



## Operation Instruction Hydraulic Herculean Puller

This handbook is an integrating part of the machine, and must be carefully read in full, before a completing every operation. It must be kept in case of future references, until the getting rid of the machine.

The handbook is addressed to professional users, it reflects the state of the technique at the moment of the commercialization of the machine, and cannot be considered inadequate just because on the ground of new experience it will be afterwards up-to-date.

WREN CO. declines every responsibilities due to the following situations;

- improper use of the machine or its use by not professional operators;
- wrong installation;
- wrong feeding;
- absences in maintenance;
- alterations or interventions not authorized by the manufacturer;
- employment of not original parts, or not suitable for the model.

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### IMPORTANT INSTRUCTIONS ON RECEIPT

Always inspect the packages and all the material received, this to verify possible damages happened during the transport; in this case make a complaint to the transport company.

### INFORMATION ABOUT THE RISKS RESULTING FROM THE OF THE PRODUCT



This is the symbol of danger. Every time you meet this symbol it means that damages more or less serious towards persons, animals and things are possible. The kind of danger and the precautions to adopt in order to contain the relative risks are every time quoted in the text following the symbol.



**DANGER:** EVERY TIME THIS WARNING IS IGNORED, IT EXISTS A MINOR RISK FOR PERSONS' AND ANIMALS' SECURITY AND/OR DAMAGES TO THINGS.



**WARNING:** EVERY TIME THIS WARNING IS IGNORED, IT EXISTS A MINOR RISK FOR PERSONS' AND ANIMALS' SECURITY AND/OR DAMAGES TO THINGS.

**The user is requested to follow always and carefully these precautions. The manufacturer declines every responsibilities and wounds resulting from an improper use of the product.**

### SAFETY ISSUES

Hydraulic Herculean Puller is a power tool. Operators must read and understand all safety precautions and operation instructions included with the puller, electric pump, and cylinder before using the puller.

#### SAFETY FIRST

▲ **WARNING:** To avoid personal injury and possible equipment damage,

- Be sure that every components of the hydraulic system are designed for a max. pressure of 700bar (10,000 psi)

- Never rely on this puller to support, carry, or transport the workpiece being pulled.
- The following procedures should only be performed by qualified, trained personnel who are familiar with this equipment.
- Safety glasses must be worn at all times by the puller operator and anyone within sight of the puller. Locate the puller in an isolated area or shield it to minimize danger to others.
- The owner of this tool must ensure that all safety-related decals are installed, maintained and replaced if they become hard to read.
- Do not exceed equipment ratings. Try to minimize the danger of overloading. Overloading causes equipment failure and possible personal injury.
- The pressure gauge is installed in the system to monitor operating pressure. It is your window to what happening in the system.
- Immediately replace worn or damaged parts by genuine WREN parts.
- Keep hydraulic equipment away from flames, heat, sharp edge, and chemical corrosion
- To avoid personal injury and possible equipment damage, NEVER get rid of the protective device installed on the puller. Do not dismount any components of the puller without WREN's permission. Do not readjust the safety valve of the cylinder.
- Never stand to each side of the puller in case of personal injury in system operation.

## HOSES

- should a hydraulic hose ever rupture, burst, or need to be disconnected, immediately shut off the pump. Never grasp a leaking pressurized hose with your hands.
- Avoid damaging hydraulic hose. Avoid sharp bends and kinks when routing hydraulic hoses. Using a bent or kinked hose will cause severe backpressure. Sharp bends and kinks will internally damage the hose leading to premature hose failure.
- Do not drop heavy objects on hose. A sharp impact may cause internal damage to hose wire strands. Applying pressure to a damaged hose may cause it to rupture.
- Do not subject the hose to potential hazard, such as fire, sharp surfaces, heavy impact, or extreme heat or cold. Do not allow the hose to kink, twist, curl, or bend so tightly that the oil flow within the hose is blocked or reduced. Periodically inspect the hose for wear, because any of these conditions can damage the hose and possibly result in personal injury.
- Do not use the hose to move attached equipment. Stress can damage the hose and possibly cause personal injury.
- Hose material and coupler seals must be compatible with the hydraulic fluid used. Hoses also must not come in contact with corrosive material such as creosote-impregnated objects and some paints. Consult the manufacturer before painting a hose. Never paint a coupler. Hose deterioration due to toxic materials can result in personal injury.

