



C-Tech
Laboratory equipment co.,limited

HYDRAULIC PROBING RIG SPT-H

PRODUCT MANUAL



C-TECH LABORATORY EQUIPMENT CO., LTD

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CONTENTS

I. Overview	1	Working principle	18
II. Use specifications	1	Structure	18
Action Tips	1	Body size and weight	19
Characters, abbreviations and technical terms	1	Hydraulic pump station parameters	21
Symbol Description	2	Puller parameters	22
Scope of responsibility	3	V. Precaution before use	23
Warranty	4	VI. Operation steps	23
Customer Service	4	VII. Weight drop adjustment	30
Copyright Protection	4	VIII. Falling distance adjustment	31
III.Safety	5	IX.Maintenance	32
Intended use	5	Maintenance	32
Improper use	5	Maintenance safety instructions	33
Misuse	5	Maintenance schedule	33
Operator responsibilities	6	Maintenance work	35
Liability	7	Measures after maintenance	36
Personnel requirements	7	Parts list	37
Personal Protective Equipment	9	Packing list	43
Danger	10		
Safety device for dynamic entry	13		
Spare parts	16		
Secure against restart	16		
Behavior in the event of danger and accidents	16		
Signage	17		
Place of Use	17		
IV. Size parameters	18		



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I. Overview

SPT-H is a dynamic penetration device with simple operation and convenient use. It can carry out the penetration test of falling weight DPL, DPM, DPH, SPT, the drop distance is adjustable 500mm or 750mm, and is equipped with probe rods and cone heads of different sizes, in accordance with the standard EN 22476-2.



Note

Read the instructions before you start any work.

II. Use specifications

SPT-H is designed to carry out dynamic penetration tests. If used for any other purpose, the warranty period and operation permit will expire.

Action Tips

The operating instructions are the basis for all operations on the device. The equipment user must always be made aware that the operating instructions are an integral part of the equipment. The prerequisite for safe work on the device is that all specified safety instructions and warnings must be followed. Therefore, before starting any work, personnel must carefully read and understand these operating instructions. In addition, the local accident prevention regulations and general safety regulations applicable to the location where the equipment is used must be observed.

Characters, abbreviations and technical terms

In this document, the use of characters, abbreviations, and technical terms has the following meanings:

Meaning	Character
List	▶
List	-
Number	1
Steps	1.



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Symbol Description

Warnings and safety precautions in the manual are marked with pictograms and displayed on a gray background. Warnings and safety tips have also been introduced to remind people to pay attention to basic dangers, and to indicate the degree of damage through signal words. These structures are as follows:



Dangerous!

... Indicates an imminent danger that, if not added, will result in death or serious injury.

- ▶ Be careful at work to avoid accidents, personal injury and loss of property.
- ▶ All warnings and safety instructions, hieroglyphics and signals must be observedWord- relatedIt means:



Signal word!

Sources of Danger Describes the siffyd dweud with hazards and how to avoid them.



Warning!

... Indicates the risk of death or serious injury if not avoided.



... Indicates a potential hazard that, if not avoided, can in minor injuries.



Attention!


... Indicates a potential hazard that, if not avoided, may result in property damage.


Tips and suggestions



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These instructions use the following symbols to indicate tips and suggestions:

**Attention!**

... Focus on tips and recommendations, as well as information on effective and trouble-free operations.

Special safety instructions

To alert you to special hazards, the following pictographs are used in conjunction with safety instructions:



...Indicates the danger caused by crushing. Failure to follow the safety instructions may result in serious injury to moving parts.



...Indicates that the current is dangerous. Failure to pay attention to safety information may result in serious personal injury or even death.



...Indicates the danger of high temperature. If the safety instructions are not followed, the skin may be seriously injured by burns or burns.

Scope of responsibility


All information and instructions in this manual take into account the applicable standards and regulations.


The manufacturer is not liable for damage due to the following reasons:

- ▶ Didn't follow the instructions
- ▶ Improper use
- ▶ Untrained personnel
- ▶ Self-modifying

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- ▶ Technical changes
- ▶ Use of unapproved spare parts

The obligations stipulated in the delivery contract, our company's general terms and conditions, the manufacturer's delivery terms, and the legal provisions in force at the time the contract is concluded apply.

Warranty

The manufacturer provides a warranty for the equipment based on sales and delivery conditions. The warranty is void if:

- ▶ Damage caused by improper operation,
- ▶ Repairs or interventions carried out by unauthorized personnel
- ▶ Accessories and spare parts that do not match the equipment were used.

The defect must be reported immediately after testing. Defects must be fixed immediately to minimize damage and do not compromise safety. If the requirements are not met, the warranty claim will expire. Changes in the sense of technological improvement are reserved for manufacturers.

Customer Service

Our customer service provides technical information. Information about the contacts in the responsible area can be obtained over the phone and can be faxed, e-mailed or InternetDoingContact.



Attention!

My Company company's contact details can be found on the cover.

Copyright Protection

This document is protected by copyright. Without the written permission of the issuer, the instructions may not be transferred to a third party, copied in any form, excerpted, or used or communicated. Violations must be compensated. We reserve the right to make further claims.



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III. Safety

This section outlines important safety aspects to protect operators from possible hazards and the company's safe and trouble-free operation. Failure to follow the instructions listed, warnings and safety instructions can cause serious danger.

Intended use

The device is intended exclusively for the following purpose in the industrial area: The device is used for ramming probes and ram core drilling.

Improper use

Exceeding the scope of application mentioned in **Intended use** is considered incorrect operation and the manufacturer is not responsible for any damage caused thereby. In this case, the user bears the risk. Unauthorized mechanical, electrical or structural changes to the device, the manufacturer does not assume any responsibility for any damage caused thereby. The intended use also includes compliance with the commissioning, operation and maintenance conditions provided by the manufacturer, as well as consideration of foreseeable misconduct. Marks have been affixed to the equipment and must be observed.

Misuse

This section describes the dangers of misuse of the equipment.



Warning!

Danger due to improper use!

In addition to the intended use of the device, any other use may cause danger.


Use the device only in accordance with the intended use in this document, especially in accordance with the usage restrictions specified in the technical data.


- Do not use the device in any other way beyond the scope.
- Do not modify or modify the structure or individual components of the equipment to change the scope of application or the availability of the equipment.



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Operator responsibilities

The operator is any natural or legal person who uses the device or leaves it to a third party for use, and must be responsible for the safety of users, staff, or third parties during use.

Operator's obligations

The device is used in the industrial field. Therefore, the operator of the device must bear the legal responsibility for occupational safety.

In addition to the warnings and safety instructions in this manual, you must also comply with the safety and environmental regulations applicable to the area where the equipment will be used.

Operators must comply with the following:

- ▶ Inform yourself of applicable health and safety regulations and identify, through risk assessment, other hazards that may arise from special conditions of use at the place where the equipment is used,
- ▶ The behavior requirements necessary to implement the operation of the device in the operating instructions,
- ▶ During the entire period of use of the device, please regularly check whether the operating instructions of the device comply with the current status of the regulations,
- ▶ If necessary, adapt the operating instructions to the new standards and conditions of use,
- ▶ Clearly regulate the responsibilities of equipment installation, operation, maintenance and cleaning,
- ▶ Make sure that all employees who use the device have read and understood the operating instructions. In addition, personnel must be regularly trained on the use of the equipment and informed of possible dangers, and use of designated and recommended protective equipment can be used by personnel working on the equipment.

In addition, it is the operator's responsibility to ensure that the equipment:

- ▶ Always in a technically sound state,



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- ▶ Perform maintenance according to the prescribed maintenance cycle,
- ▶ And regularly check the integrity and function of the equipment's safety equipment.

In addition, the operator must designate qualified personnel responsible for the equipment in writing.

The "Occupational Safety Regulations" require operators to conduct risk assessments based on expected work tasks and determine routine inspection cycles and test depth.

Liability

The device is used in the industrial sector. Therefore, employees must comply with the legal requirements for occupational safety. In addition to the warnings and safety information in this manual, safety, accident prevention and environmental protection regulations applicable to applications must be observed.

In particular, staff:

- ▶ Understand applicable health and safety regulations,
- ▶ Meet the operating requirements of the field operating equipment as given in the operating instructions,
- ▶ Properly perform ingons of equipment, maintenance and cleaning,
- ▶ Before you begin work, you must fully read and understand the operating instructions. Use regulations and recommended protective equipment.
- ▶ In addition, it is the responsibility of everyone responsible for the equipment to ensure that the equipment is always in good condition.
- ▶ Maintenance according to the maintenance cycle,
- ▶ Check the integrity and functionality of all safety equipment regularly.

Personnel requirements

- ▶ Any activity on the device can only be performed by people who can work correctly and reliably and meet specific requirements.



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- ▶ Persons whose ability to react, such as the consumption of drugs, alcohol or drugs, is affected, shall not work.
- ▶ Staff must always comply with the age and occupation requirements of the operating site.

**Warning!**

Risk of injury if you are not eligible!

Improper work can result in significant personal injury and property damage. All operations can only be carried out by personnel with the necessary training, expertise and experience.

Instructor

Instructor refers to the operator who can inform them in detail and clearly about tasks and possible dangers

Technical staff

Technical personnel are those who are able to correctly perform assigned work due to their professional training, knowledge and experience, and knowledge of relevant regulations, independently identify possible hazards and avoid personal injury or property damage.

Electrician

In principle, all work of electrical equipment can only be carried out by electricians.

Electricians are people who can correctly perform work on electrical systems due to their professional training, knowledge and experience, and understanding of relevant regulations, independently identifying possible hazards and preventing current from causing personal injury and property damage.

Unauthorized person**C-TECH LABORATORY EQUIPMENT CO., LTD**

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**Warning!**

Risk of injury if not allowed!

Untrained personnel do not understand the hazards in the work area and are therefore considered unauthorized. Keep unauthorized people away from the work area, communicate with them, and direct them to leave the work area. As long as unauthorized personnel enter the work area, work can be interrupted.

