP button (6) on the control panel. Do not connect the charger plug during cleaning.	8
3. FIXING THE BOWL TO THE CARRIAGE	9
4. DISCONNECTING THE BOWL FROM THE CARRIAGE	12
5. CARRIAGE OPERATION CONTROL	13
6. Battery charging cable and ch.	14
7. CARRIAGE DESIGN, MAIN UNITS	15
7.1. LIFTING DRIVE	16
7.2. TOP ROLLER.....	18
7.3. CARRIAGE	19
7.4. BOWL FRAME	20
7.5. Electrical parts list	22
8. ELECTRICAL DIAGRAM	25

Thank you for your trust and choosing the product of 'MACPAN SNC'. We would like to assure you that we offer high quality products based on innovative structural and technological solutions. With the newest manufacturing method applied, our products are distinguished with high quality recognized at the European market. Owing to our many years of experience and knowledge on recent trends and technologies, we are able to meet expectations of our customers.

We sell products of excellent quality valued for their functionality and style.

Products marked with **CE** mark are compliant with PN and declarations of conformity of EC directives.

Before starting to operate the machine, please read this manual book documentation and comply with its instructions and operating principles to ensure maximum performance and usability of the device.

CE – DECLARATION OF CONFORMITY

The company:

MACPAN SNC

Declares that the following machine:

Machine	Bowl lifter
Model:	MAC/LIFT
Serial Number

Build to lift up planetary mixers bowls and rotate it in order to pour out the product into another container / hopper ect.

is compliant with the relative provisions foreseen by

• Directive 2006/42/CE	Machines directive
• Directive 2014/30/EU	Electromagnetic Compatibility
• CE Regulation No. 1935/2004	Materials and articles intended to come into contact with food
• Regulation No. 2023/2006	Good manufacturing practices for materials and articles intendend to come into contact with food.

Materials which have a possibility to contact with food.	
• Stainless steel AISI 304	• Additional information There are no machine parts which have a direct contact with food



INTRODUCTION

Before starting the machine for the first time, please read this manual carefully. This will provide you with knowledge necessary for appropriate operation of the machine. In order to ensure proper maintenance of the machine mechanisms and electric parts, it is necessary to use safety covers attached to the machine and operate it in accordance with its intended use.

Make sure that all safety devices are properly installed as described later on in this manual. Should any inconsistencies be detected, please contact immediately the manufacturer or vendor.

This manual constitutes an integral part of the machine and must be available all the time. Therefore, it should be kept in a dry place easily accessed by the operator. It is recommended to put it in a waterproof sleeve to protect it from dust, humidity and light. This will help to maintain the manual in proper condition for the entire service life of the machine.

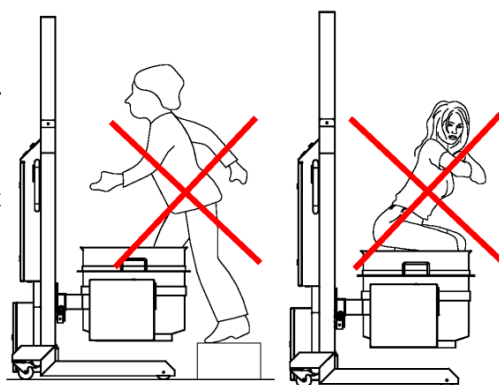
The manual reflects the state of the machine at the time of launching it on the market, and may not include subsequent modifications of the structure resulting from new experiences. The manufacturer reserves its right to implement structural changes without further notice to the user.

The manufacturer does not assume liability for a product which has been modified by its user without the manufacturer's consent.

1. PROTECTION FROM ACCIDENTS

Specific recommendations and guidelines for a bowl carriage operator:

- 1.1. Do not use a load greater than that recommended by the manufacturer.
- 1.2. Do not walk into the machine bowl.
- 1.3. Do not seat in the machine bowl.
- 1.4. Do not stay under the bowl mounted in the machine.
- 1.5. Always lock the rear wheels when lifting or lowering the bowl.
- 1.6. Do not stay under the bowl when moving the machine.
- 1.7. When moving the machine, disconnect the power cable!



- 1.9. The machine complies with generally accepted regulations. The level of continuous sound pressure is below 70 dB(A). This result was obtained with proper selection and component design.

2. **CHARACTERISTICS**

2.1. **INTENDED USE**

The carriage is designed for moving and lifting pastry bowls to a desired height and pouring a product contained in the bowl. Depending on the model, the machine lifts the bowl from a transport carriage or directly from a pastry mixer. After lifting the bowl to a desired height, the operator can pour its content, e.g. to a pastry squeezer or other technological devices. Electric drives are responsible for lifting and pouring operations. The machine is of a mobile design, therefore the drives are supplied with batteries.

THE MACHINES MUST NOT BE USED FOR PURPOSES OTHER THAN THAT SPECIFIED ABOVE.

Application must comply with machine manufacturer's recommendations, otherwise the manufacturer shall not be liable for any damage to persons, animals or property.

2.2. **GENERAL DATA**

- Lifting time: approx. 15 seconds,
- Installed power: 1.0 kW,
- Loading supply: 230V,
- Maximum weight of the full bowl: 185 kg,
- Carriage weight (depending on the model): around 190 kg
- Operating time per charge: up to 6 - 8 hours in normal environmental conditions

The main components of the machine are made of stainless steel.

The wheels and battery power supply – ensure mobility of the machine during operation.

The carriage is suitable for a bowl delivered by the Customer.

2.3. MACHINE CLEANING



The machine must be kept in perfect hygienic condition. Thoroughly washed at the end of work.

Use compressed air or moist cloths for external cleaning of the machine. Avoid using running water as well as prevent water from getting into electrical parts.

If necessary, use a sponge or soft cloth. Do not use aggressive acids or chemicals that can damage the surface of the truck.

Detergents intended for disinfection and cleaning of machines in the food industry are allowed.

Use only compressed air for internal cleaning of the machine.

Open the electrical box doors after each cleaning for checking and drying with compressed air.

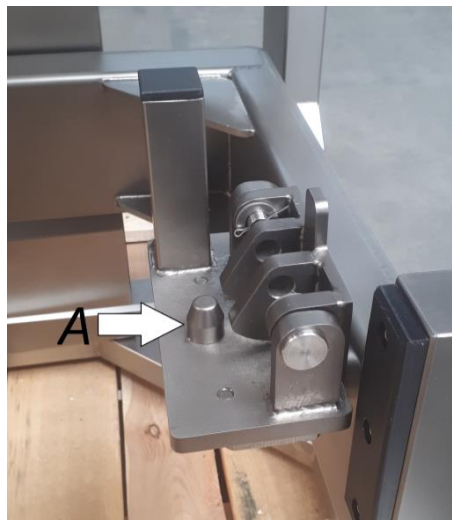
Attention:

Before cleaning the machine, lower the frame, unclip the bowl, press the STOP button (6) on the control panel. Do not connect the charger plug during cleaning.