## Description

WREN LA50T, heavy tonnage, all-purpose hydraulic puller, is made of super high strength alloy. With its character of point-to-point control and double acting design, it is used for dismantling giant axle and hole type work piece. The wheeler design enables it move freely to change workplace.

## Operation

- READY** -----Choose 2 pawls or 3 pawls to work according to the work piece. When transferring to 2 or 3 pawls, loose the bolt in master cylinder, rotate the cylinder to proper position, then fixed;
- Choose the right puller mouth according to the work piece that is being pulled to operate puller foot;
- According to the relative location between puller and being pulled work piece to choose the right compensating rod with proper length;
- Connecting the power, if the power light turns red, the facility is in inactive state.

Before operating the machine, it should be confirm if hose and coupler are tightened well, and if the cylinder is filled with oil. Never use the equipment without oil.

### Try circulating

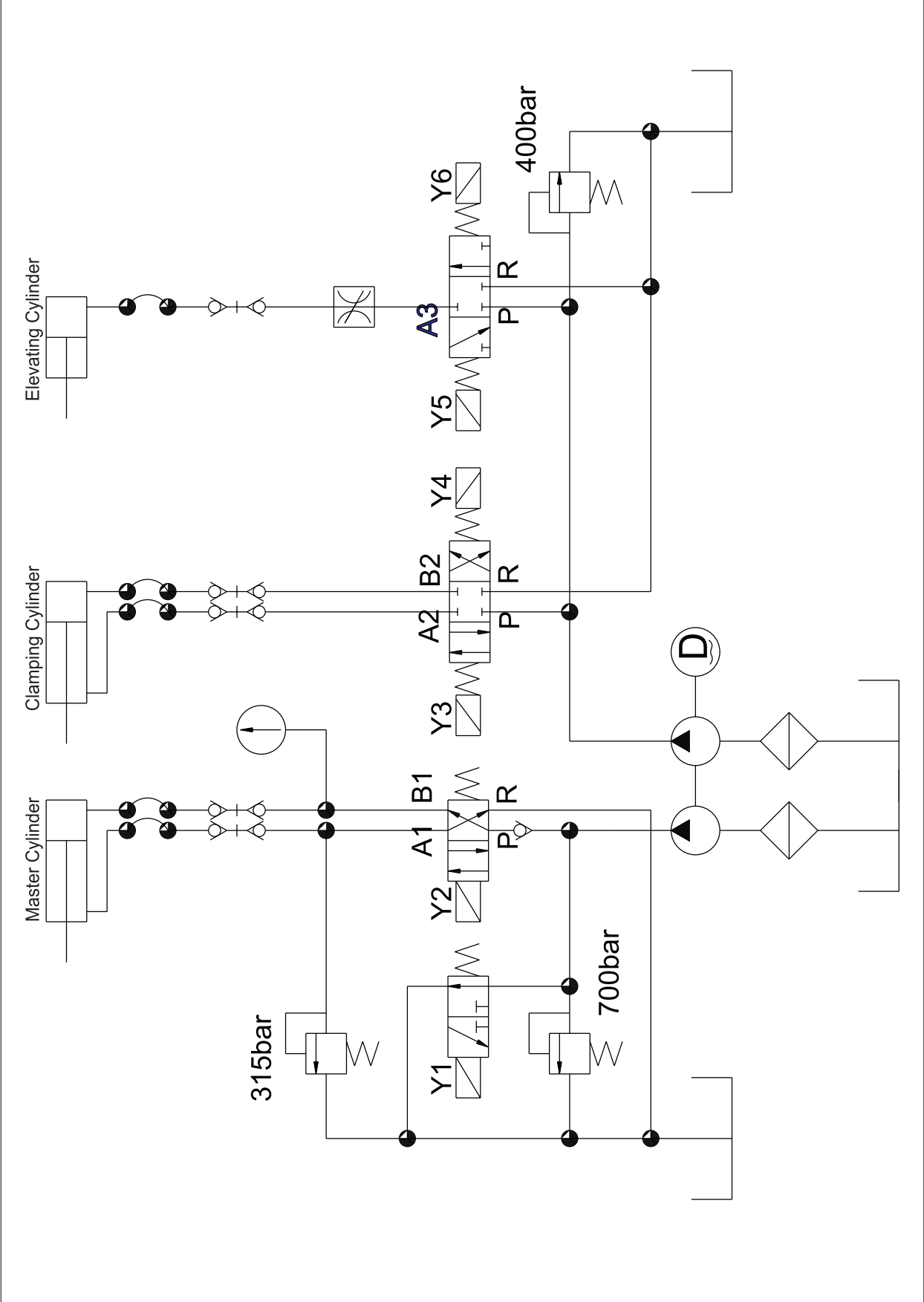
- Press the lift or down button, and inspect if the lifting device works well.
- Press the opening or fastening button, and checkup if the open-and-fasten action right or not.
- Press the forward or backward button, and check whether the fore-and-aft movement of master cylinder is correct.

