

# COSBER



## INSTALLATION MANUAL

### TRUCK Play Detector

COSBER C-PD Series

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# 1 Statement

## 1.1 Important notes

- First, thank you for purchasing this product.
- This manual is a necessary accompaniment to the product. To use the equipment more effectively, users should read the instructions carefully before installation and reference it properly for further use and maintenance.
- The product specifications and information mentioned in the instructions are only for reference only, content may be updated regularly, and without further notice.
- This product should only be used for its specifically designed purposes and should never be used for other purposes; the manufacturer is not responsible for any damage caused due to the improper use of this product.
- Please strictly abide by the “guidelines” and “notice” during operation when using this product and remember that regular maintenance for the equipment is required.
- This product should only be operated and used by specially trained and qualified personnel.
- Any personnel not belonging to our company are prohibited from performing any disassembly or modification of the product or from using it for other purposes beyond the detection function of the device itself without permission.
- In cases of product damage caused by human factors or force majeure (such as earthquakes and floods, etc.), the user shall take timely and effective remedial measures and inform the company as soon as possible.


## 1.2 Security tips




You must read the instructions carefully before starting, debugging, connecting, or operating the device, and always pay close attention to these instructions.



**NOTIFY USERS OR NEARBY PERSONS OF ANY DANGEROUS INFORMATION, AND ALWAYS INFORM OF ANY DANGEROUS CONSEQUENCES AND PREVENTIVE MEASURES.**

**WARNING!**

Reminder	Possibility of occurrence	Risk severity
 <b>DANGER!</b>	Direct danger	Personal injury and death

 <b>WARNING!</b>	Danger	Personal injury
 <b>NOTICE!</b>	Important notice	Minor injury
 <b>ATTENTION!</b>	Note	General notice or information

### 1.3 Description of safety sign

Be careful of electric shock.



### 1.4 Tips for product setup

All necessary configuration settings and sensor calibrations should only be conducted by COSBER technical service personnel or by COSBER approved partners.

### 1.5 Safety regulations for handling hydraulic oil



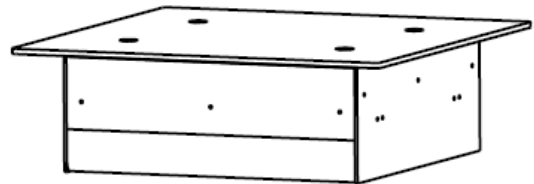
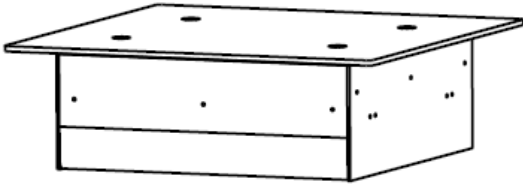
**WARNING!**

- **NEUTRALIZE SPILLED HYDRAULIC OIL WITH A BINDING AGENT.**
- **REMOVE CONTAMINATED, SOAKED CLOTHING IMMEDIATELY.**
- **IF INHALED: SEEK MEDICAL ATTENTION IF SYMPTOMS OCCUR.**
- **IF SKIN CONTACT OCCURS: IMMEDIATELY WASH SKIN WITH SOAP AND WATER. IF SKIN IRRITATION PERSISTS, CONSULT A DOCTOR.**
- **IF EYE CONTACT OCCURS: RINSE THOROUGHLY WITH PLENTY OF WATER AND CONSULT A DOCTOR.**
- **IF SWALLOWED: DO NOT INDUCE VOMITING. CONSULT A DOCTOR IMMEDIATELY.**

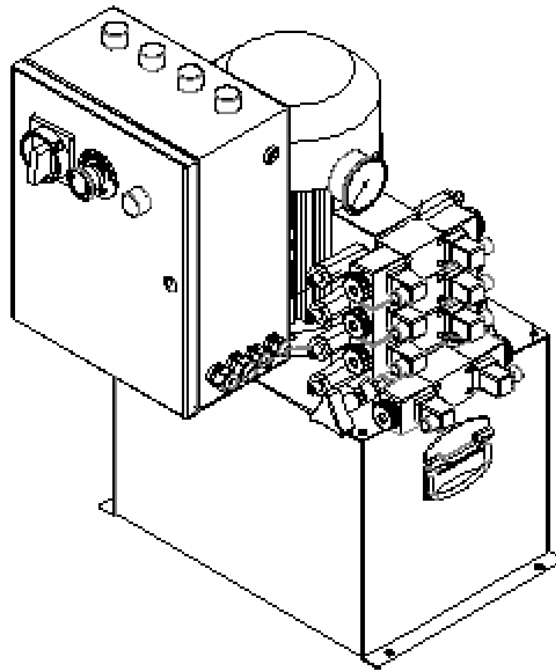
## 2 Preparation

### 2.1 Check the packing list

Play detector including hydraulic cylinders



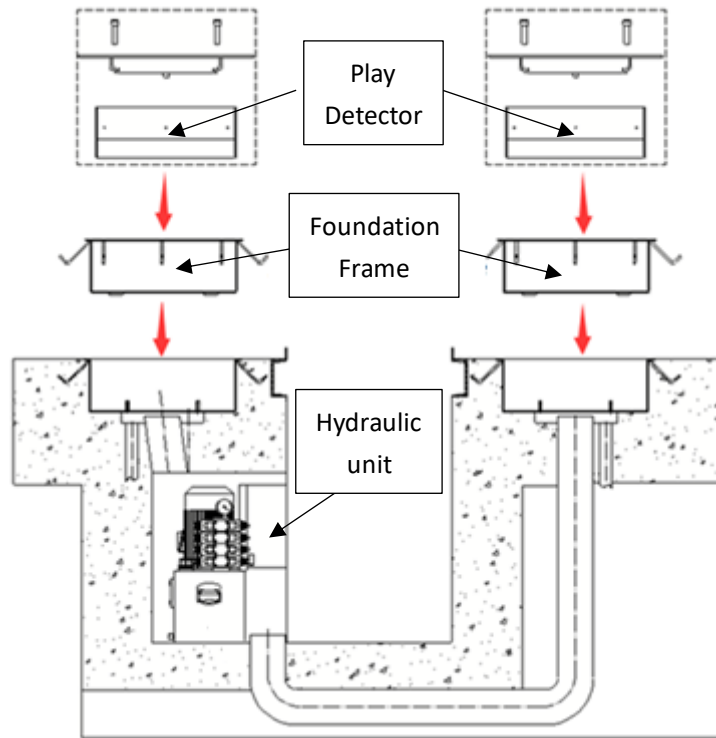
Control unit (including hydraulic unit, control cabinet, remote control)



- Please verify contents according to the packing list
- Please make sure that all the equipment is intact, and the user should take timely and effective remedial measures and notify the Company immediately if there is any damage caused by error or force majeure factors (e.g., earthquakes and floods)