Personal Protective Equipment

Personal protective equipment must be worn at work to minimize health risks.

- ▶ Wear the specified protective equipment correctly and wear it during work before you start any work.
- ▶ Also, it is important to note that the personal protective equipment attached to the work area has a hieroglyphic logo.

The protective equipment listed below must, in principle, be worn and must always be in good condition.

**Overalls**

Tight overalls, with low tear resistance, narrow sleeves and no protruding parts, mainly to prevent them from being caught by moving equipment parts. Do not wear rings, necklaces or other jewelry.

**Gloves**

Protect your hands from bruises, scratches, hurts, cuts, stab wounds or similar surface skin damage.

**Safety shoes**

Protect your feet from falling parts and slippery ground.

**Industrial hard hats**

Protect the head from injury caused by falling parts and materials above.

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**Earplugs**

Prevent hearing damage caused by noise at work.

**Goggles**

Prevent eye damage from splashing parts, particles, liquid splashes, or compressed air leaks.

Danger

The device has been assessed against risk. Eliminate identified hazards as much as possible and reduce identified risks. Nevertheless, there is still a residual risk to the equipment, as described in the following sections.

The warnings and safety instructions listed here and in the operating sections of this manual must be observed in order to avoid harm to health and dangerous situations.

Risks posed by machinery**Warning!**

Risk of injury from moving parts!


Driven moving components or parts may cause serious injury


-Do not let people stay in or near the danger zone.


-Do not invalidate safety equipment or functions, making them unusable.

-Do not touch the running equipment.

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**Warning!**

Risk of crushing!

Driven moving components or parts can cause serious injuries, and moving parts can crush body parts during operation.

-Do not enter the hazardous area during operation.

-Always carry out inspection and maintenance work and troubleshooting, especially pay attention to tightening points.

When working in a hazardous location, wear protective equipment to prevent pressure injuries.

Risk of electric shock**Dangerous!**

Danger to life from electric current!

Touching live parts leads to death. Damage to the insulation or individual components can be life-threatening.

- Before starting any work on the electrical system, switch off the electrical system. Check that there is no voltage

- Before carrying out maintenance, cleaning and repair work, switch off the electrical power supply and secure it against being switched on again.

- If the insulation is damaged, switch off the power supply immediately and arrange for repairs.


- Do not bypass fuses or put them out of operation.


- When replacing defective fuses, always pay attention to the correct amperage rating.

- Keep moisture and moisture away from live parts.

Risks from thermal hazards**C-TECH LABORATORY EQUIPMENT CO., LTD**

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Be careful!

Risk of burns!

Contact with hot components may cause burns.

-Suitable for all work close to high-temperature parts, for example: wear protective clothing and protective gloves when using the motor of the device.

Before starting any work, make sure that the components have cooled to ambient temperature.

Noise risk



Warning!

Noise can cause hearing damage!

Noise generated in the work area can cause severe hearing loss or hearing loss.

-In principle, hearing protection is required for all work.

-Only stay in hazardous areas when necessary.

Vibration risk



Warning!

Strong vibrations can damage your health.


-During operation, do not stop in or near the violent vibration danger zone.


Risks posed by materials



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Warning!

Risk of poisoning when using lubricants! Lubricants can cause poisoning or skin irritation.

- Please follow the lubricant manufacturer's safety instructions.
- Avoid spraying.
- Do not eat, drink or smoke at work.
- Before using lubricant, please apply skin protection cream.
- Wear plastic protective gloves when working, and safety glasses with side shields when using oil.
- Wash and apply skin cream after get off work.



Warning!

Risk of explosion when handling fuel!

When in contact with sparks or fire, fuel will burn and explode.


- Avoid spilling and spraying when refueling and working.
- Do not smoke while working. Avoid contact with skin and eyes.
- Wear plastic protective gloves when working, and safety glasses with


Safety device for dynamic entry



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**Warning!**

Safety device failure or bridging can result in death!

Malfunctions, bridged or disabled safety devices cannot guard against danger and may cause serious injury or death.

-Before starting work, be sure to check that all safety devices are properly installed and working properly.

-Never exceed safety devices.

Make sure that the safety device is always accessible.

SPT-H Safety Device

Model SPT-C has a safety device in the form of a safety hook. When working on the boom or in front of the mast, the impact device must be inserted into it. Figure 1 shows how to prevent the impact device from falling through the safety pawl during the hammer.


1. Raise the impact device to the stop of the mast head at a lower speed: the safety catch automatically engages.


**WARNING!**

Protection against falling impact unit is only provided if the safety catch is correctly inserted. Before working under the impact unit, make sure that the impact unit is secured by the locking pawl.

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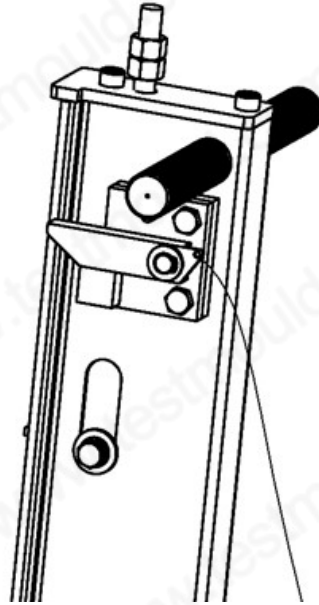


Figure 1: Impact device is properly placed on safety claws

Please release the limit block as follows:

2. Raise the shock device again until it stops.
3. Pull the limiter manually and slowly reduce the impact device (see Figure 2).
4. Put down the shock device until it passes through the safety lock and releases again.

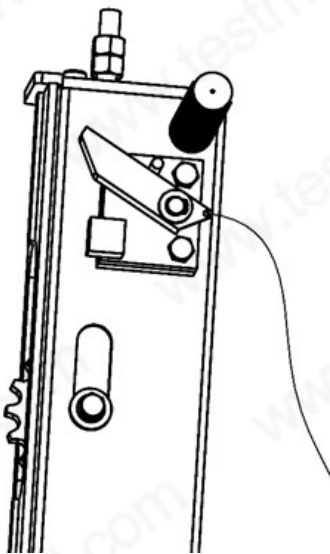


Figure 2: To release the securing device, the rope of the securing pawl is pulled and the impact unit is moved past it



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Spare parts



Attention!

Our company's contact information can be found on the cover page.

Secure against restart



WARNING!

Risk of injury due to unauthorized restart!

When working on the device, people at the danger points can be injured by unauthorized switching on the power supply.

- I. Always observe the information on securing against being switched on again in the instructions in this manual.
- II. Before carrying out any work on components, assemblies or individual components, follow the procedure described below for securing against being switched on again.

After completing the work:

- ▶ Reinstall all safety devices properly and check that they are functional.
- ▶ Make sure that there are no people in danger areas and in the entire danger area.

Behavior in the event of danger and accidents

In this section, the correct behavior in the event of danger and accidents is addressed.

Preventive measures

Always be prepared for accidents and fire.

- ▶ Keep first aid facilities (first-aid kit, blankets, etc.) and fire extinguishers within reach.
- ▶ Make personnel familiar with the accident reporting, first aid and rescue facilities.



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- ▶ Always keep access routes for emergency vehicles clear.

Do the right thing if the worst comes to the worst

- ▶ Shut down the device immediately.
- ▶ Initiate first aid measures.
- ▶ Rescue affected persons from the danger zone. Inform the responsible person on site.
- ▶ In the event of serious injuries, call a doctor or fire service. Keep access routes for escape routes open.

Signage



ATTENTION!

Risk of injury due to illegible symbols!

Stickers and signs that have become indistinct no longer identify danger spots sufficiently and cannot point out possible risk of injury.

- Always keep the pictograms, safety, warning and operating instructions in a legible state.
- Immediately replace damaged or unrecognizable pictograms, labels, signs or stickers.



Refer to the manual!

Read the operating instructions before starting any work.



Risk of crushing!

There is a risk of serious injury to moving parts on the marked component.

Place of Use



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Basically, the device should be used outdoors. The use of equipment in closed rooms is strictly forbidden because the exhaust from the hydraulic press is harmful to health. If it is necessary to work in a closed room, if you have any questions, please contact the manufacturer.



Attention!

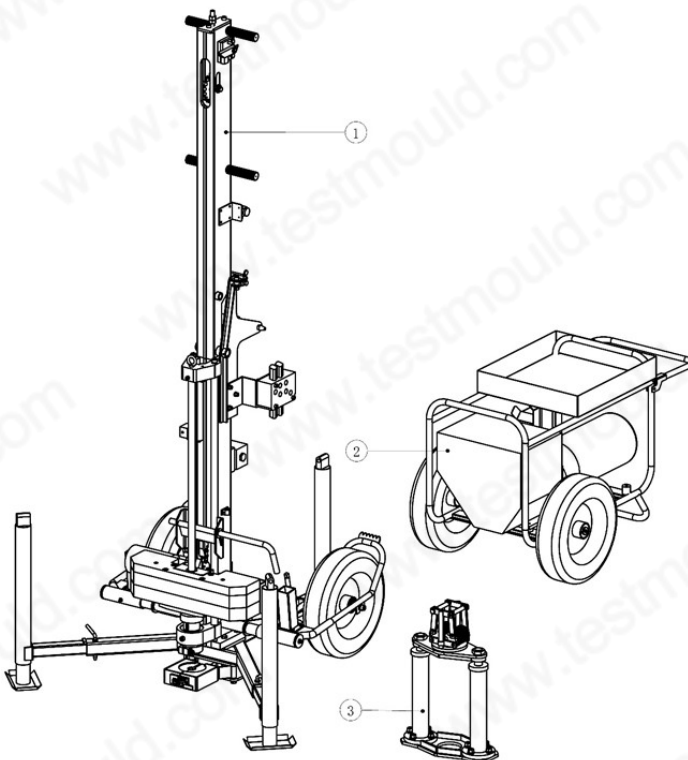
My company's contact information can be found on the page after the cover.