### Operation

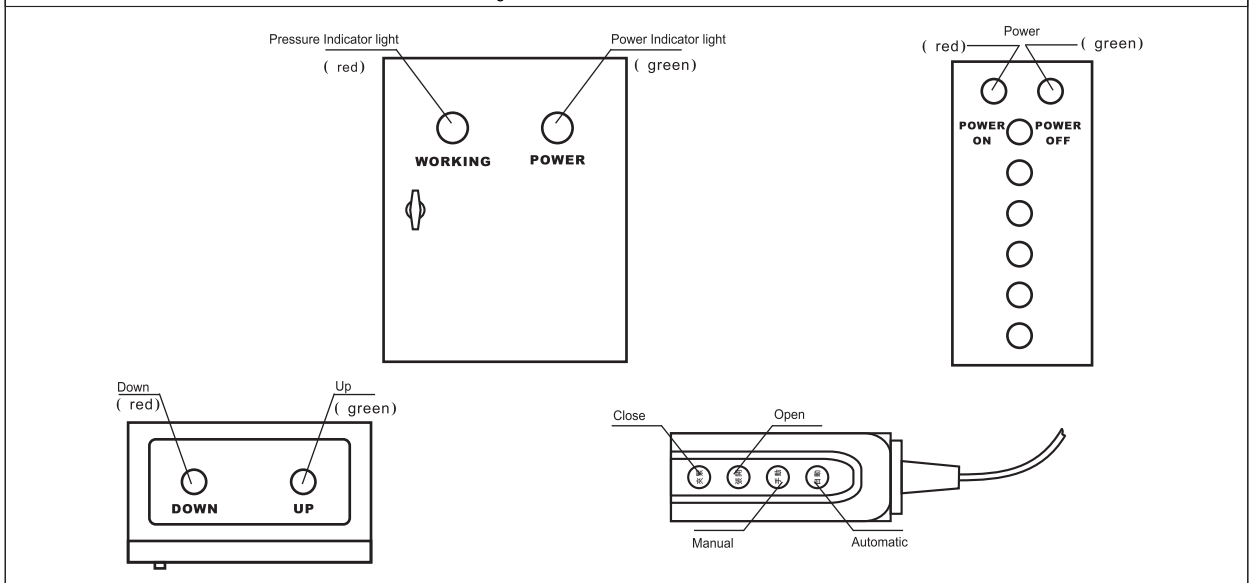
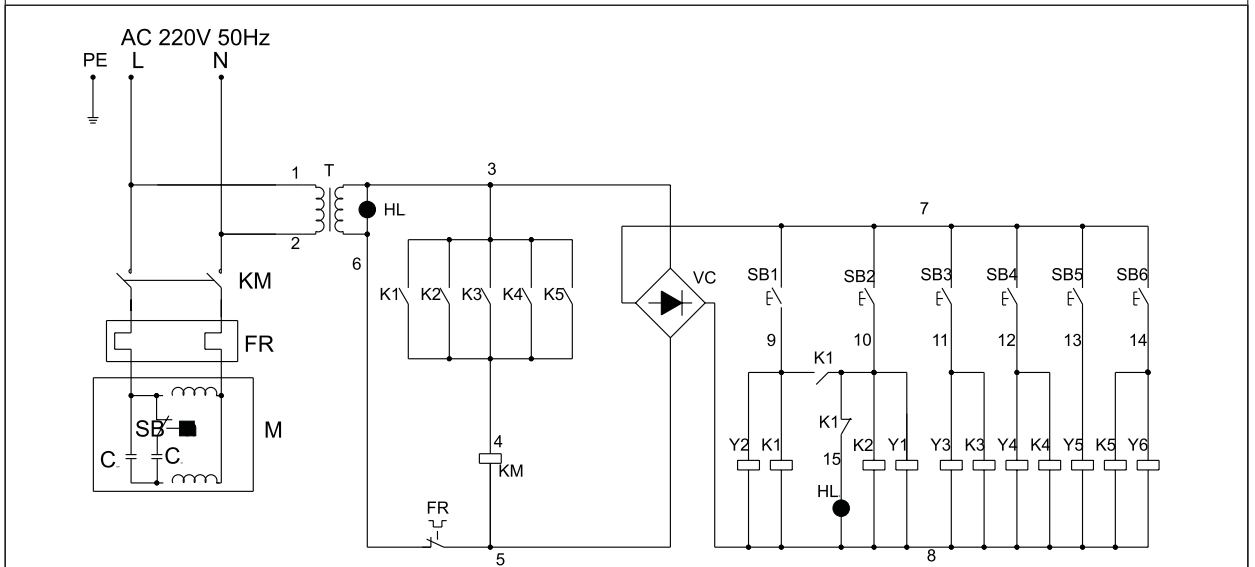
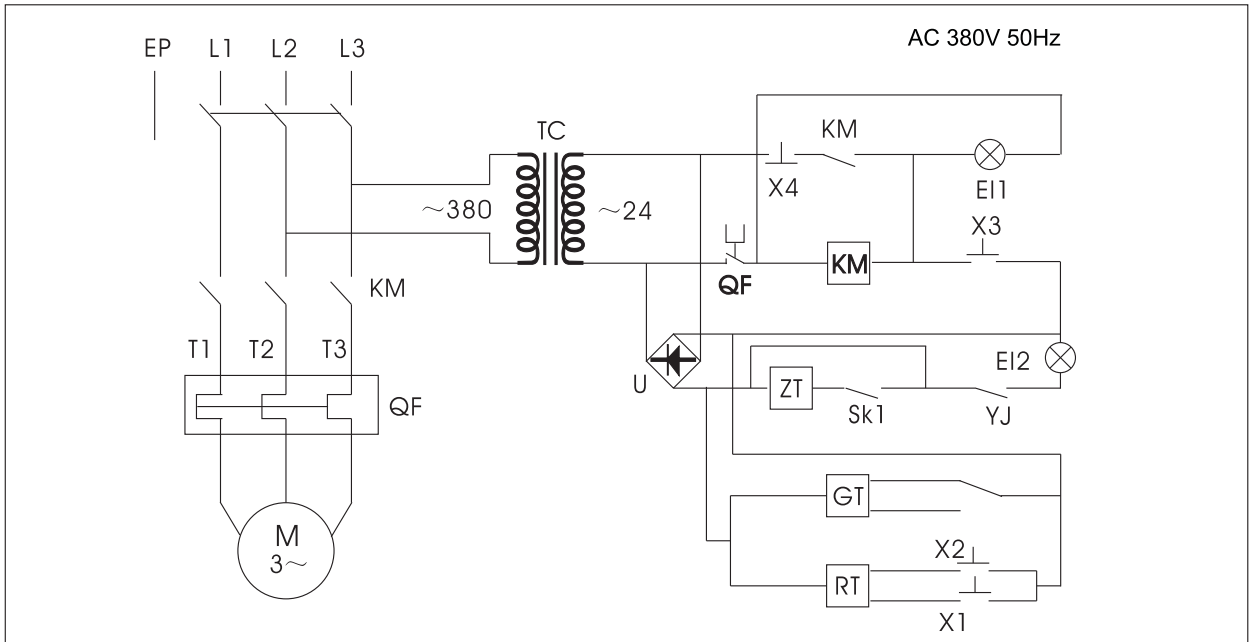
- Place the puller to the work place, press lift or down to make the center shift in line with work piece's central line.
- Press the open button, loose the pawls, and push the cart into bound of the pawls, then press the fasten button to hook the work piece.
- Place a proper length compensating pressure pin at the top of main cylinder according to location of work piece.
- Press forward, and the light turns green. Then the cylinder draws out to dismount the work piece; after pulling out, press the backward to release the piston, then press open until the pawls are completely unlocked.
- Caution: when working, the movable spring central thimble is necessary for protecting the other parts from damaging.