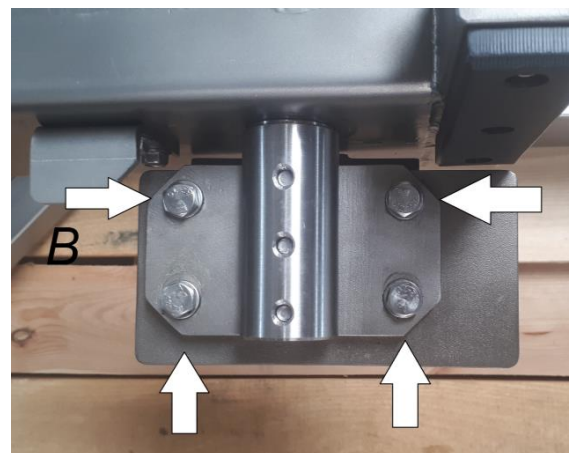
3. *FIXING THE BOWL TO THE CARRIAGE*

Before start to work with delivered lifter it's completely necessary to check the proper adjustment between the bowl ring and the lifter clamps. It's should be checked with compare to the instruction below.

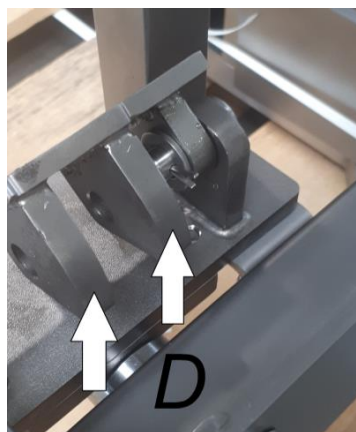
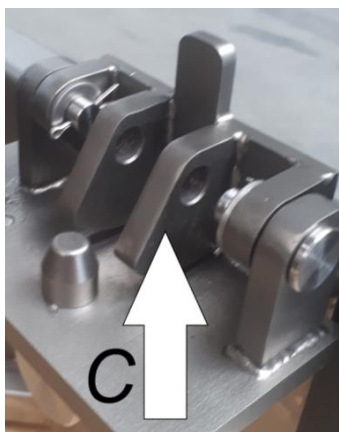
1. *Put the bowl on the clamps*



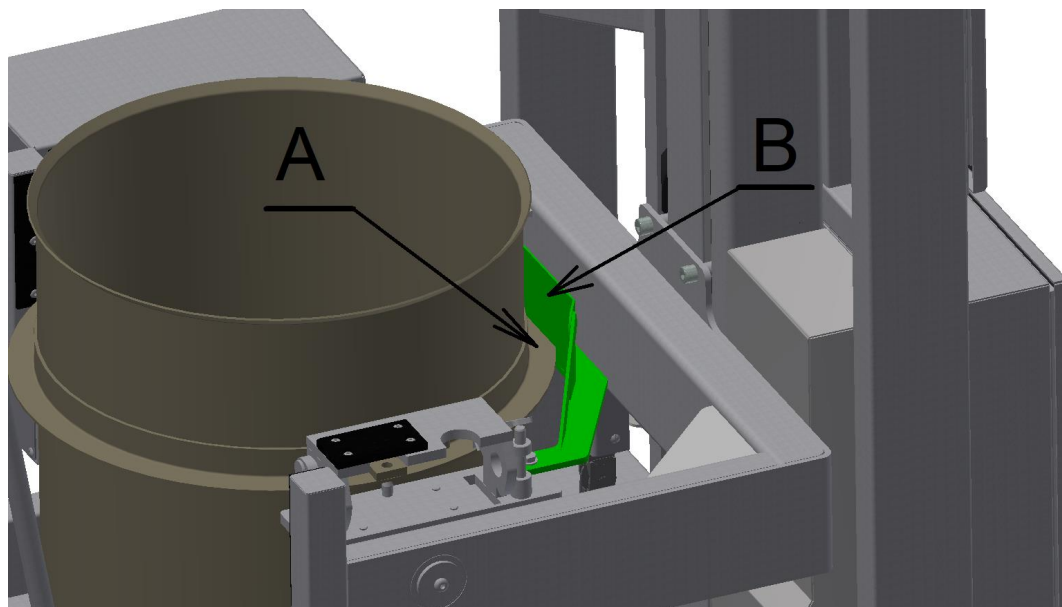
2. *If the spacing of extracting pins "A" does not allow an easy placement of the bowl, loosen the screws marked "B" (on both holders). Next, place the bowl again onto pins "A". Plates with pins "A" will move towards / offwards to adjust proper distance to bowl coupling. Fasten the screws "B" in this position with the bowl on (do not remove a bowl while fastening the screws).*



3. *If the locking clamps "C" do not return to initial settings (before bowl coupling) they should be slightly polished up in places marked "D".*

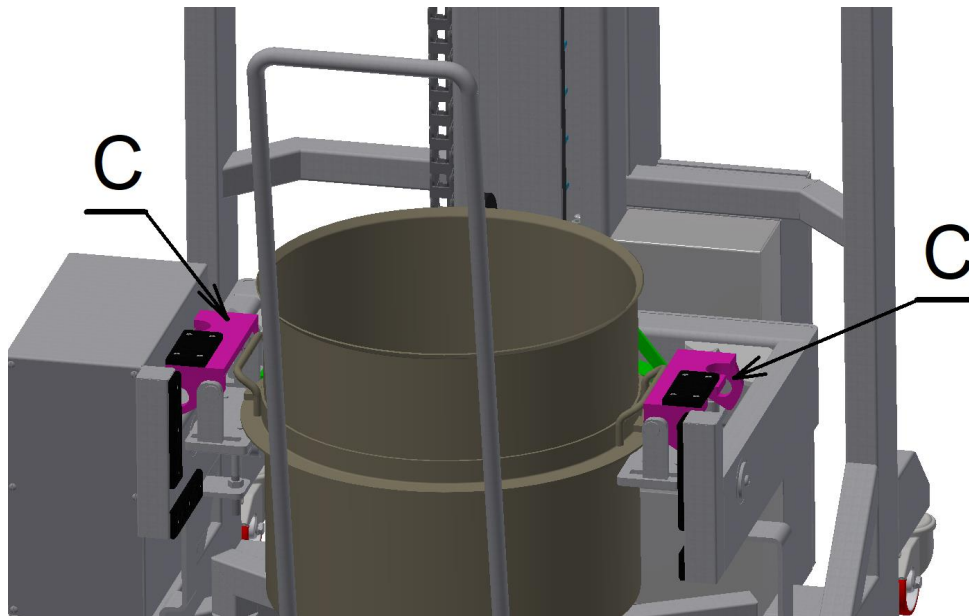


The bowl fixing system ensures quick and safe installation of the bowl in the lift holder. This reduces handling procedures to minimum and guarantees safe operation.