## 3 Installation

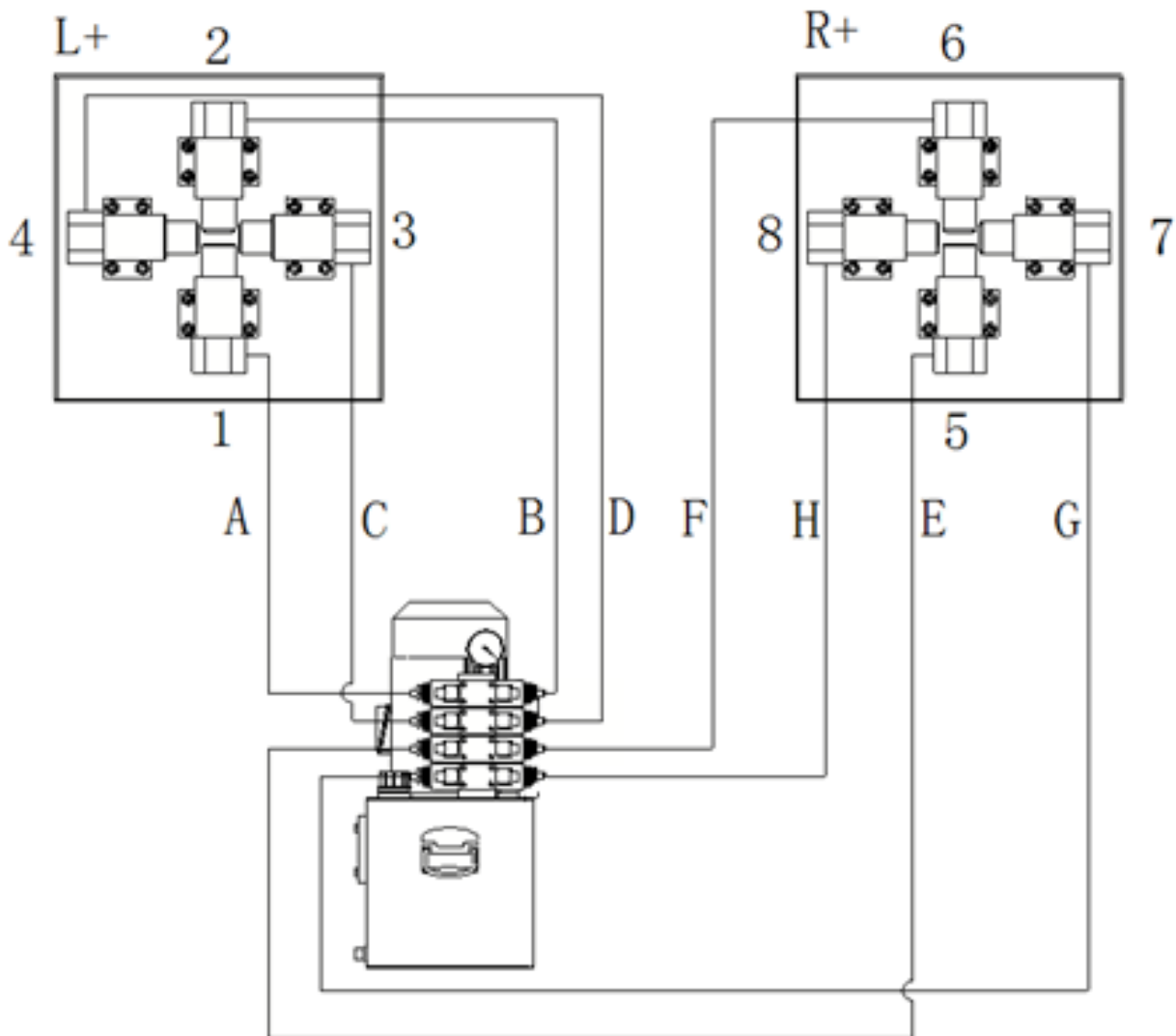
### 3.1 Schematic diagram of installation.



- Before installation, check whether the studs in the foundation frame are in good condition and whether they are screwed smoothly with nuts.

### 3.2 Installation of cables and oil pipes

- Due to the limited space available, insert all the connection into the empty pipe before the equipment is placed into the pit.
- Before installing the hydraulic lines, it's recommended to mark the lines as follows



- Use the threading device to pass the power cable to the hydraulic unit
- Use the threading device to pass the hydraulic lines and signal cables from play detector to hydraulic unit.

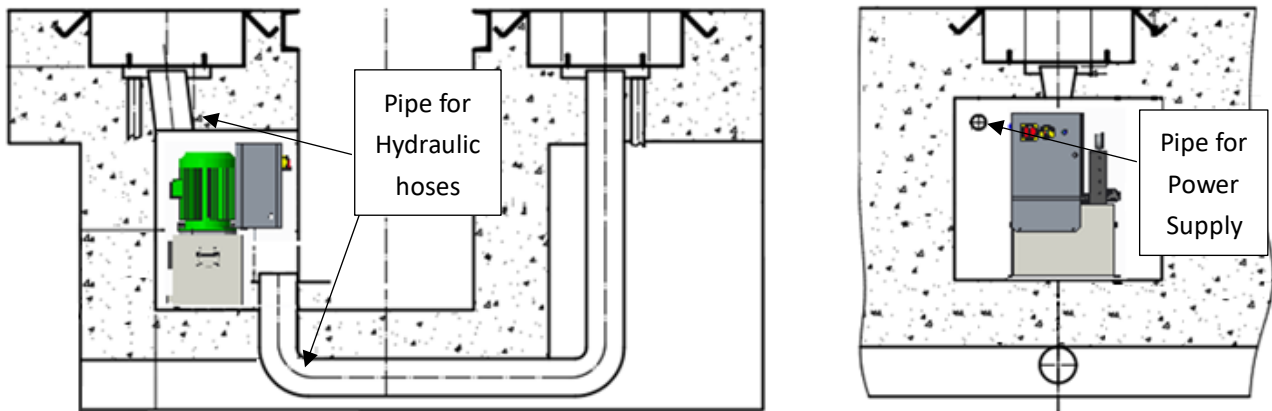
### 3.3 Installation of hydraulic unit



**NOTICE!**

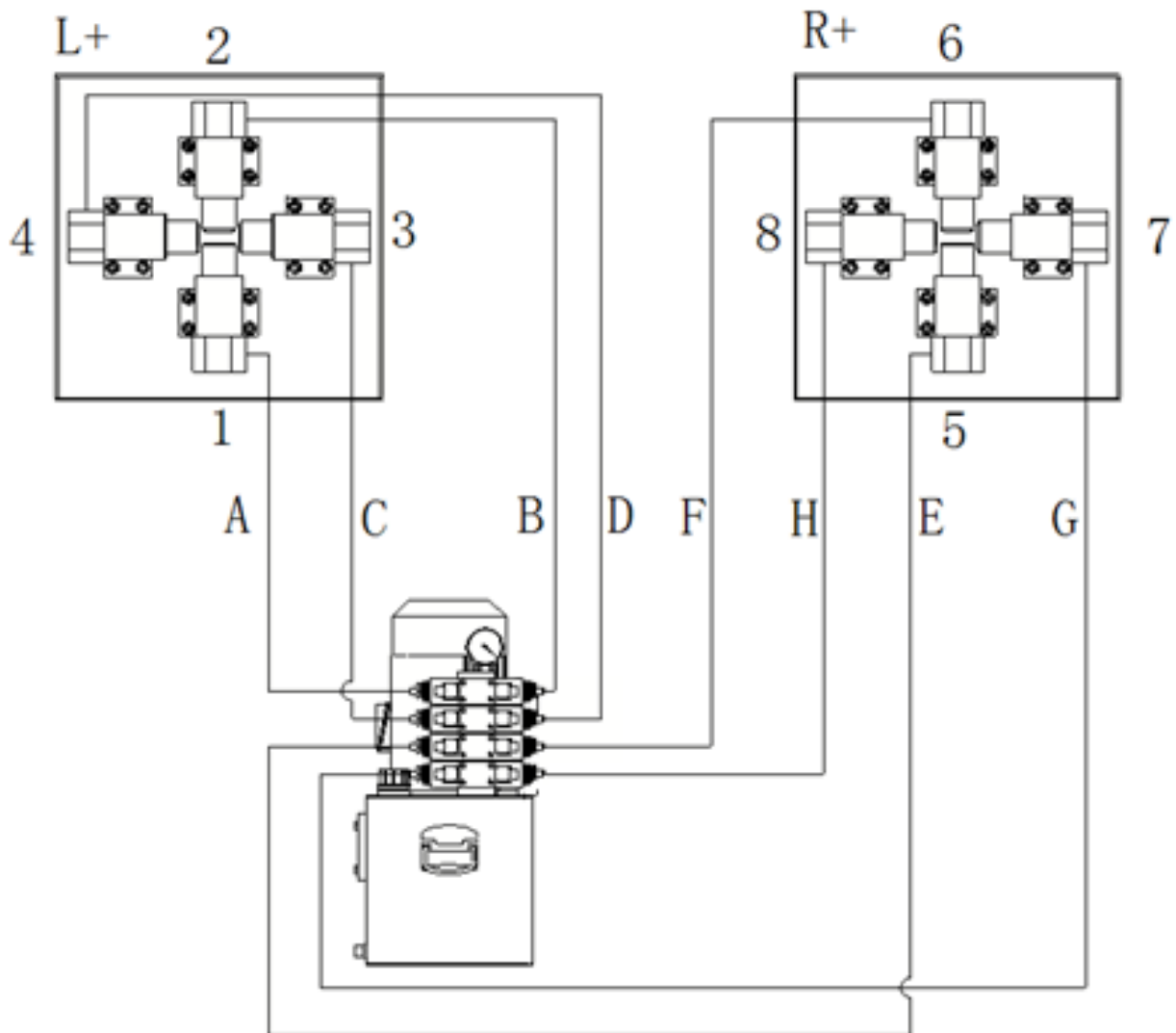
- **DURING DRILLING AND INSTALLATION, THE OPERATOR SHOULD ALWAYS WEAR PROTECTIVE GLASSES AND A DUSTMASK; IF AN ELECTRIC DRILL IS USED, THE OPERATOR SHOULD ALWAYS TAKE ELECTRICAL PROTECTION MEASURES.**
- **ALWAYS WATCH OUT FOR FALLING OBJECTS! THE OPERATORS MUST WEAR HELMETS.**