IV. Size parameters

Working principle

SPT-H is powered by the hydraulic pump station, driving the motor to lift the drop weight, and the drop weight is equipped with an automatic shedding device to hit the probe rod and the borrower for testing. This device does not have an automatic shutdown function to achieve Hammer times need to be stopped manually; equipped with hydraulic automatic puller, easy to operate.

Structure



1	SPT-H body
2	Hydraulic pumping station
3	Auto-puller



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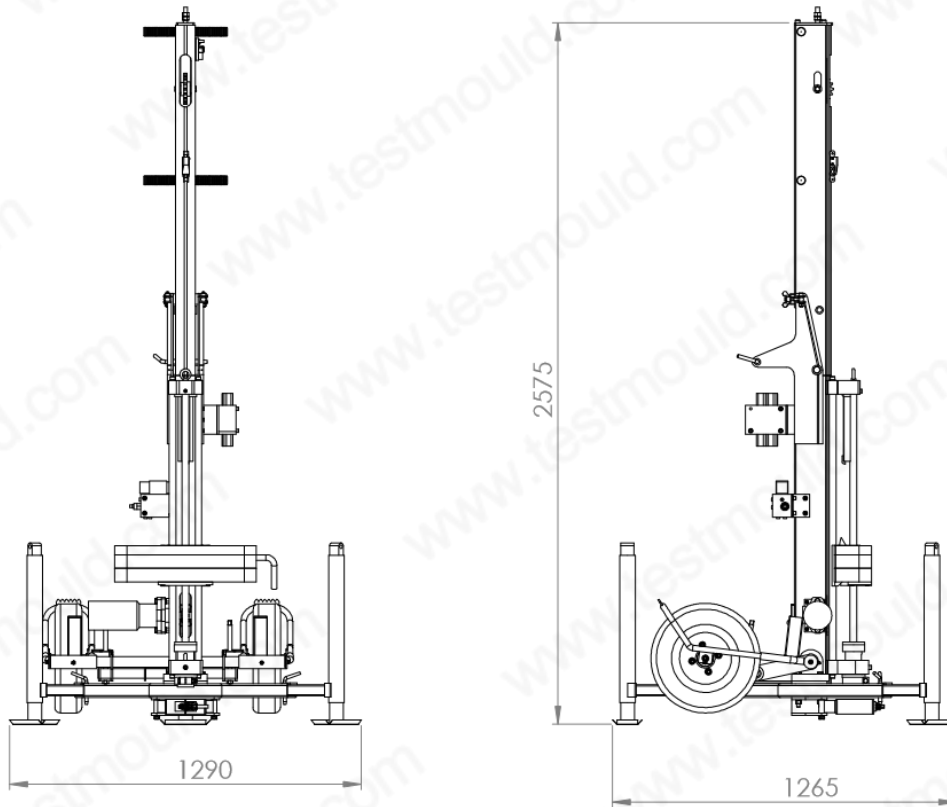
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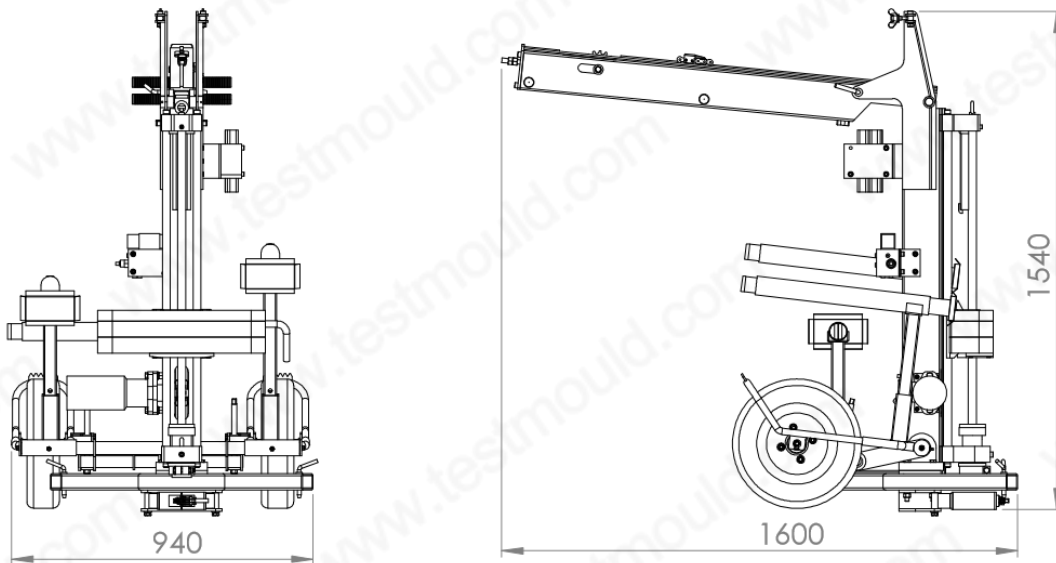
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Body size and weight

Working size: 1265 x 1290 x 2575mm, weight 220kg



Transport size: 1600 x 940 x 1540mm

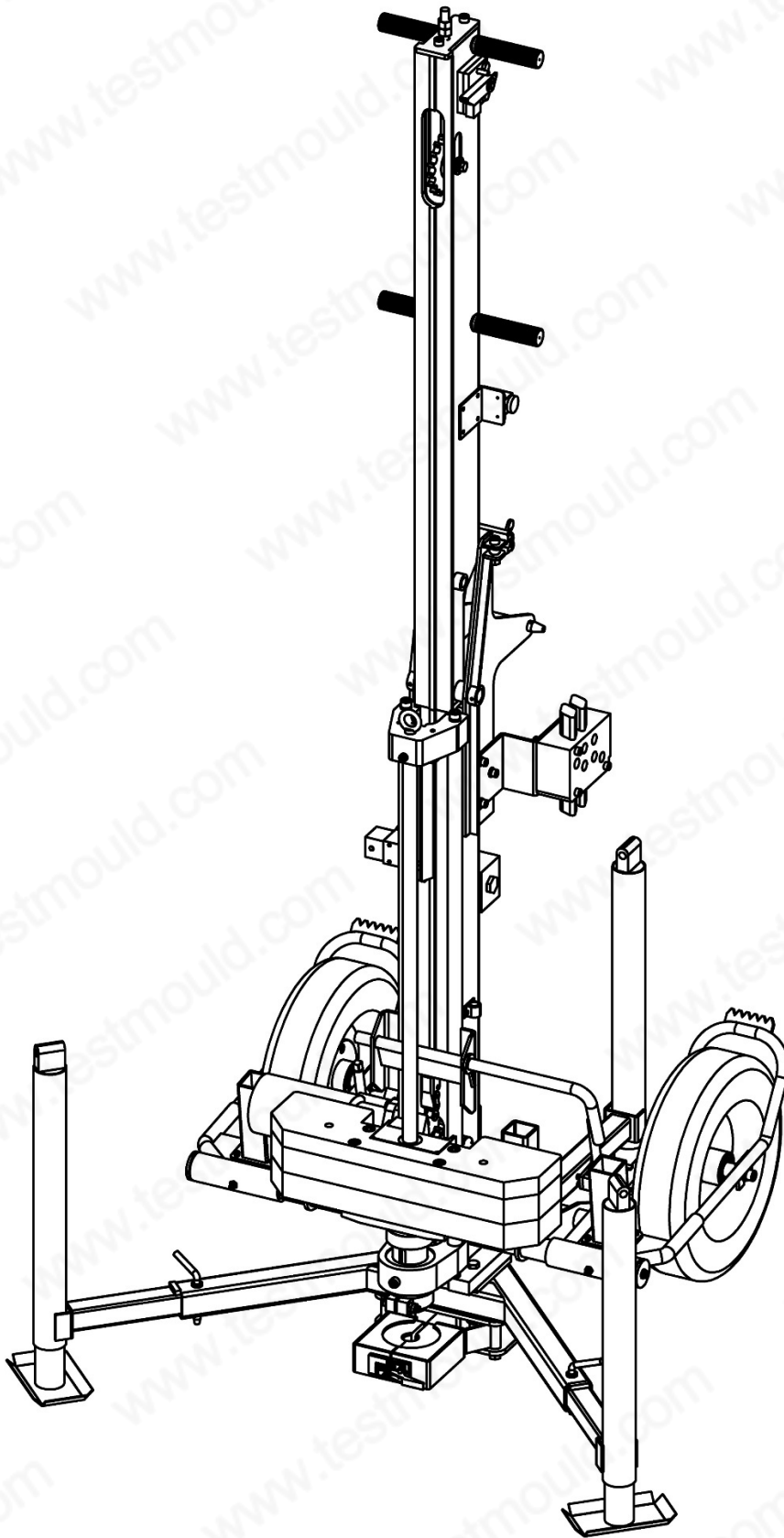


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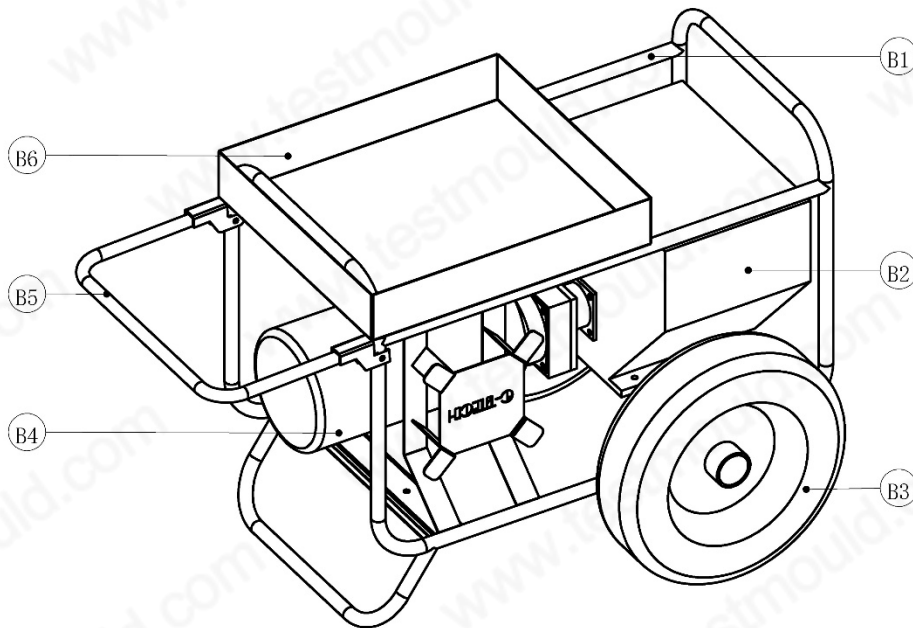
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Hydraulic pump station parameters