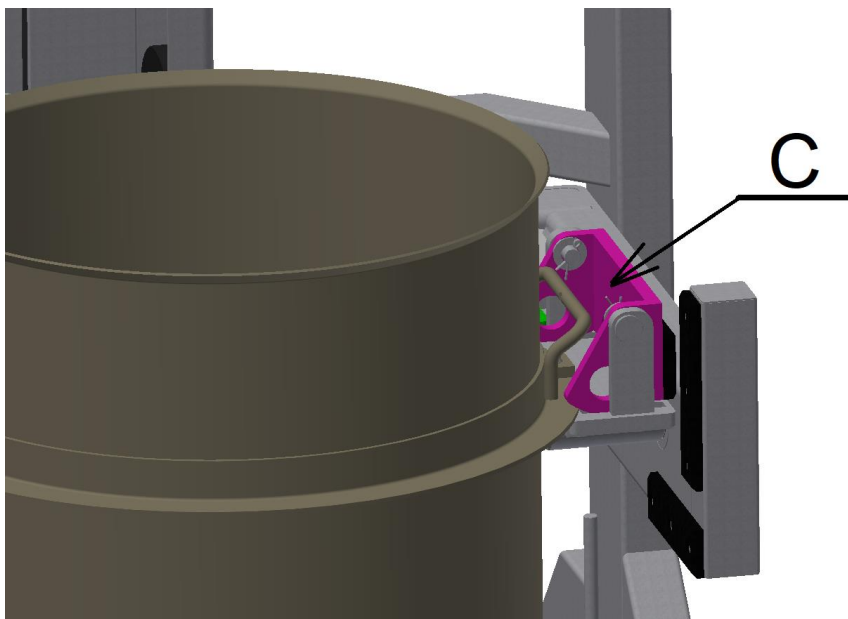


Lower the carriage all the way to the bottom position, then move the transport carriage so that the straight piece of the bowl ring (A) touches the rest plate (B). Rest plate B is not use by any models – depends on the model.

After lowering the bowl holder, both locks (C) should be positioned as shown below.



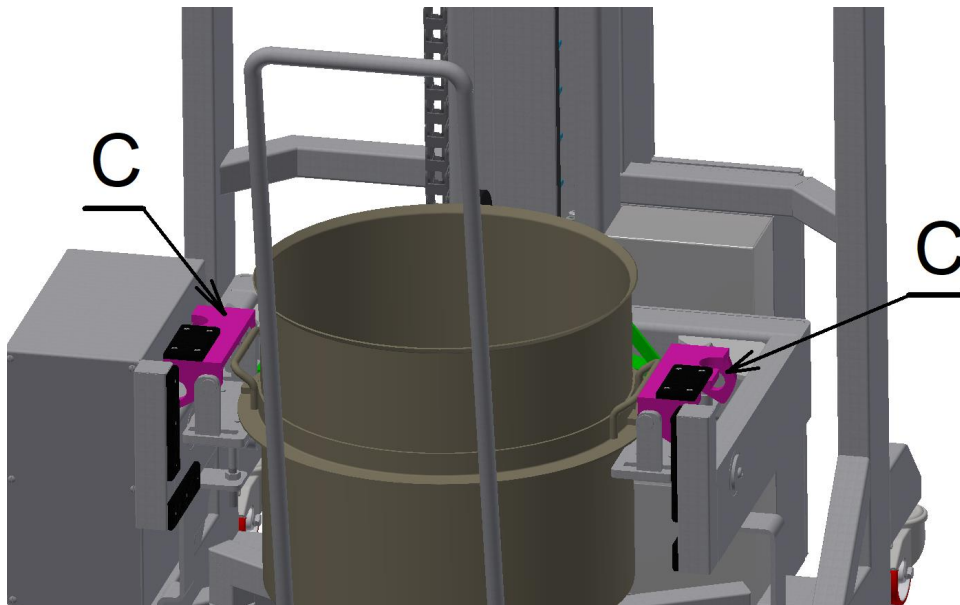
After lifting the bowl from the transport carriage, the locks (C) will return to the initial position and will fix the bowl to the carriage.



Such mounted bowl can be lifted and tilted. It is recommended to check whether the bowl is properly 'locked' before each tilting.

4. *DISCONNECTING THE BOWL FROM THE CARRIAGE*

When the bowl is in a vertical position and has not been seated in any transport carriage yet (it is suspended from the carriage arms), move the carriage to the bowl and lower the bowl so that it lands on the carriage.



The locks will release automatically and the released bowl will land on the transportation carriage. At the same time, after releasing the bowl, the carriage will be prepared for installation of another bowl.

By some models special clamps protection sensors are used. Sensors check if bowl is always placed right and protected in a right way by clamps. If clamps are not closed fully its possible to lift the bowl but is not possible to rotate / tipp it.

5. *CARRIAGE OPERATION CONTROL*

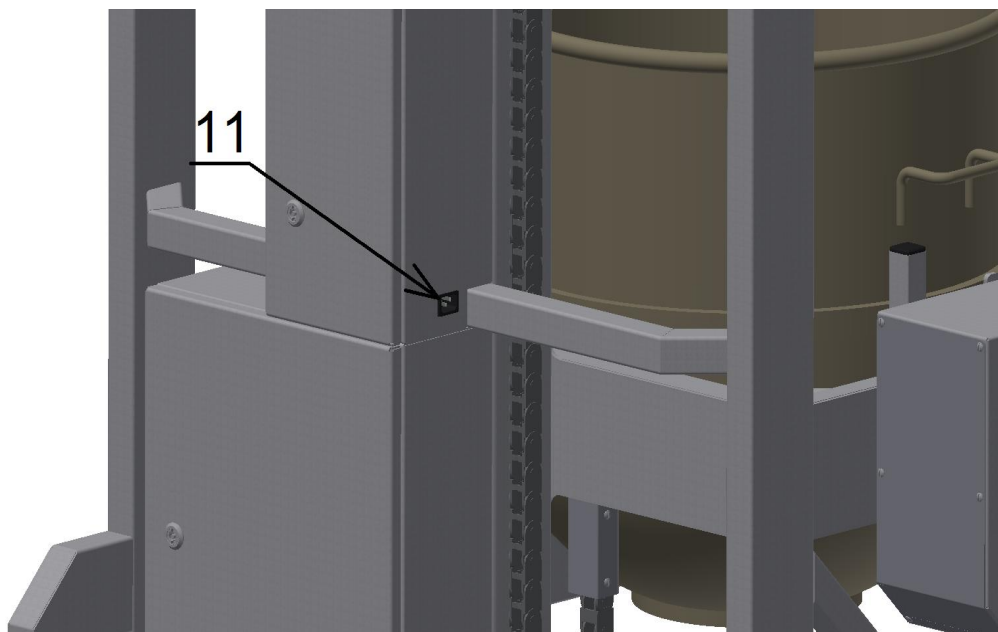


In order to start the carriage, check whether the safety switch (1) is pressed. If yes, pull it back. Turn the main switch (2) on – press START. The indicator light (7) will then turn on. Press and hold the side switch (9) and select the up arrow ↑ or the down arrow ↓ on the lifting switch (3 or 5) or tilting switch (8 or 4) as appropriate. Select ↑ of the lifting switch (3) to lift the carriage arms upwards. Select ↓ on the switch (5) to lower the arms (bowl holders). Select ↑ on the tilting switch (8) to slowly rotate the bowl (pour its content); select ↓ on the switch (4) to restore the initial position of the bowl. Due to safety reasons, the switches can be used only when the side switch (9) is pressed.