- Place the hydraulic unit in the location
- Use the fixing holes of the oil tank as drill template and drill four holes on the ground
- Fix the hydraulic unit by using anchor bolts



### 3.3.1 Installation of the oil pipe

- The oil pipes and assemblies have been sealed with adhesive tapes before delivery. To prevent the machine oil from being contaminated by dust and causing choking, the oil pipes shall not be unsealed in the conduct before connecting with the assemblies.
- Please connect to the hydraulic station according to the tubing code.



- When the oil pipes are installed, fit the bolt with a washer, after it is screwed on the joint, fit it with another washer and then fix it on the assembly. The hexagon socket head cap screws shall be screwed tightly for fear of loosening oil pipe joints and oil leakage.

### 3.3.2 Connecting to the power supply

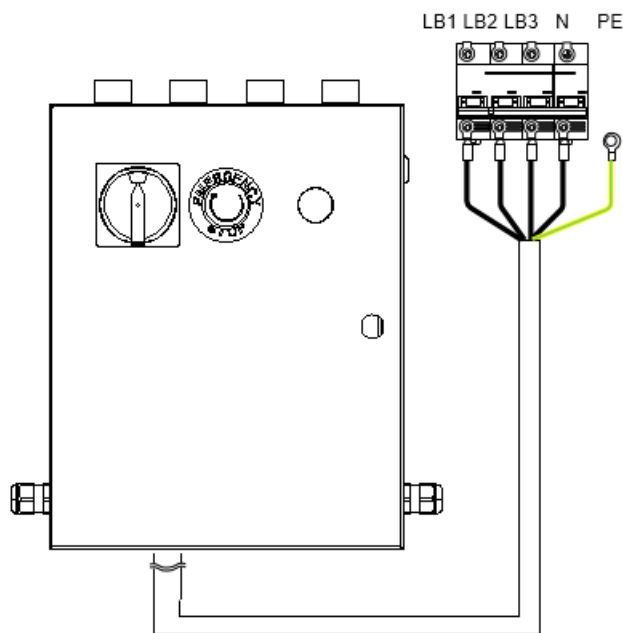


**WARNING!**

- **THE MAIN POWER SWITCH MUST MEET ALL NATIONAL STANDARDS AND SAFETY REQUIREMENTS. IT MUST ALSO MEET THE POWER UTILIZATION REQUIREMENTS OF THE EQUIPMENT.**
- **THE MAIN POWER SWITCH MUST BE PROVIDED WITH SAFE GROUNDING THAT MEETS ALL NATIONAL STANDARDS AND SAFETY REQUIREMENTS. GROUNDING IS VERY IMPORTANT FOR SAFE OPERATION AND OVERALL EQUIPMENT STABILITY.**
- **FOR INSTALLATION LOCATIONS WITH LARGE FLUCTUATIONS IN POWER GRID VOLTAGE, A LIGHTNING PROTECTION OR SURGE PROTECTION DEVICE SHOULD ALSO BE INSTALLED ON THE POWER SUPPLY.**
- **THE PERSONNEL MUST BE EQUIPPED WITH INSULATED GLOVES AND INSULATED BOOTS DURING CONSTRUCTION.**

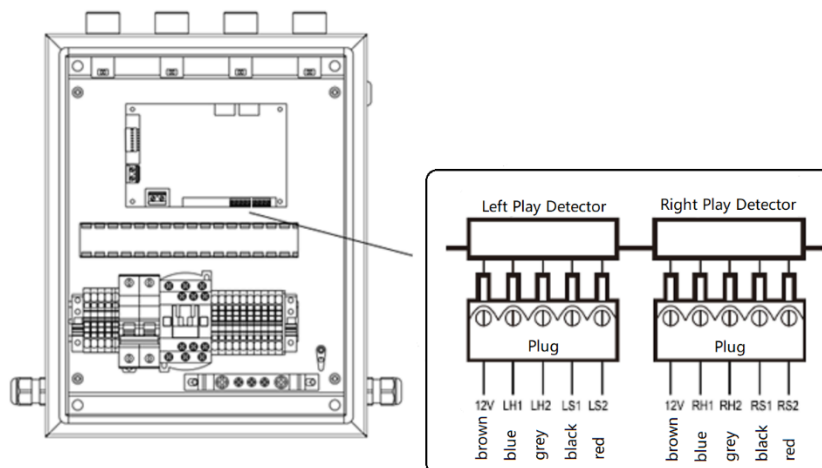


- Connect the power cable from the electric control cabinet to the on-site distribution cabinet. Note that it is necessary to connect the L1, L2, L3, N and PE lines according to the markings on the power cables.

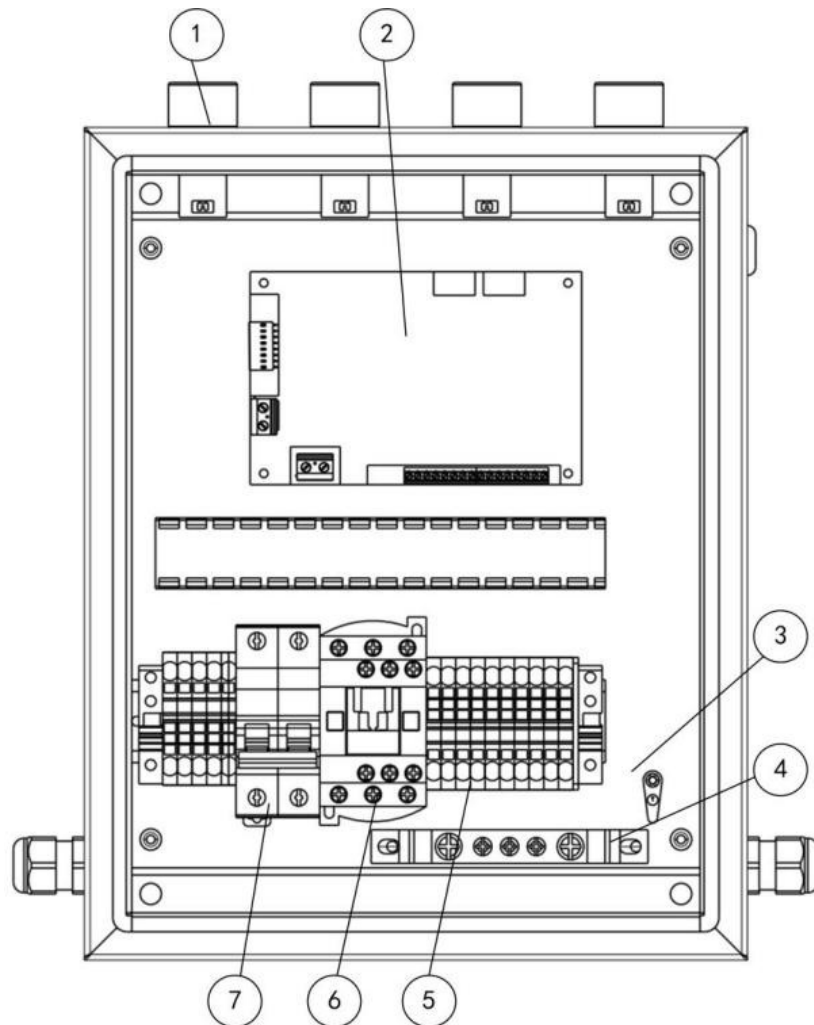


### 3.3.3 Connecting the sensor cables

The sensors of the left and right test plate must be connected to the control box.