Parameter list

Engine model	GP200
Power	4KW
Hydraulic pump flow	15L/min
Hydraulic pump rated pressure	16Mpa

Description

NO.	Component
B1	Hydraulic Pump station frame
B2	Gasoline engine
B3	tire
B4	The fuel tank
B5	Pumping station handle
B6	Tool box



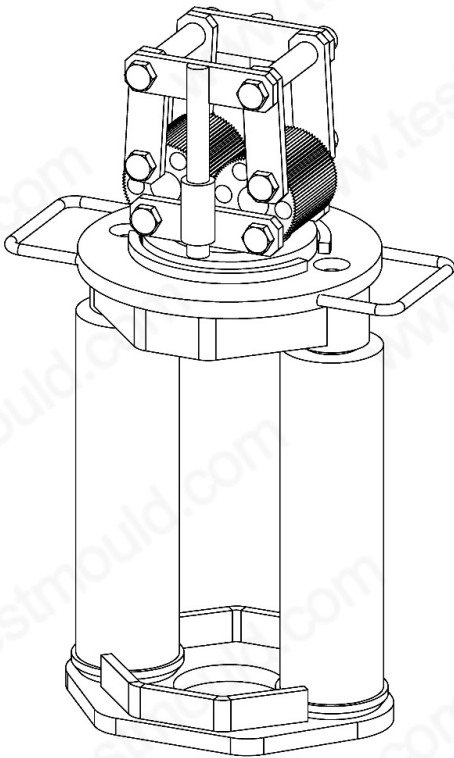
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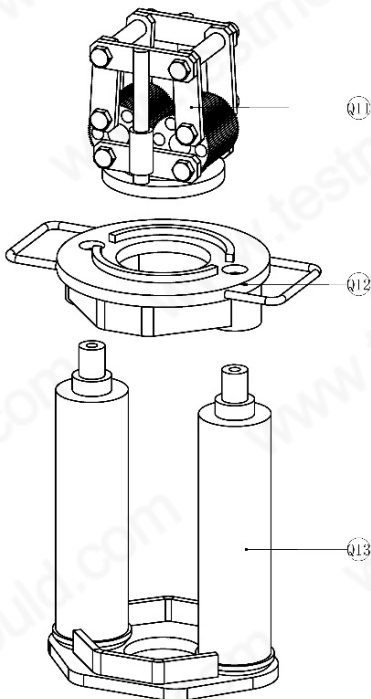
Puller parameters



Parameter list

Max lifting force of puller	16T
Max travel of the cylinder	150mm
Cylinder diameter	80mm
Dimensions when the cylinder is fully retracted	330*200*415mm
Weight	32kg

Description



NO.	Component
Q11	Collet chuck
Q12	Oil cylinder gate
Q13	hydraulic oil cylinder



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V. Precautions before use



Due to transportation reasons, be sure to fill the engine oil before use, if not, it will cause serious damage to the engine.

Due to transportation reasons, please add LMH-46 hydraulic oil in the hydraulic mailbox before use, and the liquid level should be above the oil suction filter to avoid long-term suction and cause pump wear.

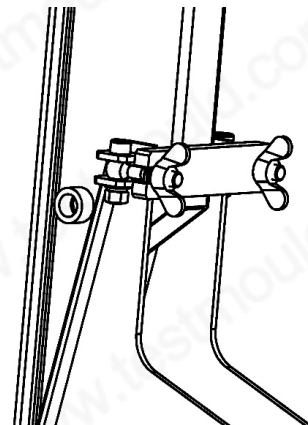
As shown, you have to be able to see the liquid level here.



VI. Operation steps

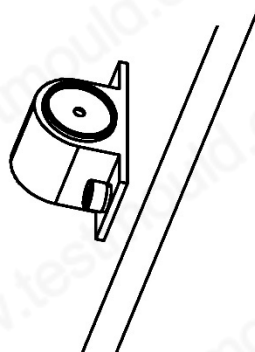
1. Open the folded post and insert 3 supporting lifting legs (ensure that the ground contacted by the legs is strong enough, otherwise you need to pad wooden boards to prevent the legs from collapsing) and fix the legs with pins.

As shown:



2. Adjust the elevating outrigger and observe whether the device is tilted through the bubble.

As shown:



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3. Connect the hydraulic pipe between the manual directional valve and the pump station.

As shown:



4. Check whether the chain is tensioned (the chain has been adjusted at the factory. For safety, you need to confirm whether the chain is in transit loose), use a spring scale to verify the tightness of the chain before each use. Use a spring when the post is upright, hook and pull outwards the scale. When the spring scale shows a pull force of 4-5kg, the distance of the chain from the track plane should be about 8mm.



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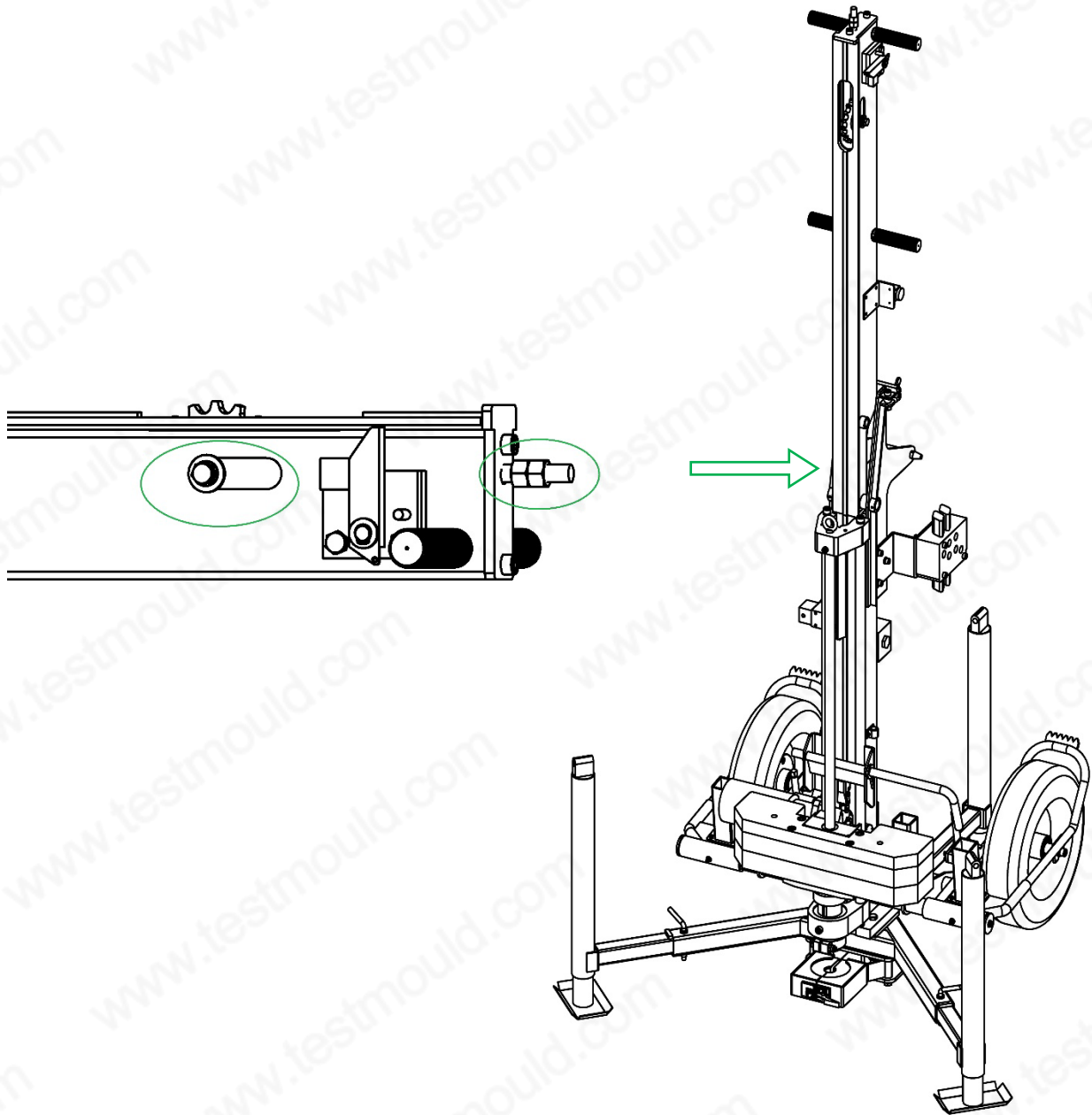
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When the chain needs to be adjusted, it can be adjusted by the tension on the top of the column.