By special model with extra clamps protection / sensors light no 7 shows also a correct bowl placing. If lamp No 7 is not On its needed to check if sensors by the bowl clamps are clean and clamps are closed right.

6. BATTERY CHARGING CABLE AND CH.

During operation, the battery level gradually decreases. The current battery charge can be seen on the tester (6) on the desktop. The actual charge is only indicated when the truck is not doing any work related to moving the bowl.



At the end of work or when the battery charge indicator (6) indicates a low level marked with an orange LED (later red), connect the charging system to the socket (11) located at the bottom of the electric box of the truck and to the 230V 50Hz network. Then turn off the device with the button (2 – press STOP) so that the LED of the button indicating operation is not lit.

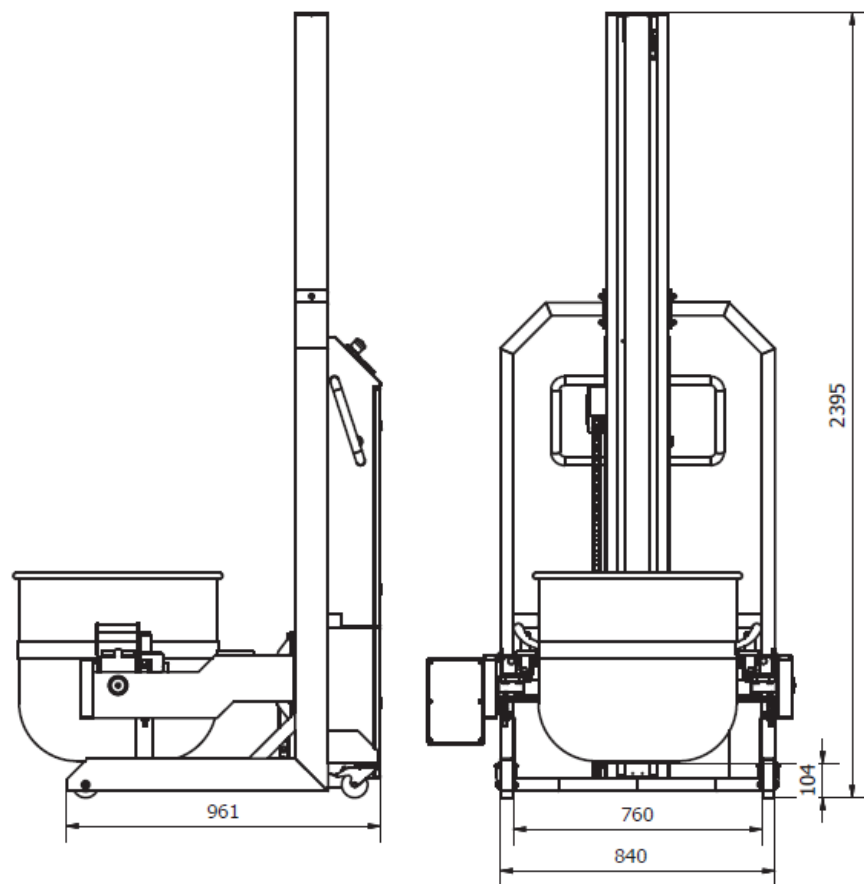
We charge until the indicator on the external charger reaches 100% and is signaled by the green diode.

The battery charger used does not require an immediate disconnection of the power supply after charging.

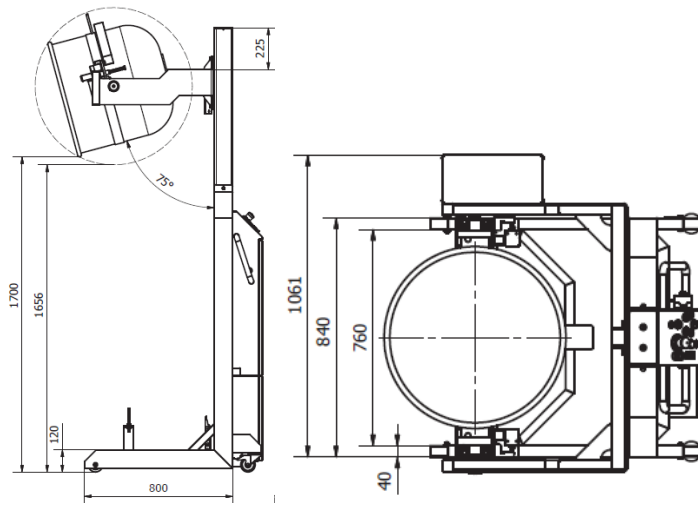
Attention:

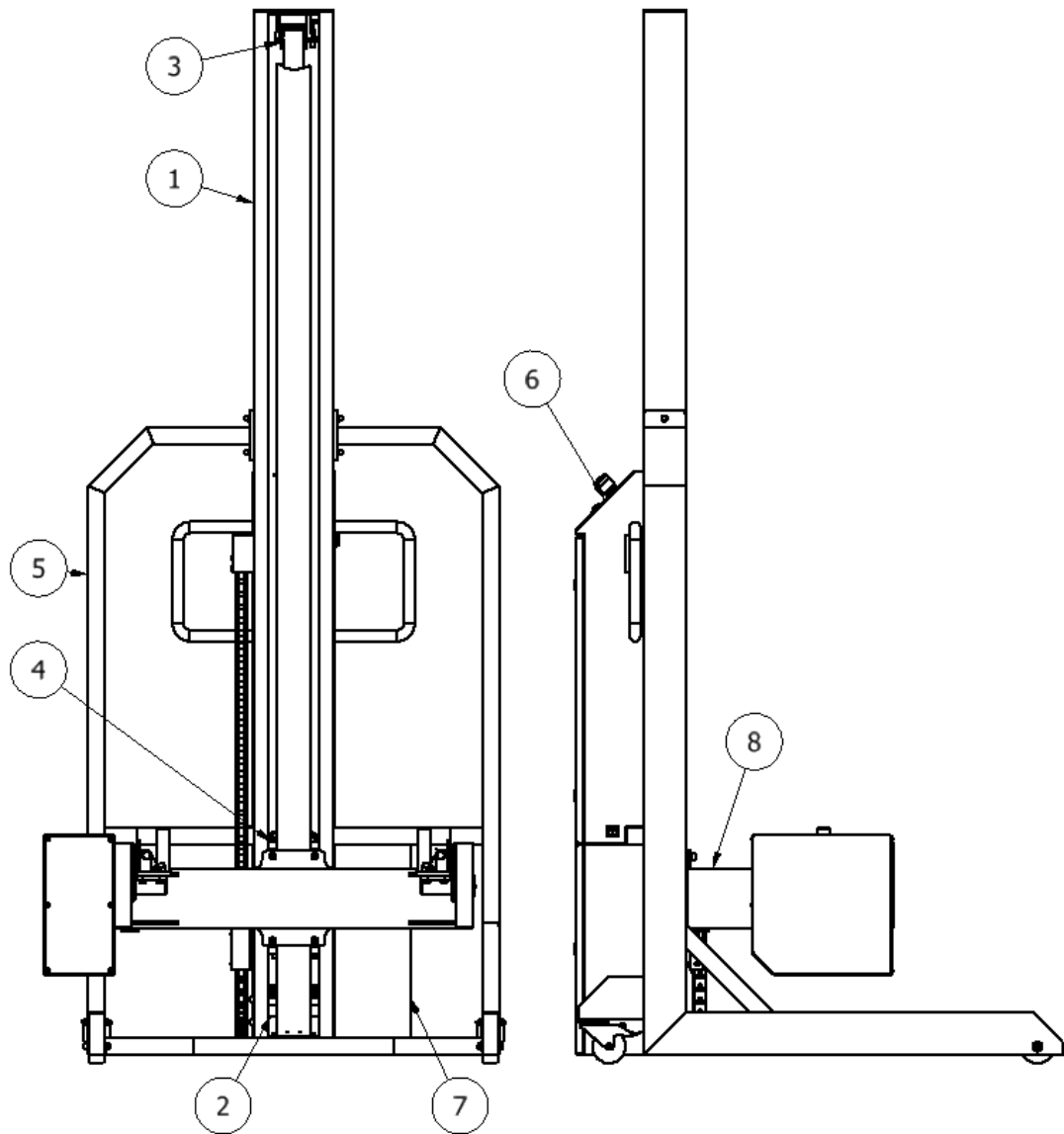
Deep discharge of the battery may damage it or reduce its operating time. Non-compliance with the above recommendations is treated as damage caused by the user and is not covered by the manufacturer's warranty.

7. CARRIAGE DESIGN, MAIN UNITS



Lifter main measurements

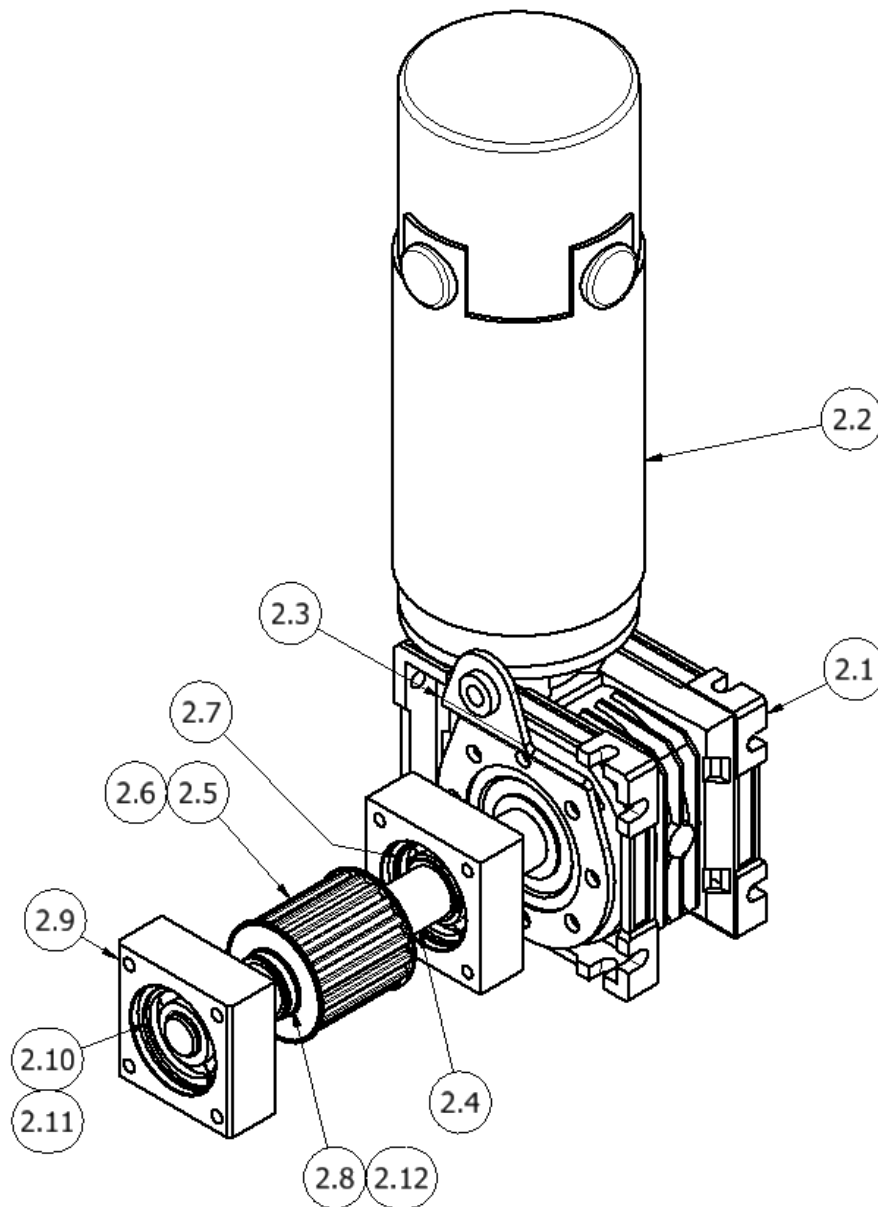




Main units:

- | | |
|------------------|------------------------|
| 1. Pole | 6. Control box |
| 2. Lifting drive | 7. Drive covers |
| 3. Top roller | 8. Bowl frame |
| 4. Carriage | 9. Battery compartment |
| 5. Frame | |