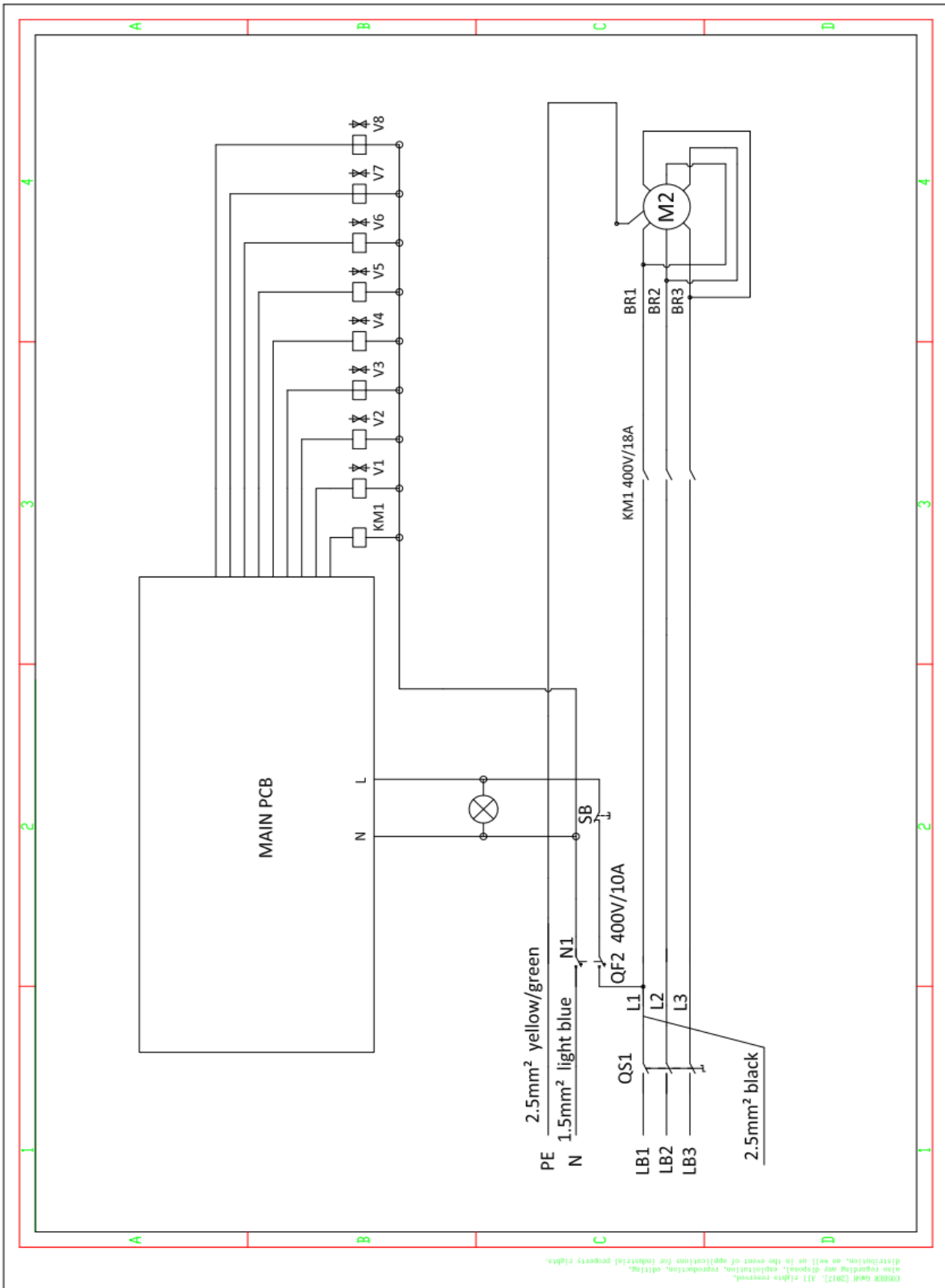


### 3.3.4 Circuit layout of control box



No.	Name	Functions
1	Indicator lights	Displays the working status of the instrument cabinet
2	Main control board	The main control board controls motor rotation through the relay board. It also collects the sensor signal, converts it into test data, and displays the data through the instrument cabinet or computer
3	Ground sign	Protect the ground wire
4	Ground terminal	Used to connect to the ground
5	Wiring terminal	A connector for the convenience of external electrical wiring and the internal wire of the control cabinet
6	AC contactor	The AC contactor is controlled by the relay board for forward and reverse rotation of the left and right motors
7	Single-phase circuit breaker	This protects the power supply system of the main control board; when there is a short circuit, power is cut off to protect the equipment