As shown:



5. Start the engine and turn on the manual reversing switch of the hydraulic station, as shown in the figure:

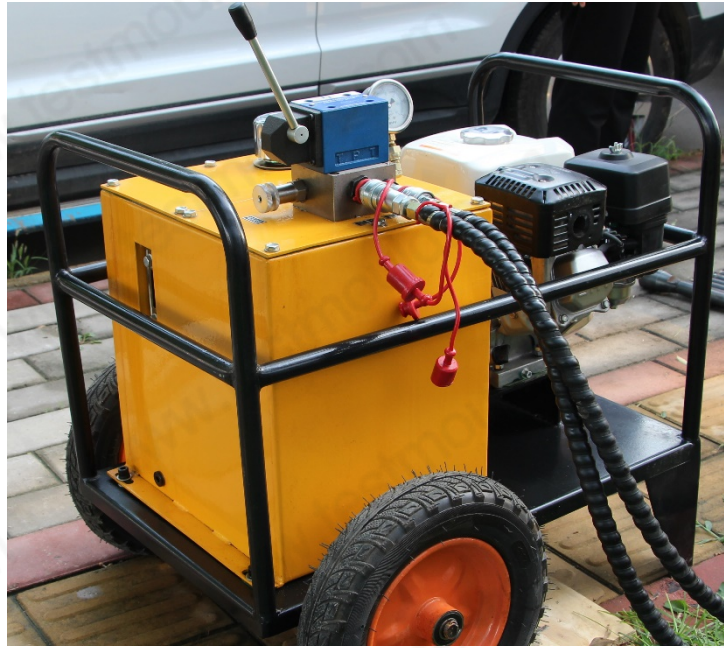


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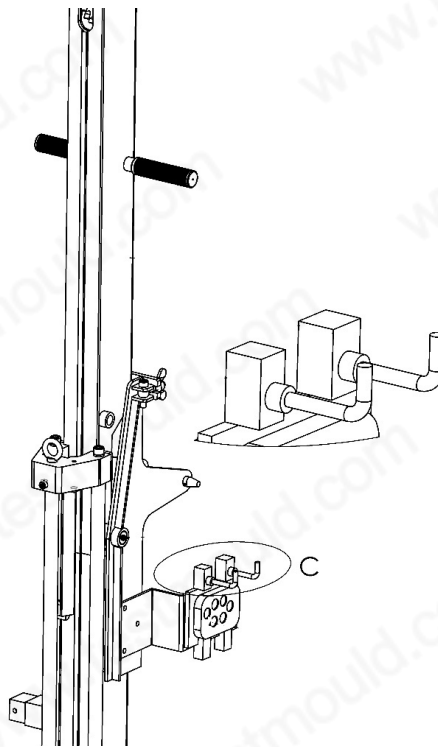
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⚠ Before opening this switch, ensure that the position of the manual multi-way valve is in the horizontal position.

As shown in the figure:



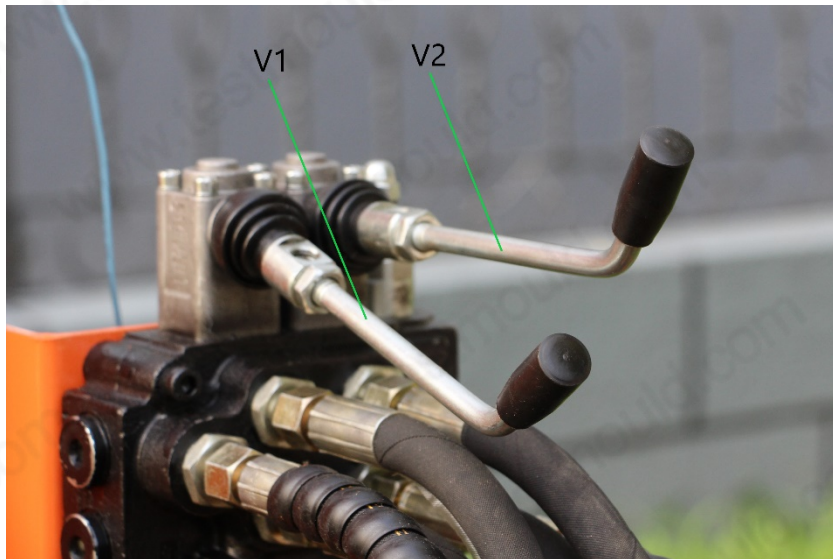
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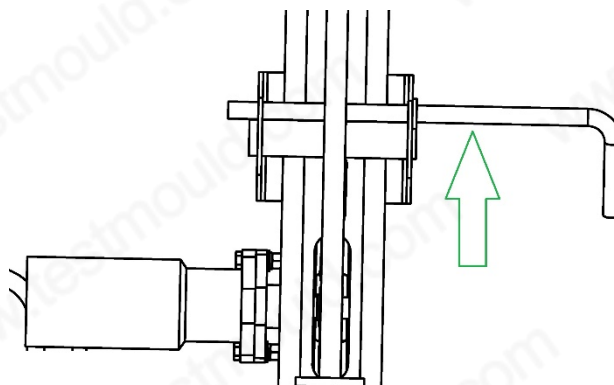
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6. Turn on the manual directional valve switch V1, observe the operation of the chain, let the chain idle for 1 minute, and remove the air from the pipeline.



V1	Chain motor lever
V2	Automatic extractor lever

7. After the chain is idling without any problems, insert the lifting latch to raise the drop weight assembly to the highest point of the column.



8. Select the appropriate probe rod and cone head, and insert the appropriate guide block, place the matching copper cap on the top of the probe rod, slowly lower the drop weight assembly until the copper cap fully enters the anvil, open V1, so that when the chain lifts the falling weight, the penetration test is started until the chain clamp can no longer lift the falling weight. At this time,

the lifting bolt is inserted again, and so on.



1	Probe rod
2	Guide block
3	Cone head

⚠ When the drop weight assembly rises to the top, there is a fall stopper to ensure that the drop weight will not fall when the hydraulic system fails or is mishandled. When you need to land, you need to manually pull the stopper to land normally. Limiter as shown:

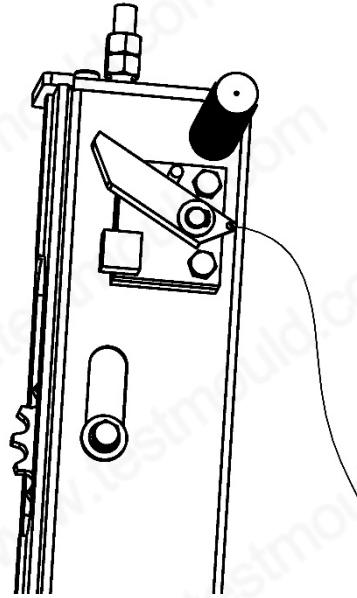


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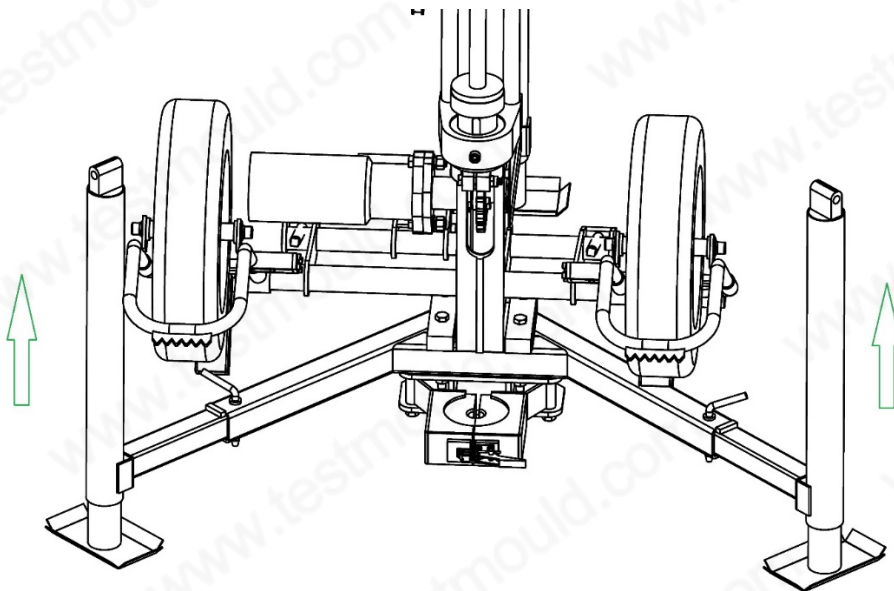
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9. Lifting of the probe

After the test is completed, the drop weight assembly is raised to the highest point. Raise the two legs as shown, leaving room for the automatic extractor. Insert the hydraulic pipeline and put the chuck on the probe rod.



Turn on the lever V2 of the automatic puller, and the puller starts to pull automatically.