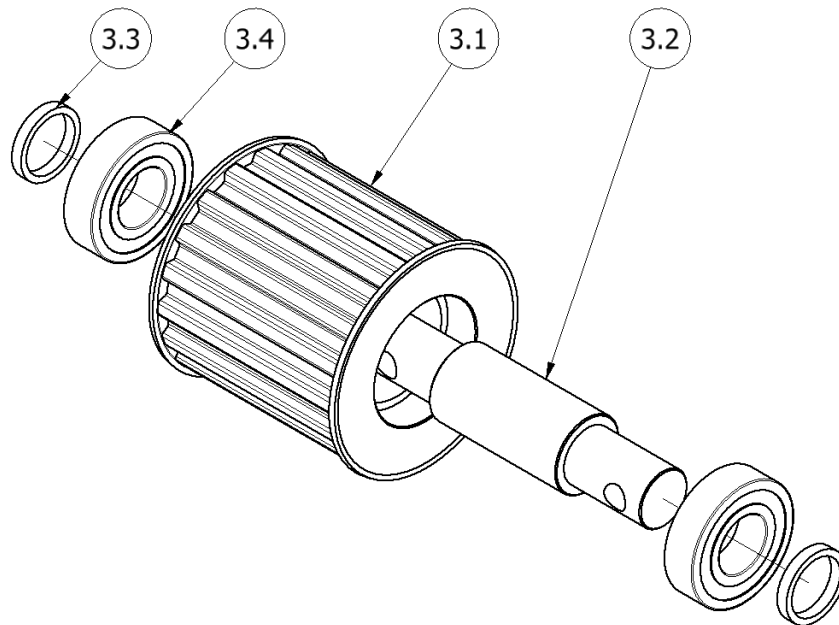
7.1. LIFTING DRIVE



No.	Pcs/machine	Part name	Drawing or index no.
2.1	1	Screw reducer	050 i=100 IEC71 B14
2.2	1	Motor 24V	DC EC600.240 71B14 24VDC BR
2.3	1	Torque arm	HUB-2-02.01.00
2.4	1	Shaft reducer	HUB-2-02.02.00/a
2.5	1	Toothed pulley	HUB-2-02.03.00

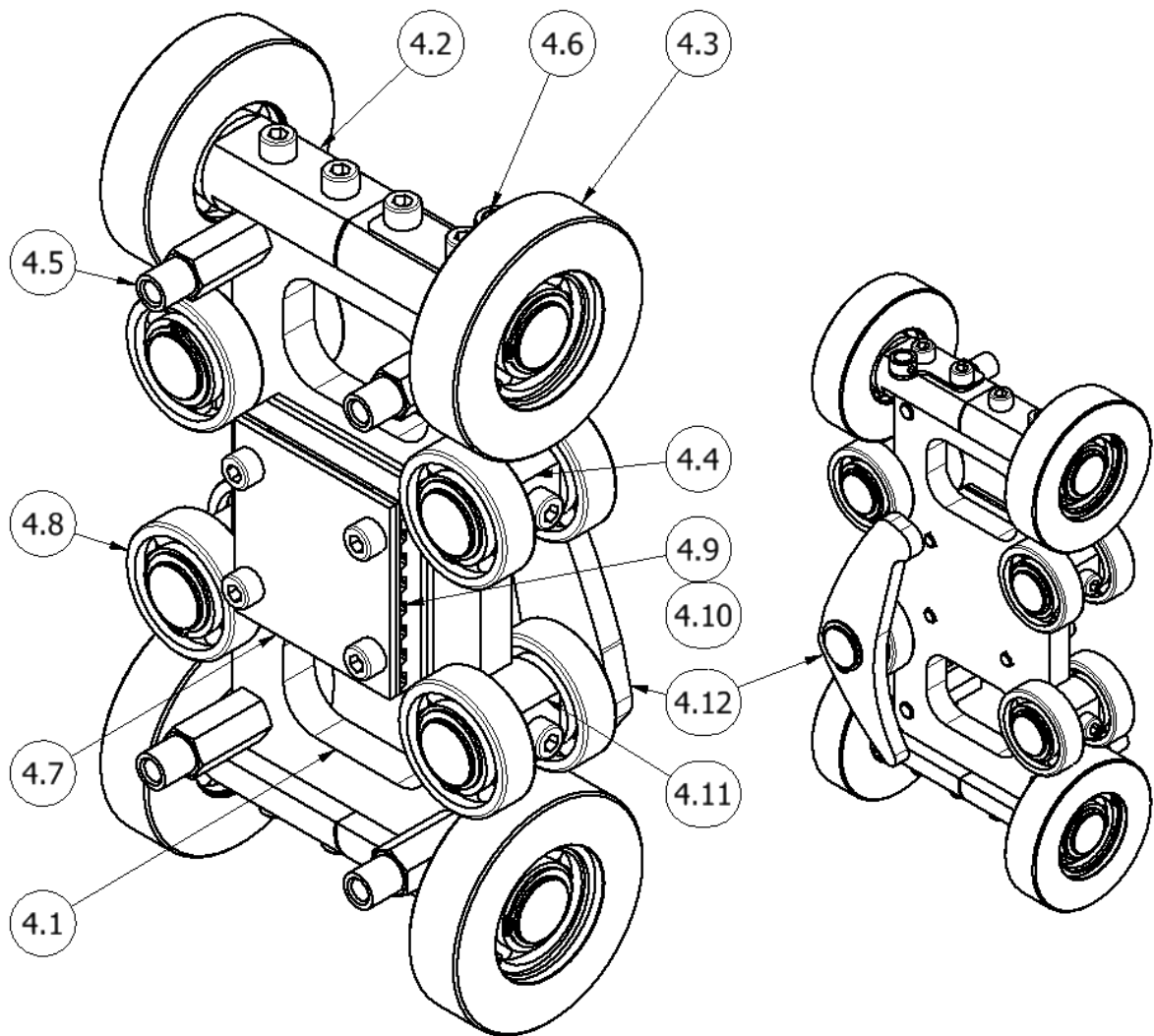
2.6	2	Overrunning clutch	HFL2530
2.7	1	Pumping bearing	6205 ZZ
2.8	2	Roller bearing	WD-1-02.04.00
2.9	2	Bearing housing	HUB-2-02.06.00
2.10	1	Roller bearing	6304 ZZ
2.11	4	Stopper ring	W 52 DIN 471
2.12	3	Stopper ring	Z 25 DIN 471

7.2. TOP ROLLER



No.	Pcs/machine	Part name	Drawing or index no.
3.1	1	Retard roller	HUB-2-03.01.00/a
3.2	1	Retard roller axle	HUB-2-03.02.00/a
3.3	2	Spacer ring	HUB-2-03.03.00
3.4	2	Ball bearing	6002 RS