### 3.3.5 Electrical diagram

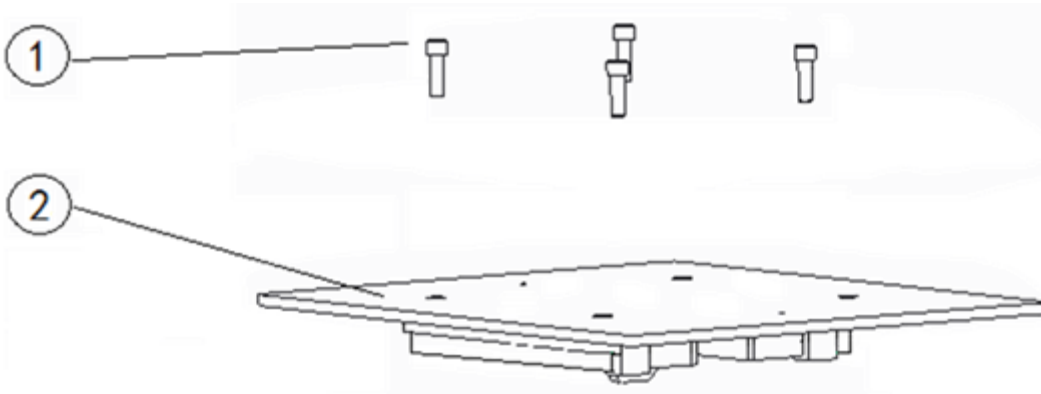


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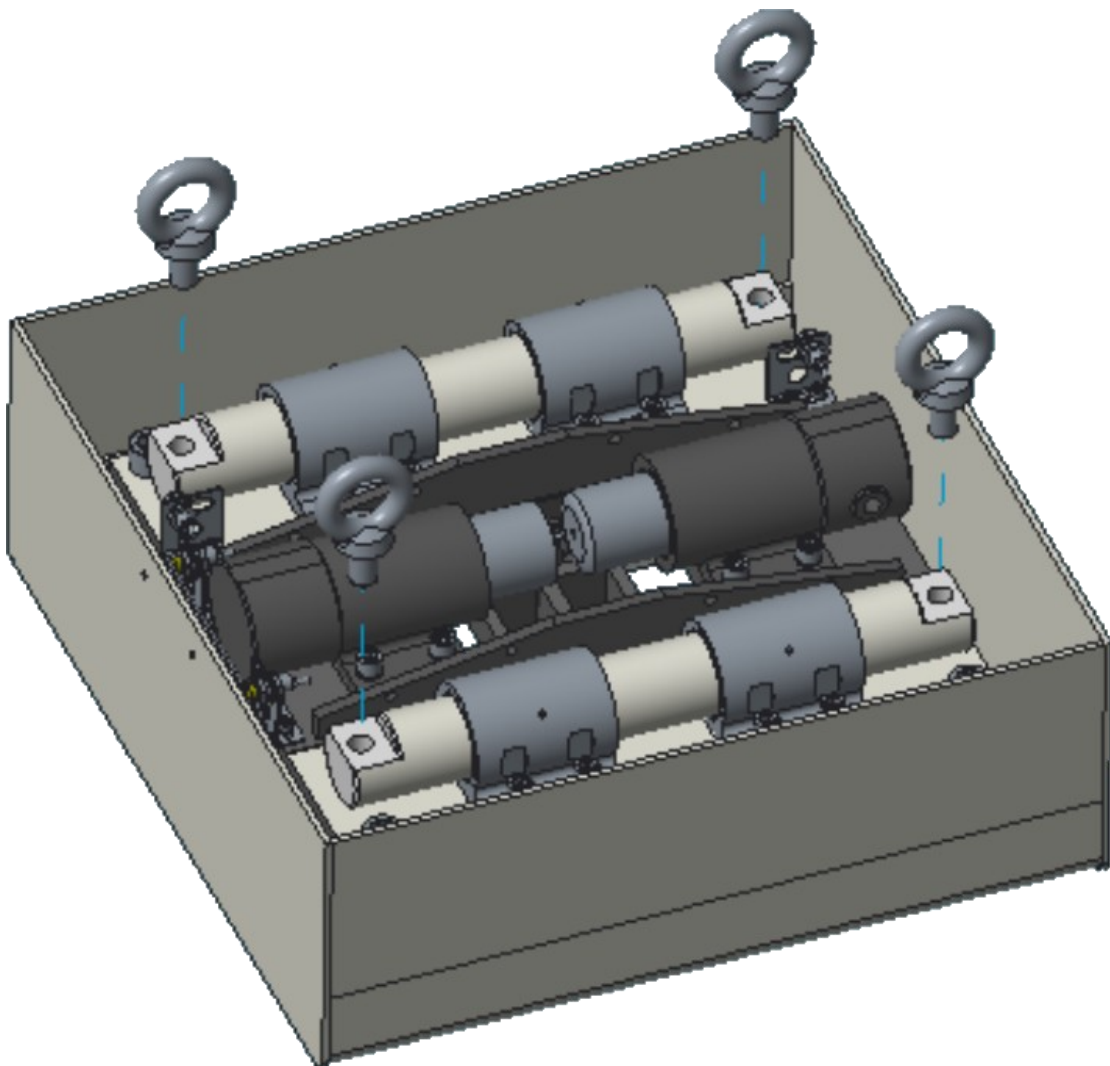
## 3.4 Installing the play detector

### 3.4.1 Lifting the Play detector

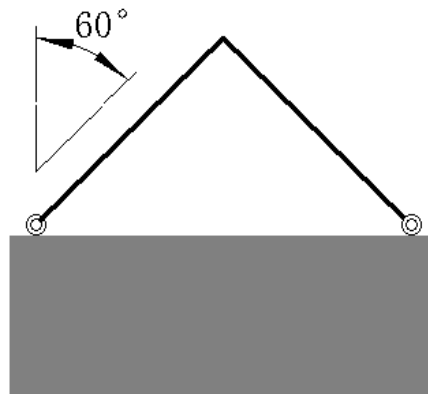
- Remove the test plate by losing four top screws:



- Install four M20 eye bolts properly as shown in the illustrated position.



- Hook the eye screw with the lifting rope and hang on the lifting equipment or forklift arm.
- The lifting capacity of lifting equipment or forklift must be more than 600kg.
- The inclination of lifting rope must be smaller than 60°.
- The lifting process must meet the safe operation requirements of the lifting equipment or forklift.



**WARNING!**

- **WHEN LIFTING AND TRANSPORTING, PAY ATTENTION TO FALLING OBJECTS AND SAFETY.**
- **INSTALLATION PERSONNEL MUST WEAR SAFETY HELMET.**
- **DURING THE LIFTING AND TRANSPORTATION OF THE EQUIPMENT, NO PERSON IS ALLOWED TO BE UNDER THE LIFTING EQUIPMENT.**
- **AFTER ADJUSTING THE UPPER EDGE BOLT, THE NUT MUST BE LOCKED.**

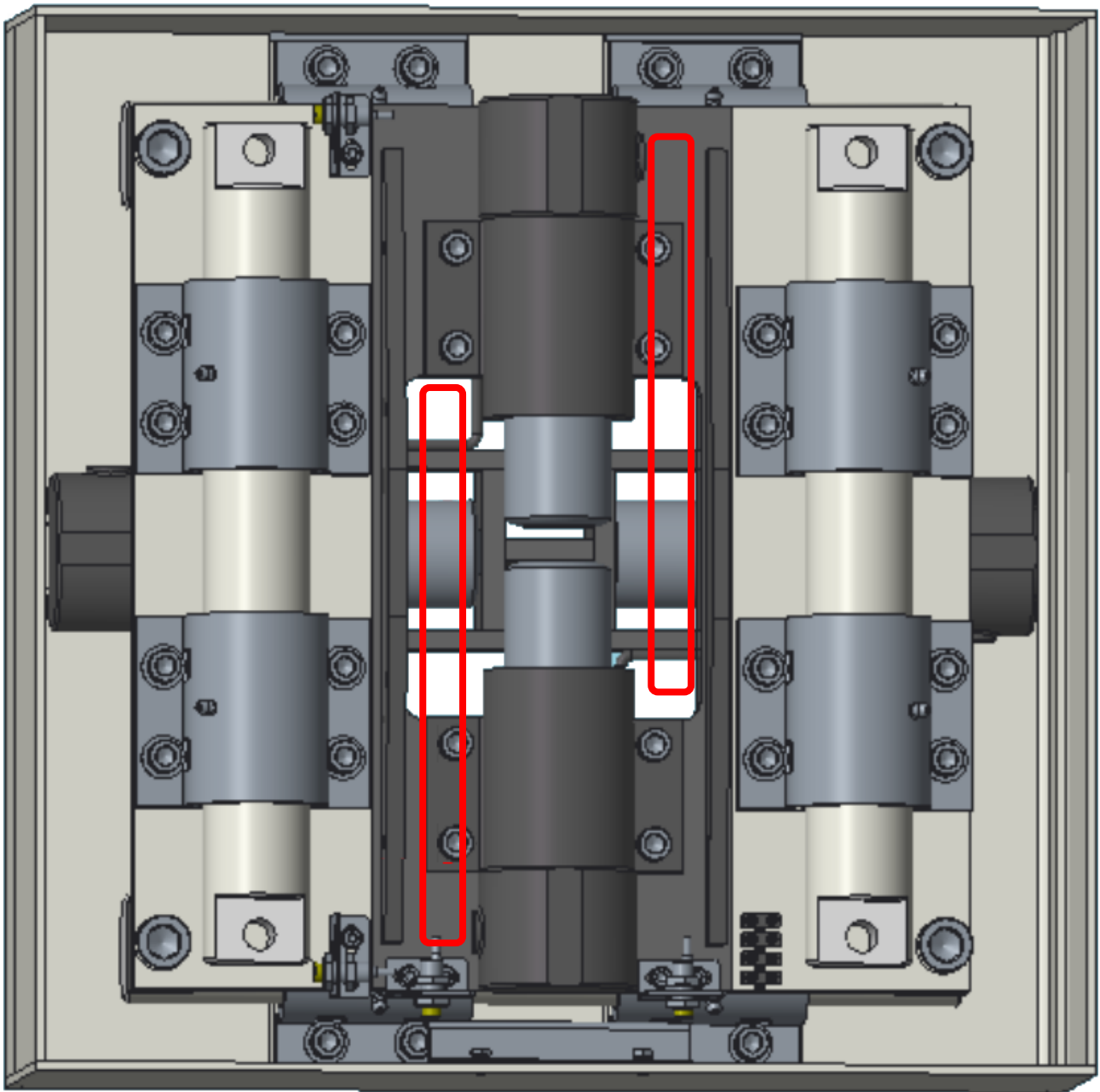
- Note the direction of the play detector.
- Lower the play detector slowly in the near of the foundation pit.
- When the play detector is hoisted over the foundation frame, insert the hydraulic lines and the sensor cables through the button of the chassis
- Lowering the play detector inside the pit completely.
- Check the levelling and adjust if necessary.