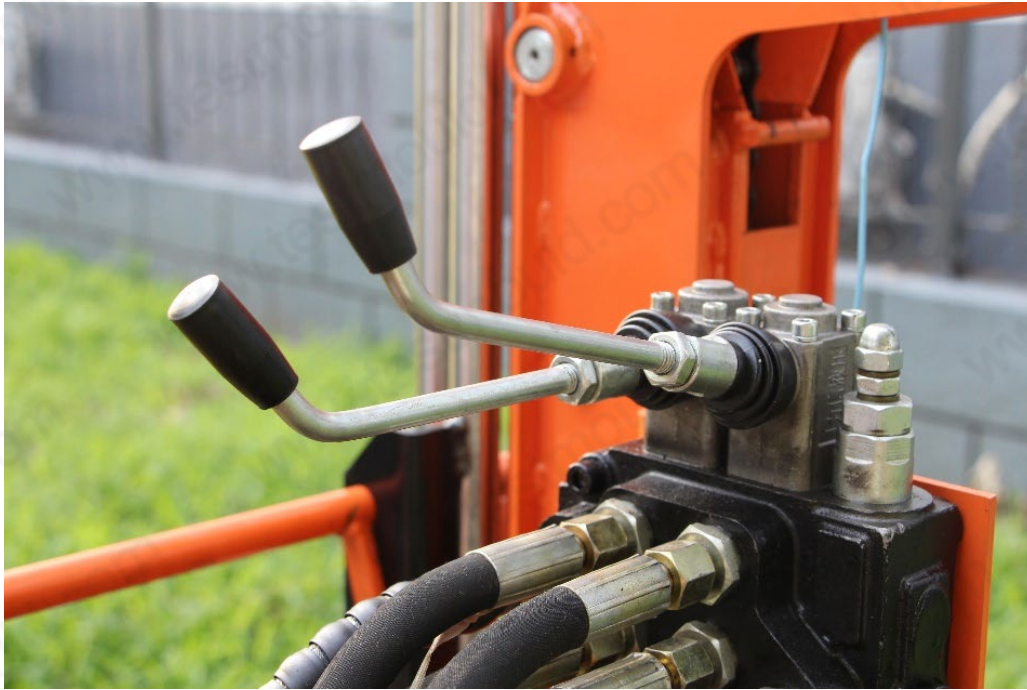


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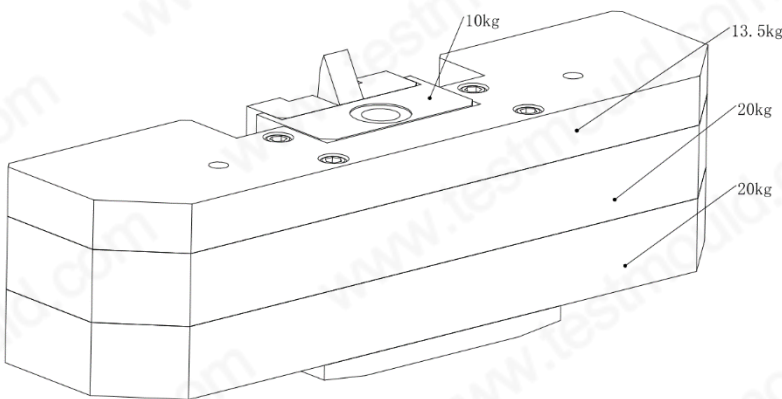
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VII. Weight drop adjustment

The weights of the drop weights are 10kg, 20kg, 20kg, and 13.5kg respectively, and can be disassembled by a hexagonal wrench.

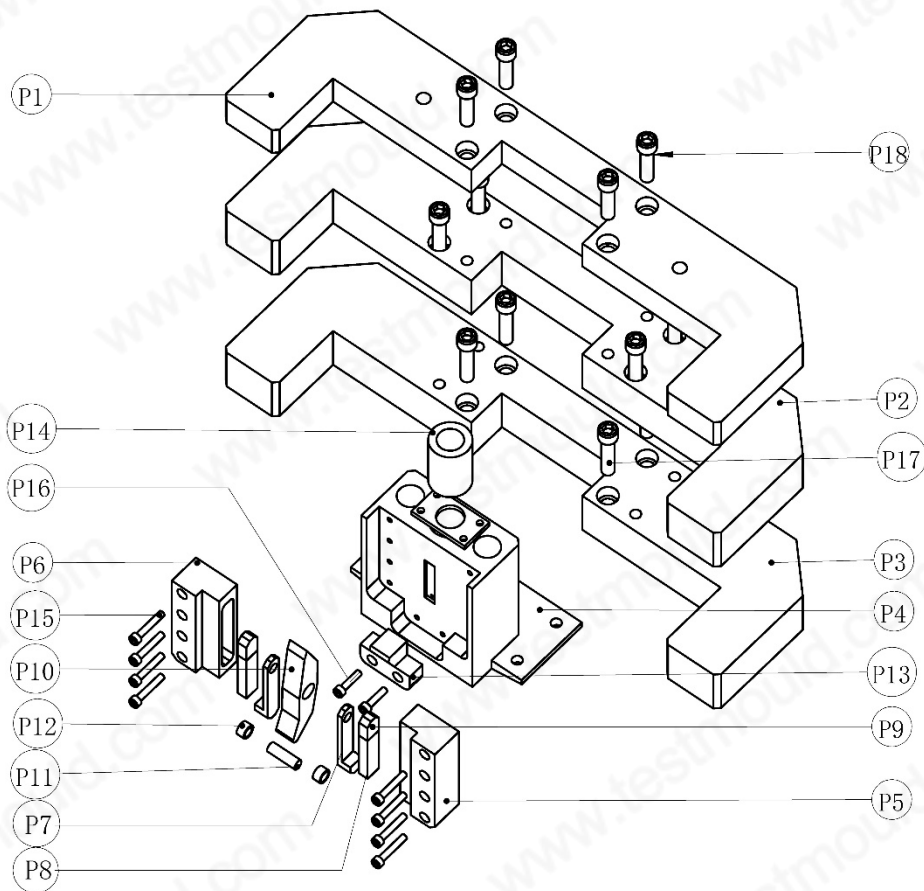


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NO.	Component	NO.	Component
P1	13.5kg	P10	Bolt
P2	20kg	P11	shaft
P3	20kg	P12	casing
P4	10kg	P13	chain block
P5	briquetting	P14	casing
P6	briquetting	P15	bolt
P7	latch holds the seat	P16	bolt
P8	bolt buffer	P17	bolt
P9	bolt seat	P18	bolt

VIII. Falling distance adjustment

The drop distance of 500mm or 750mm can be adjusted by the illustrated parts.

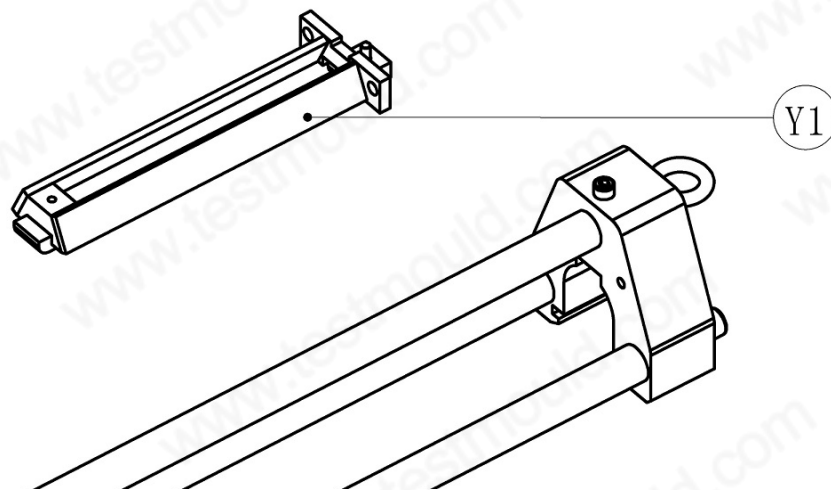


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IX. Maintenance

This chapter deals with the topic of equipment maintenance, which ensures the continued safety of the device.

Maintenance

- The chain must be tensioned before each use, and grease should be applied regularly.
- Check the engine oil level regularly, and replace the engine oil, air filter and spark plug according to the engine maintenance instructions.
- Check the hydraulic fluid level regularly.
- Regularly check whether the fasteners in key parts are loose.



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Maintenance safety instructions



WARNING!

Risk of injury due to improper maintenance!

Improper maintenance can lead to serious injuries. Maintenance work may only be carried out by trained specialist personnel authorized by the operator.

- I. Ensure sufficient freedom of assembly before starting work.
- II. When using a pressure washer, never direct the jet onto the valve blocks.
- III. Before recommissioning, make sure that all protective devices are correctly installed and functional.

Before switching on again, make sure that there are no people in the danger area.



WARNING!

Risk of injury due to unauthorized restart!

When working on individual components, people can be injured by switching on the power supply unexpectedly. Before carrying out any work on individual components, switch off the power supply and secure it against being switched on again.



WARNING!

Risk of injury from hazardous substances!

Hazardous substances contain components that are harmful to health and can lead to poisoning, burns or skin irritation.


- I. Observe the manufacturer's safety data sheet.
- II. Avoid spilling and misting.
- III. Do not eat, drink or smoke at work. Avoid skin and eye contact. Avoid skin and eye contact.


Maintenance schedule


The following sections describe the maintenance work required for optimal and trouble-free operation.



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- If increased wear and tear on the components is found during regular checks, shorten the maintenance intervals based on the actual signs of wear.

**WARNING!**

Risk of injury due to wrong spare parts!

Faulty spare parts can severely impair safety and cause damage, malfunctions or total failure. Only use original spare parts.

- Prepare a maintenance log for every maintenance job. The log helps with fault analysis, enables the required intervals to be adapted to the actual conditions of use and any warranty claims to be made.
- The execution of the named work is time and / or load-dependent in some cases. When specifying the interval both in terms of deadlines and in operating hours (Bh), the first case applies.
- For questions about maintenance work and intervals: contact the manufacturer.


**NOTE!**


My company's contact information can be found on the cover.

Interval	Maintenance work	Staff
Before every start-up	Check operating elements and safety devices for perfect technical condition, have defective components replaced if necessary or arrange for repairs.	Operator
Every day	If the device is very dirty, clean the device, oil the chain and mast guide.	Instructed staff
Weekly	Clean device and visual inspection of all device parts.	Instructed staff
Weekly	Tension, clean and oil the drive chain.	Instructed staff
Yearly	Check by the device officer in accordance with BetrSichV.	Machine representative

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Maintenance work

The various maintenance tasks to be performed are listed and described in the following sections.

Cleaning

Staff	Instructed staff
Personal protective equipment	Protective clothing
	Firm protective gloves when working on components. Chemical-resistant protective gloves when handling hazardous substances.
	Safety shoes
	Light respiratory protection when handling hazardous substances.
	Safety glasses with side protection when working on pressurized system components.


Check device for contamination daily. If surface contamination occurs:


1. Switch off the device and secure it against being switched on again.
2. Remove dirt properly. It should be noted: Do not use corrosive cleaners. Absorb oil deposits with adhesives.
 - Do not use aggressive cleaning agents.
 - Absorb oil deposits with binder.
 - Dispose of cleaning cloths and processing residues in an environmentally friendly manner in compliance with applicable local regulations.
 - After cleaning, check that all previously opened covers and safety devices have been properly closed again and are functional.
 - When using a high-pressure cleaner, do not spray the valve blocks with a strong jet, as this can damage the seals.