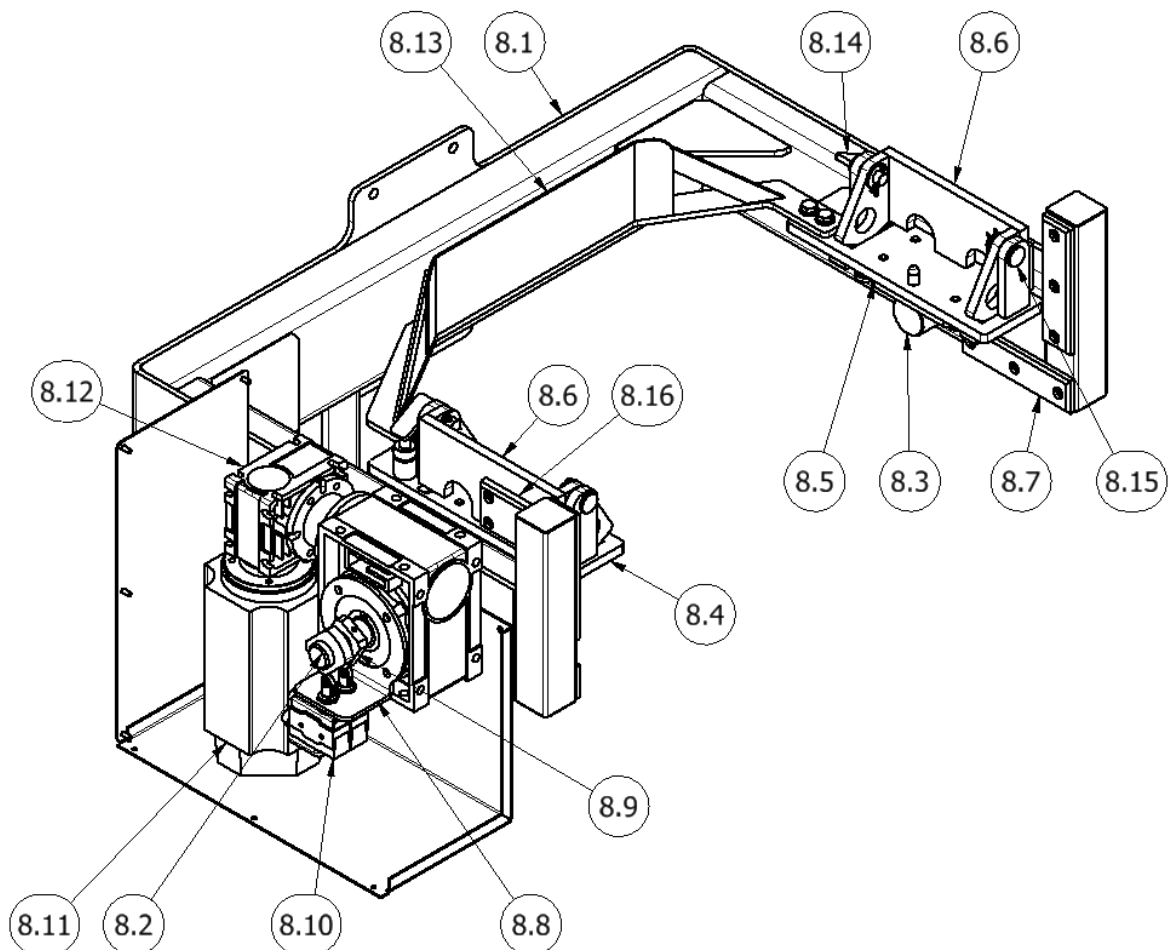
7.3. CARRIAGE



No.	Pcs/machine	Part name	Drawing or index no.
4.1	1	Main plate	HUB-3-HOB140-04.01.00
4.2	4	Bearing pivot	HUB-3-HOB140-04.02.00
4.3	4	Roller	HUB-2A-04.03.00
4.4	3	Bearing axle	HUB-3-HOB140-04.04.00
4.5	4	Special bolt	HUB-2A-04.05.00
4.6	1	Neodymium magnet	MW 10x8
4.7	3	Belt protection plate	HUB-2-04.07.00

4.8	12	Bearing	6205 ZZ
4.9	2	Clamping plate AT10 50	
4.10	1	Belt AT10, width 50 mm, open length 3690 mm	
4.11	1	Bearing and cam axle	HUB-3-HOB140-04.12.00
4.12	1	Cam	HUB-2A-04.11.00

7.4. BOWL FRAME



No.	Pcs/machine	Part name	Drawing or index no.
8.1	1	Frame	HUB-2CG-08.01.00

8.2	1	Long axle	WD-1-08.02.01
8.3	1	Short axle	WD-1-08.03.01
8.4	1	Left support	HUB-2CG-08.05.00
8.5	1	Right support	HUB-2CG -08.04.00
8.6	2	Bowl lock	HUB-2CG -08.06.00
8.7	4	Lining	HUB-3-HOB140-08.00.04
8.8	1	Limit sensor holder	WD-1-08.00.06
8.9	2	Cam	WD-1-08.02.03
8.10	1	Micro switch with roller	D5020
8.11	1	Motor 24V 190W QS7 IEC63 B14	
8.12	1	Double screw reducer	030+050 i=2000
8.13	1	Rest plate	HUB-2CG-08.07.00
8.14	2	Connector	HUB-2CG-08.09.00
8.15	2	Pin	WD-1-08.00.01
8.16	2	Lining	HUB-2C-08.00.05