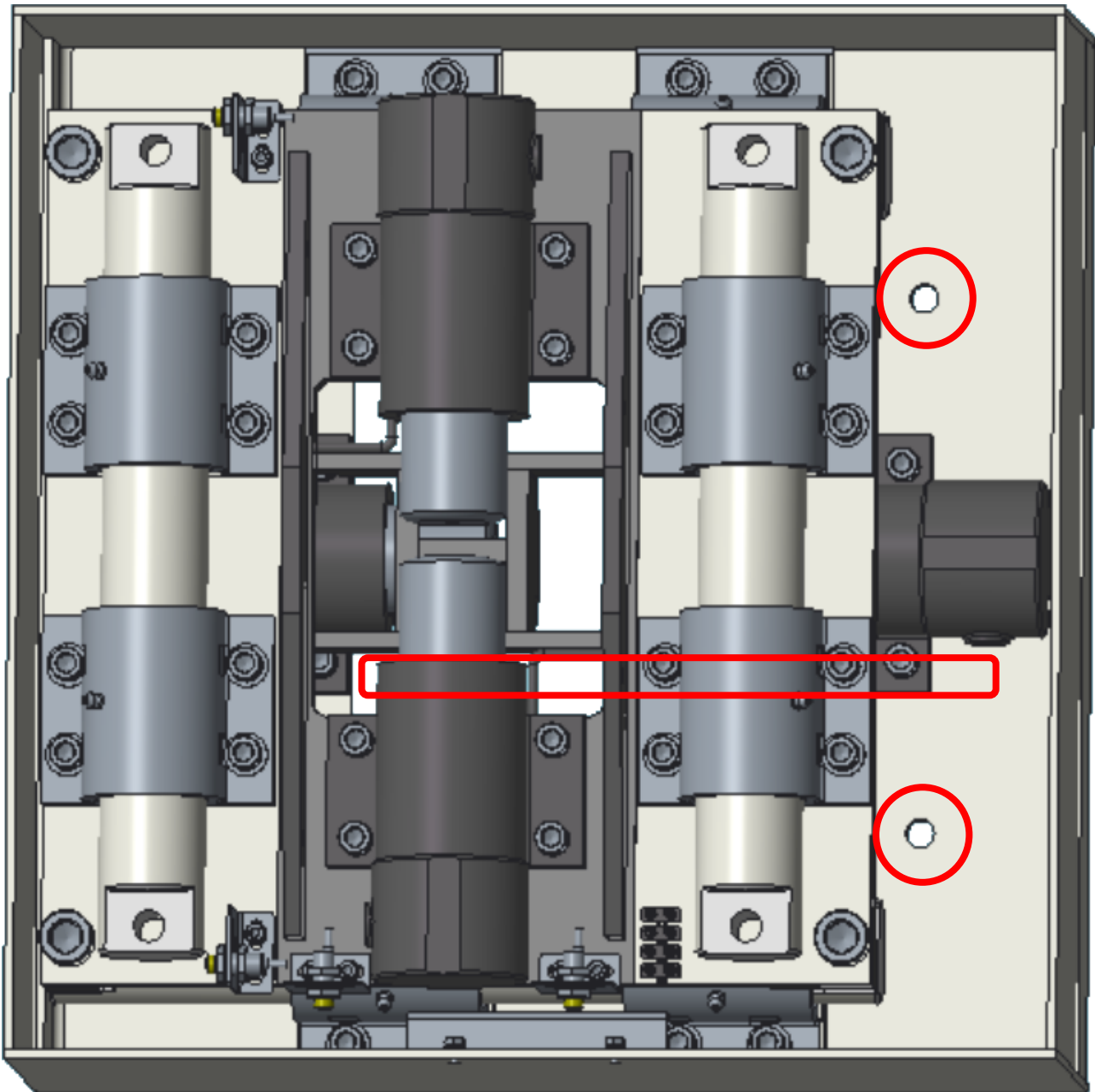
**NOTICE!**

**DON'T FIX THE HYDRAULIC LINES VERY TIGHT IN ORDER TO PROCEED THE AIR BLEED AFTER THE INSTALLATION**

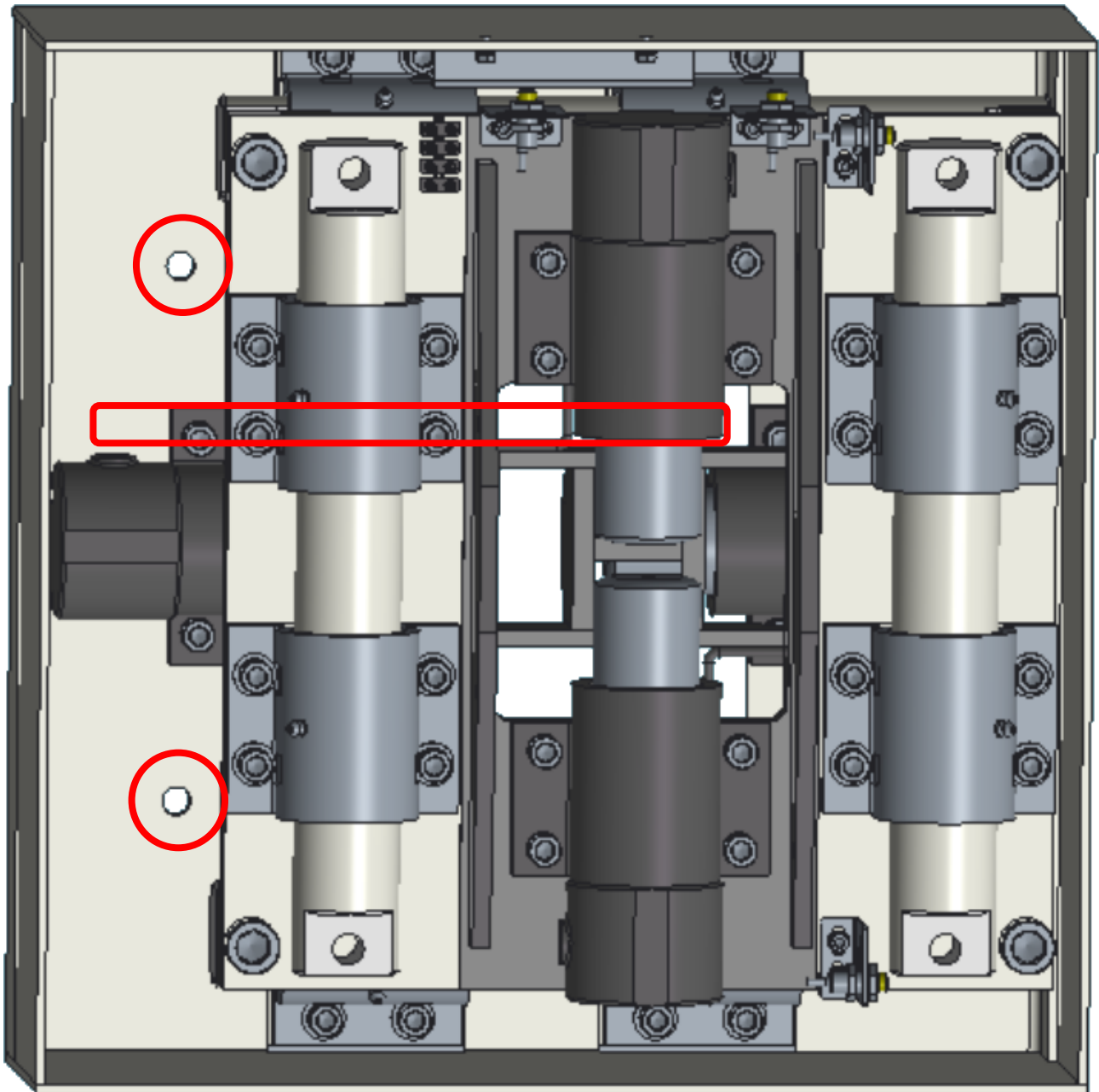
- Start to connect the hydraulic lines of the top plate, pay attention that all hydraulic lines must be placed in correct position