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Tension the drive chain

The drive chain must be checked for tension weekly with the spring balance. To do this, proceed as follows:

1. Move the mast sledge down.
2. Hook the spring balance in the middle of the chain between the drive and deflection wheel on the front of the mast. With a pulling force of 4-5 kg on the scale, the distance from the mast to the chain may only be 8 mm.

To tension the carrier chain, proceed as follows:

1. Loosen the lock nut at the top of the mast (axis of the tensioning wheel).
2. Loosen the lock nut in the mast head.
3. Tension the chain by means of a tension fork over an SW 19 tension nut until the tension is correct.
4. Tighten the lock nut again. Tighten the lock nut again.


Measures after maintenance


After completing the maintenance work before switching on, perform the following steps:


1. Check all previously loosened screw connections for tightness.
2. Check whether all protective devices and covers that have been removed are properly installed again.
3. Ensure that all tools, materials and other equipment used have been removed from the work area.
4. Clean the work area and any leaked substances such as B. Remove liquids, processing material or the like.
5. Make sure that all safety devices of the device function properly.



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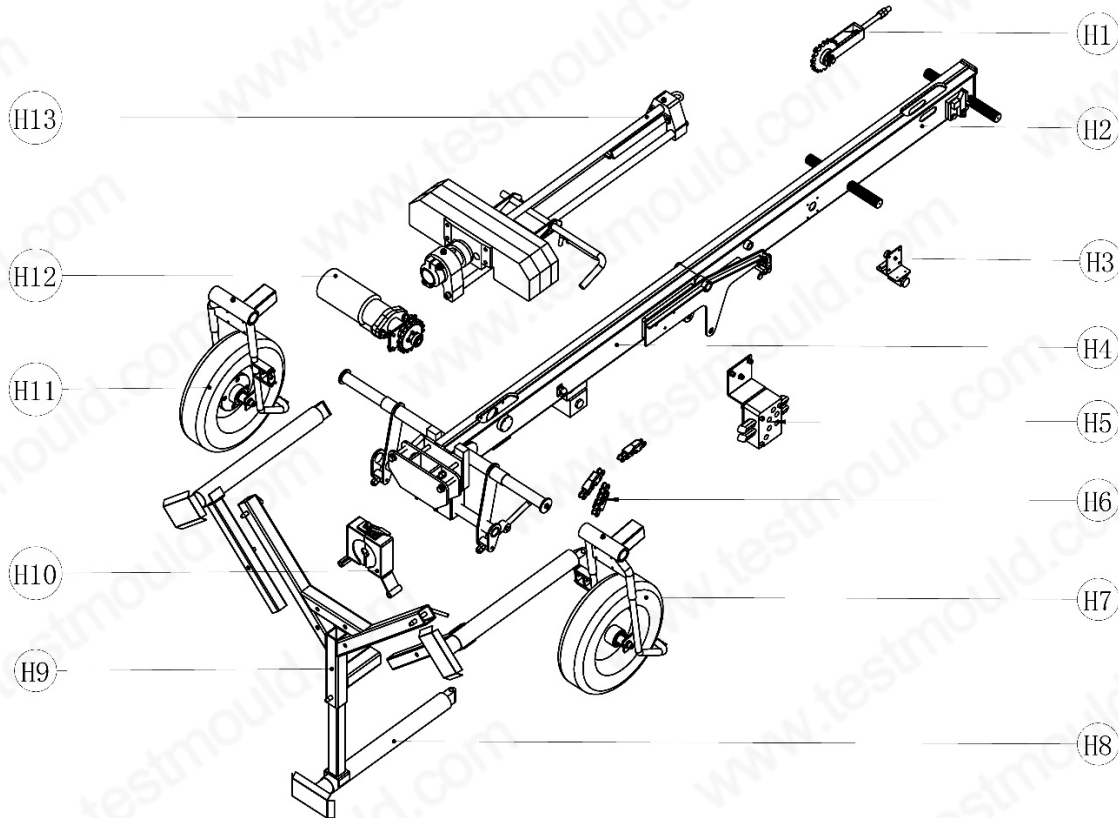
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X. Parts list

Main structure part



NO.	Component	NO.	Component
H1	Passive chain assembly	H8	Lifting leg
H2	Folded part	H9	Base
H3	counter	H10	Fixture
H4	Base	H11	Left-tire bracket
H5	Manual reversing valve part	H12	Motor
H6	Chain part	H13	Mobile seat
H7	Right tire bracket		

Moving seat part

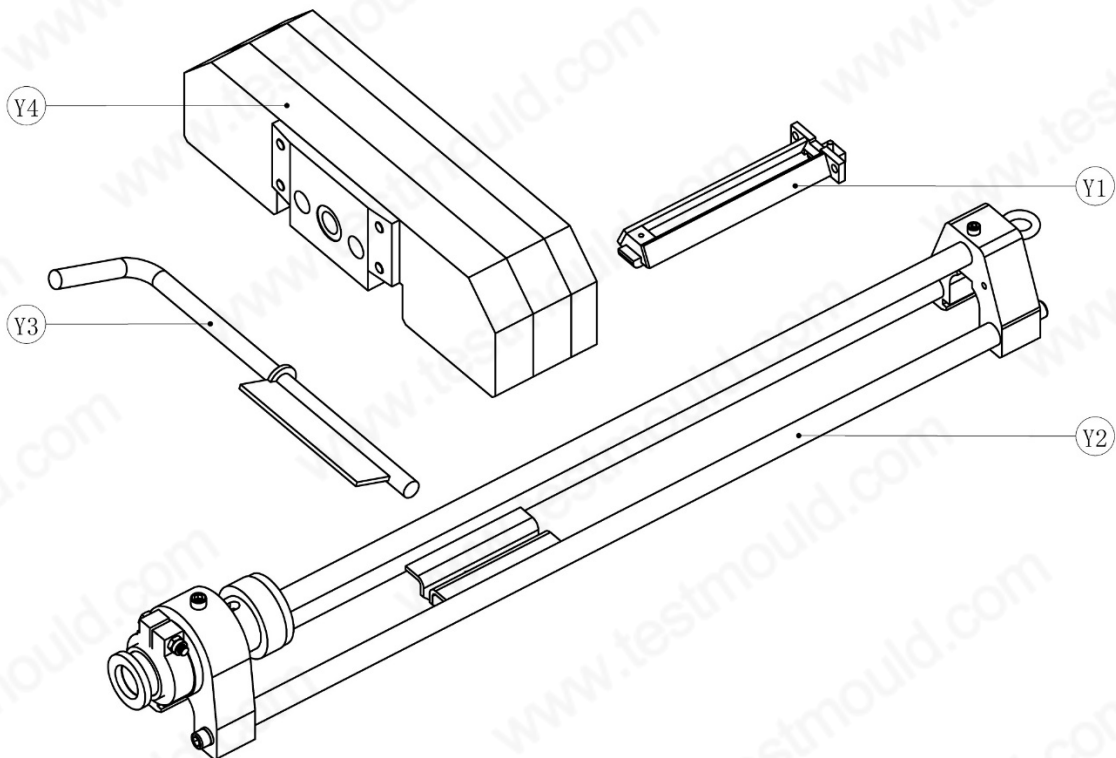


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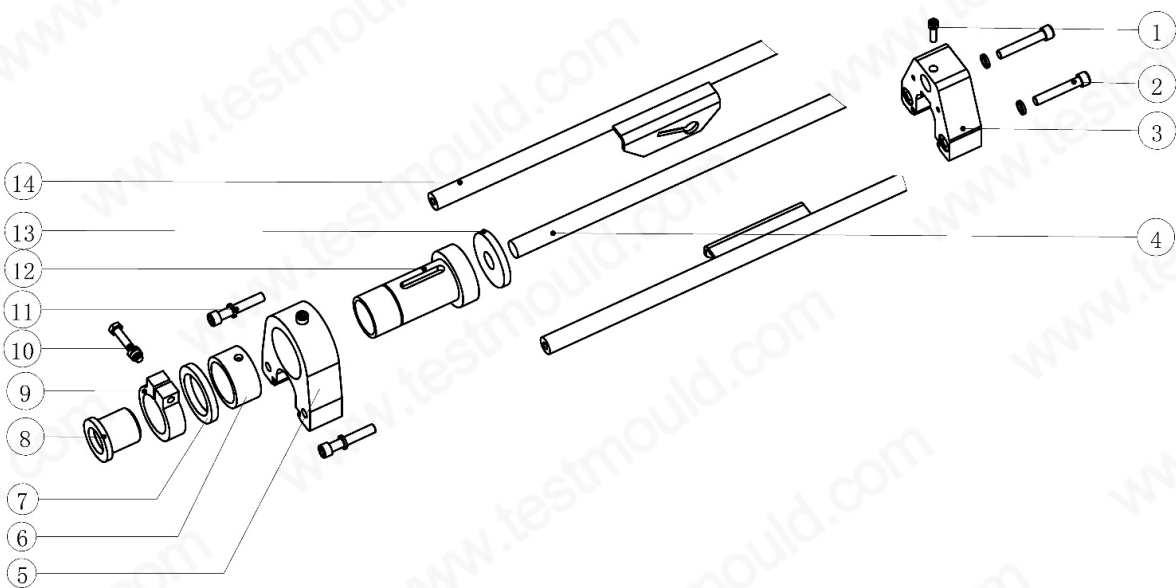
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NO.	Component
Y1	Stroke control
Y2	framework
Y3	Improve bolt
Y4	Counterweight block