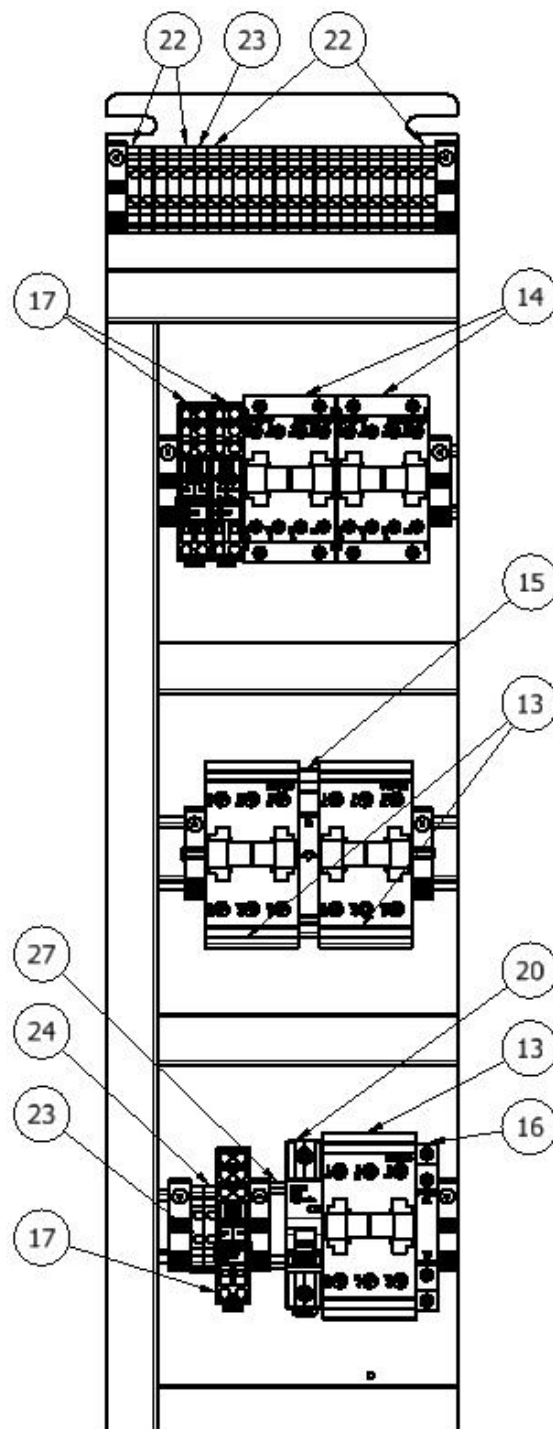
7.5. LIST OF ELETRICAL PARTS

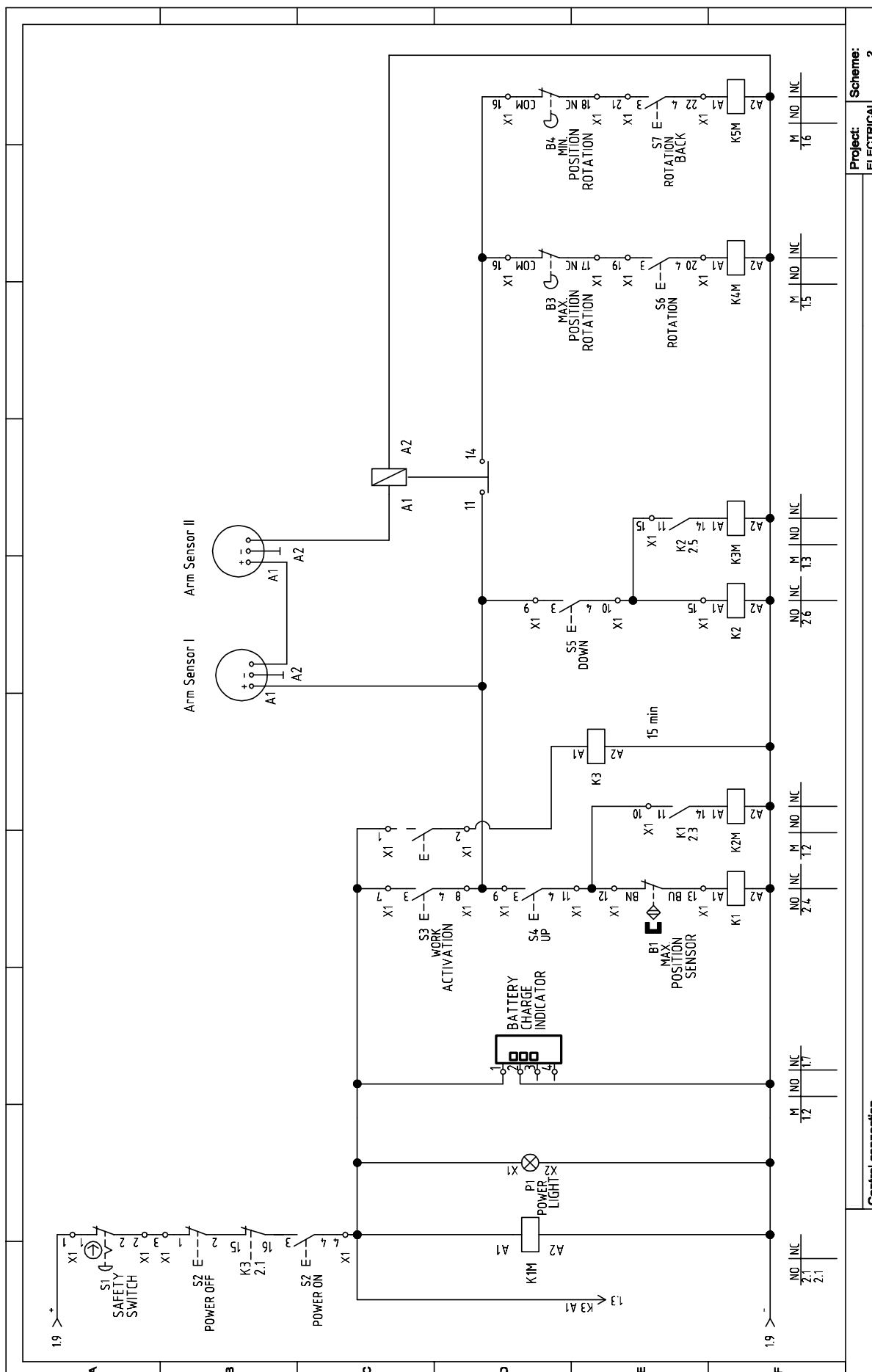
LP	pcs pro machine	Part name	Nr	Symbol on the diagram
1.	1	Magnetic sensor	SMC-10 S	KR1
2.	1	Motor 800W 24VDC	EC600.240 B12 24VDC	M1
3.		Motor 180W 24VDC	EC180.240 B12 24VDC	M2
4.	4	Button drive with automatic return	M22-D-X 216602	
5.	1	Button drive with automatic return	M22-D-G 216602	
6.	4	Button insert 22mm black	M22-XD-S-X7 218173	
7.	1	Button drive double green / red / START-STOP / with backlight automatically	M22-DDL-GR-GB1/GB0 216702	S2
8.	7	Fastening connector	M22-A	
9.	5	Protective membrane for buttons and lights	M22-T-D 216395	
10.	1	Protective membrane for double buttons	M22-T-DD 216396	
11.	1	Battery charge panel indicator	824.1.24.008 24VDC	Bauser
12.	2	VRLA battery 12V	FG 22703 lub odpowiednik	BAT.1 BAT.2
13.	3	contactor 3 pole 24VDC 38A DIN	BF38 00 D024	K1M, K2M, K3M
14.	2	contactor 3 pole 24VDC 12A DIN	BF12 01 D024	K4M, K5M
15.	1	Mechanical lock	BFX5000	
16.	1	Auxiliary side contact	BFX1211	
17.	2	Electromagnetic relay	HR502CD024	K1, K2, K3
18.	1	Charger	CBC 10	
19.	1	Glass fuse	4A	F2

20.	1	Overcurrent breaker	P1 MB C32	F1
21.	1	Safety button red	M22-PV	
22.	22	Nipple	24G-G4 czerwony	
23.	2	Nipple	24G-G4 czarny	
24.	1	Nipple	24G-G4 biały	
25.	6	CONTACT NO	M22-K10	S3,S4,S5,S6,S7
26.	2	CONTACT NC	M22-K01	S1, S2
27.	1	Socket	ZUG G/B	
28.	2	Rotary switch	D 5020	

Spare parts are delivered only on the basis of an order sent to the manufacturer. Ordering spare parts from the manufacturer ensures that the installed parts are identical to those used in the original machine in terms of their structure and technology. Only original spare parts guarantee continuous functionality of the machine.

Please indicate the type of the machine and its serial number when ordering spare parts from the manufacturer. The above data can be found in this manual and on the nameplate attached to the machine.





Project: ELECTRICAL
Scheme: 2

Control connection