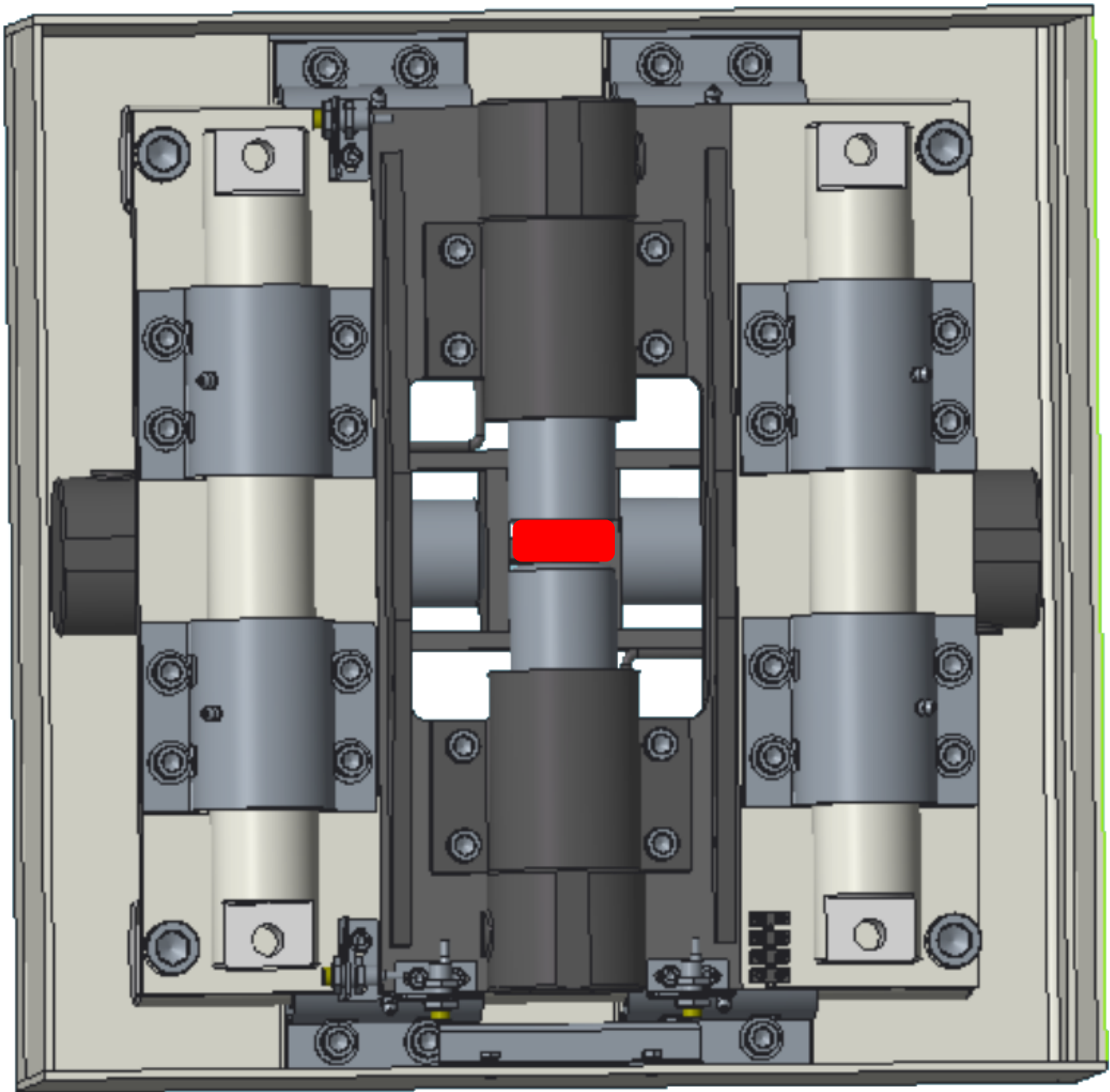
- Resume by installing the hydraulic line of the bottom cylinders.
- Move the upper cylinder support by helping a crowbar completely to the side.
- Connect the hydraulic line to the cylinder
- Now you have excess to fix the plate detector to the ground



- Now move the upper cylinder support by helping a crowbar completely to the other side.
- Connect the hydraulic line to the cylinder
- Now you have excess to fix the plate detector to the ground



- Place a distance (f. e. Screw) between the top two cylinders



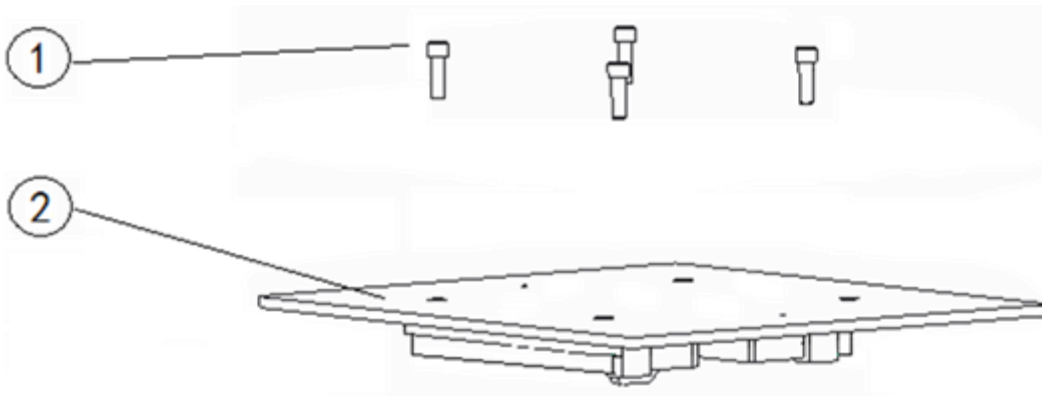
- Start to bleed the air and press the remote control to start the movement to the left, right, front, rear side. Press the remote control if only oil (without air) comes from the connections. As soon only hydraulic oil comes out, you can close the lines completely.



**ALL OIL HAVE TO BE CATCH**

**WARNING!**

- Remove the four M20 eye bolts for lifting.
- Install the test plate by fixing four top screws.



## 4 Start

### 4.1 Installation list

- Before starting the device for the first time, check and make sure that all the installations have been finished correctly.
- Before checking the wiring, make sure that the main power switch is off.
- Check if all the devices and accessories to be installed are complete.
- Check if acceptable circuit breakers are available on the installation site.
- Check if all devices have been installed correctly.
- Check if the motor power cable of the play detector has been properly connected to the terminal of the control cabinet.
- Check if the signal line of the play detector has been properly connected to the main control board of the control cabinet.
- Check if the main power cable of the control cabinet has been properly connected to the circuit breaker.
- Check if the grounding wire is connected.

### 4.2 Start checking.



**BEWARE OF ELECTRIC SHOCK WHEN STARTING THE MAIN POWER SWITCH; IF ELECTRIC SHOCK OR ELECTRIC LEAKAGE OCCURS, DISCONNECT THE POWER SWITCH IMMEDIATELY.**

**WARNING!**

- Turn on the power switch of the control cabinet, and check if the power indicator light is on.
- Turn on the three-phase circuit breaker switch and single-phase circuit breaker switch in the control cabinet, and check if the internal circuit of the control cabinet is normal.