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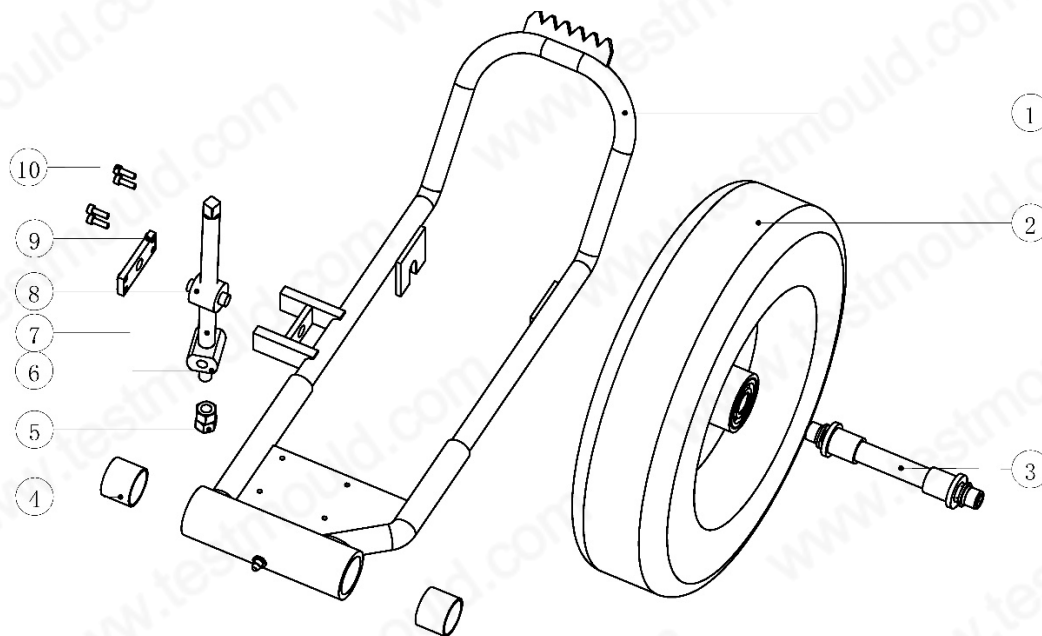
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NO.	Component	NO.	Component
1	Screw	8	Stroke adjustment set
2	Screw	9	Copper sets
3	Upper top block	10	Screw
4	Guide rod	11	Screw
5	Bottom top block	12	Anvil
6	Nylon sleeve	13	Nylon pad
7	Nylon pad	14	Fixed rod

Tire part



NO.	Component	NO.	Component
1	Tire stents	6	Copper ring
2	Tire	7	Adjust the screw
3	Wheel shaft	8	Copper nut
4	Copper ring	9	Stop
5	Nut	10	Screw

Motor part



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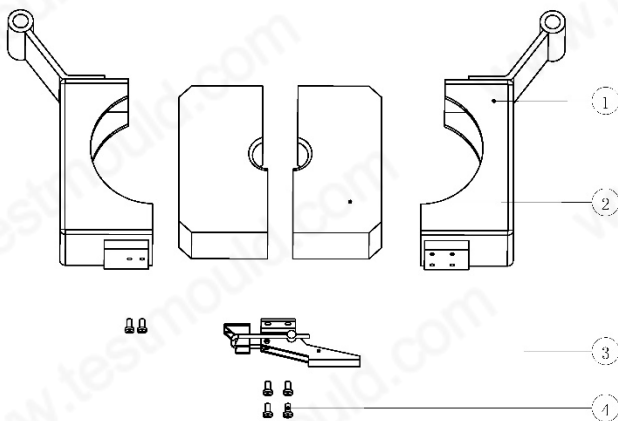
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NO.	Component	NO.	Component
1	Chain wheel shaft	6	Spacer
2	Connecting flange	7	Chain wheel
3	Motor	8	Spacer
4	Bearing	9	Screw
5	Spacer		

Fixture part



NO.	Component
1	Mast fixing seat
2	Fixed clamp 22mm
3	Quick clamp
4	Screw

Counterweight seat part

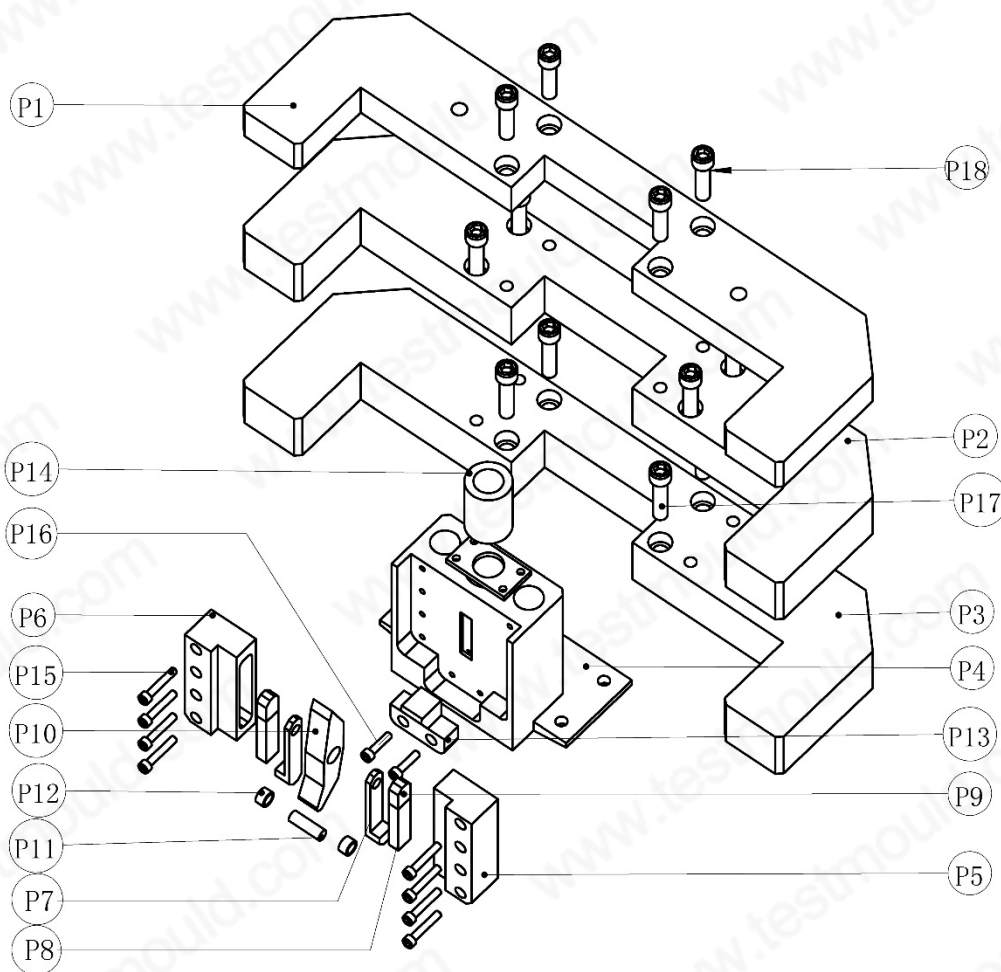


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P6	Briquetting	P15	Bolt
P7	Latch holds the seat	P16	Bolt
P8	Bolt buffer	P17	Bolt
P9	Bolt seat	P18	Bolt



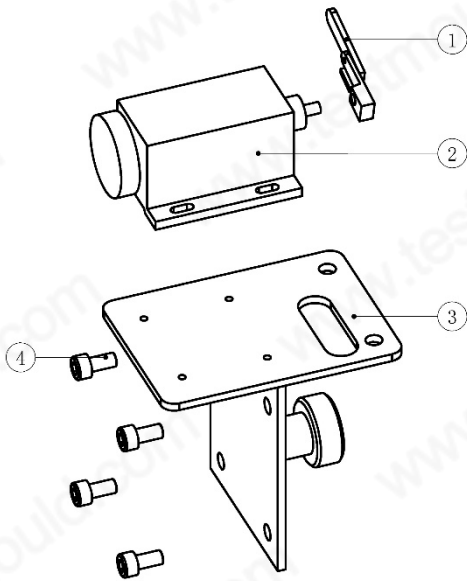
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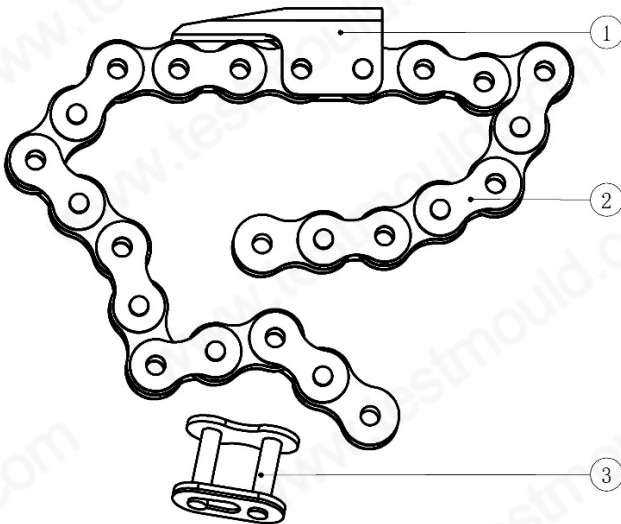
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Counter part



NO.	Component
1	pointer
2	Counter
3	Fixed bracket
4	screw

Chain



NO.	Component
1	Promotion board
2	Chain 12A
3	Chain all meet 12A



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Packing list

Item	Detail	Quantity
Hydraulic probing rig	SPT-H200	1 set
Hydraulic station	Oil tank 385*280*150mm, 16L	1 set
	Filter SP-06*10	
	Cooling system	
Hammer mass 63.5kg	DPL 10kg, DPM 30kg, DPH 50kg, DPSH & SPT 63.5kg	1 set
Rod	Dia. 22mm x 1m	2 pcs
	Dia. 32mm x 1m	10 pcs
Brass cap	Suit for dia. 22mm rod	1 pc
	Suit for dia. 32mm rod	1 pc
Cone 90°	10cm ²	1 pc
	15cm ²	1 pc
	16cm ²	1 pc
	20cm ²	1 pc
Window sampling	Dia. 51mm*1m length split sampler	Optional
Rod extraction unit	SPT-RE16, 16T, including oil cylinder and clamp	1 set
Tool bag		1 set



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