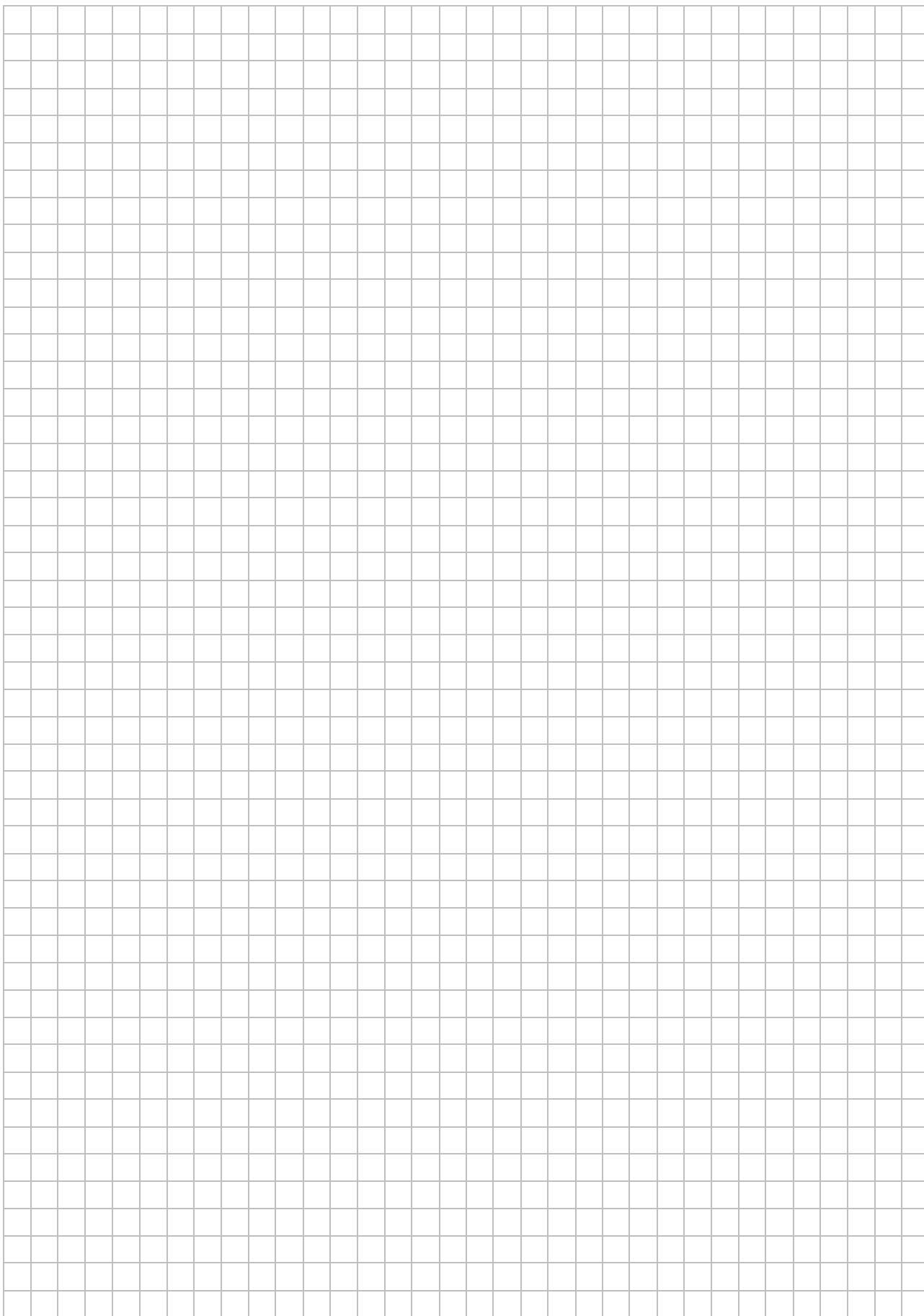
- When the power is turned on, check if all the lights on the pointer instrument are on, if the pointer is rotating, and if the screen displays. After starting, the pointer returns to the original position, the power indicator light turns on, and other lights turn off.
- Check if the motor rotation is correct.

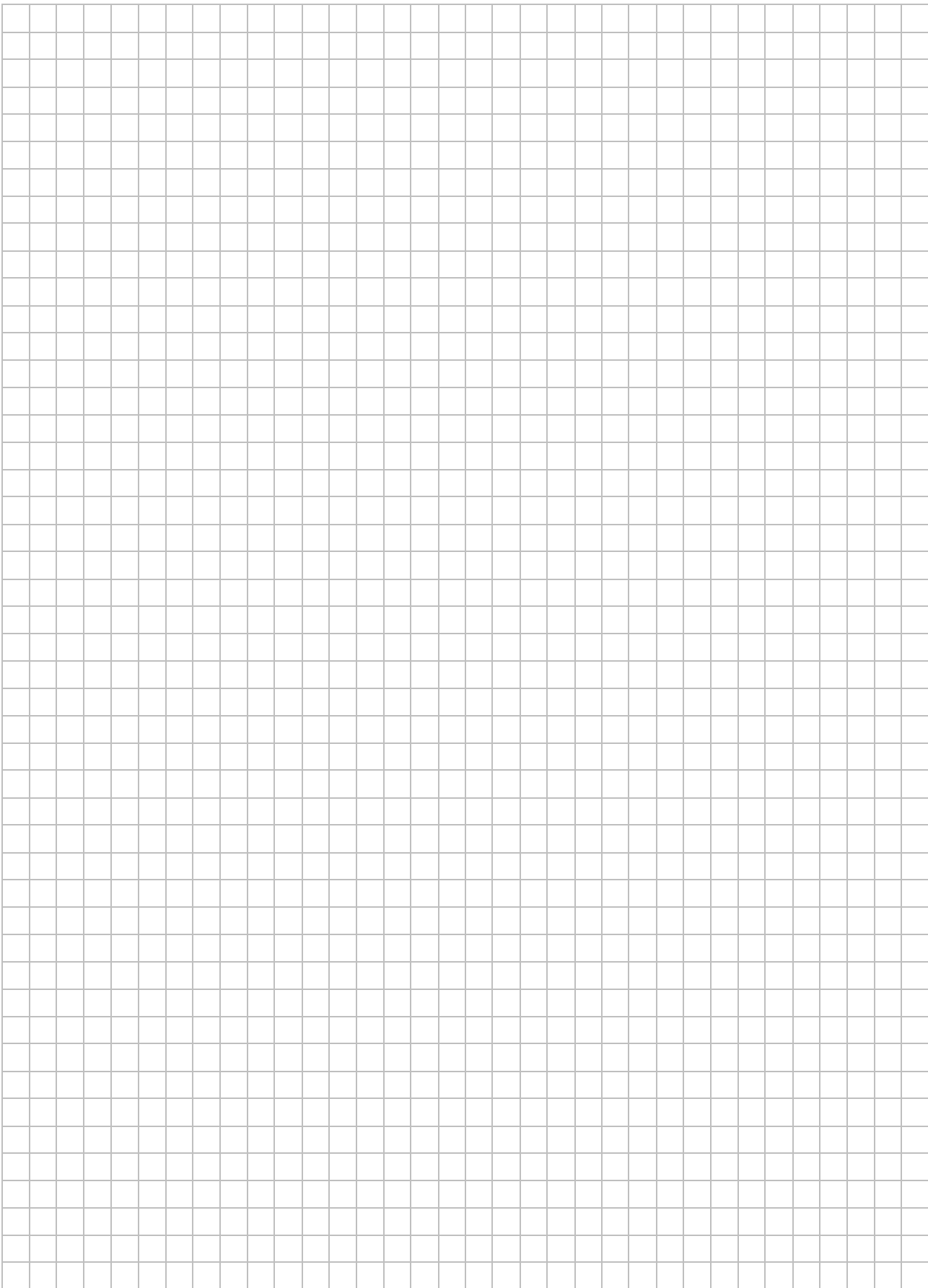


**ATTENTION!**

**MAKE SURE THAT ALL DEVICES ARE INSTALLED AND WIRED CORRECTLY BEFORE USING.**







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