Please fix the location before the pawls unlock the work piece, if not, the work piece will strike the equipment. If the axle's and the work piece's center are not in the same circle, please reset it

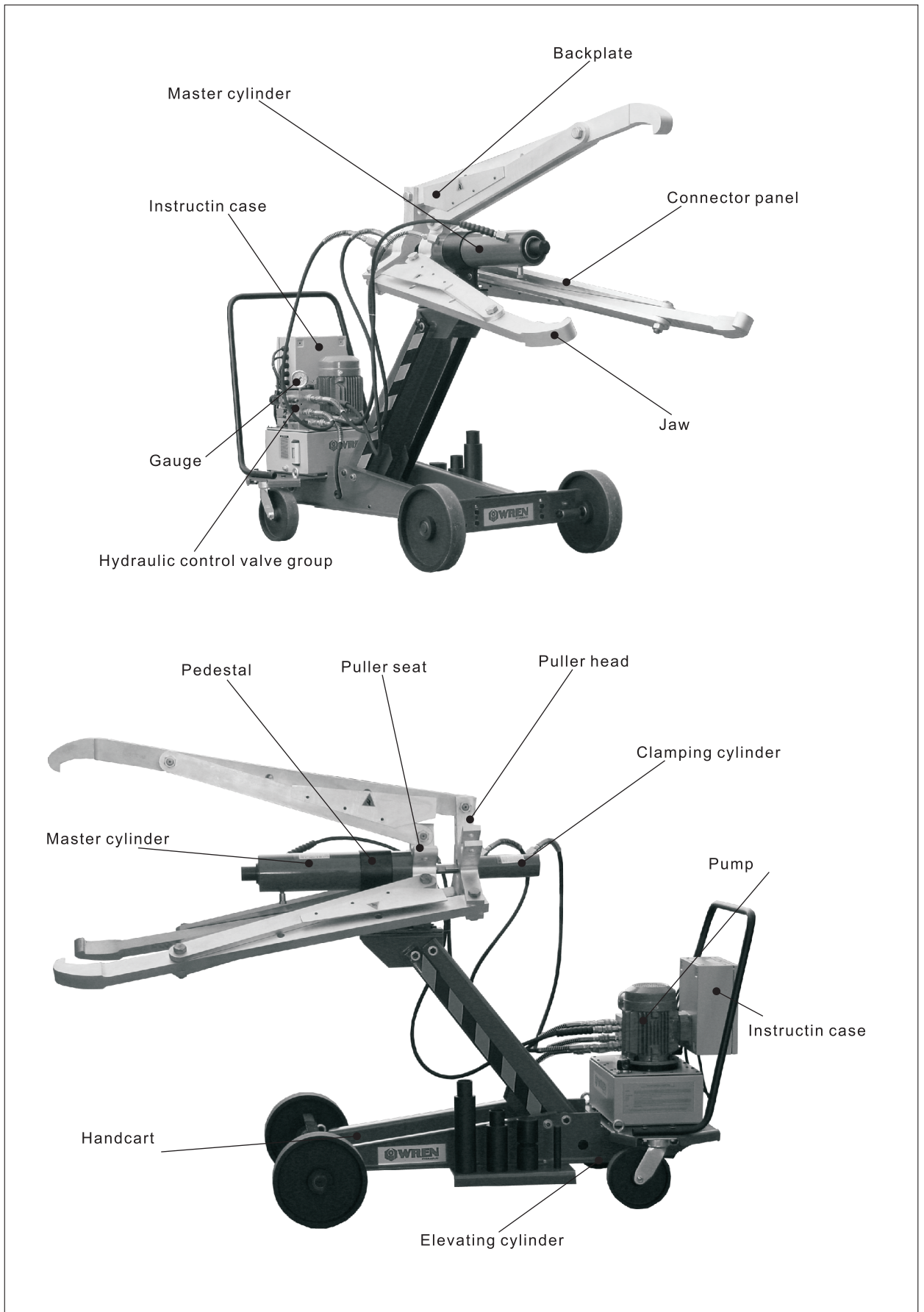
Oil route schematic diagram



# Electric schematic diagram



## Appearance map





## 液压拔轮器操作保养手册

本操作手册是整套机器的一部分，并且在完成每一步操作之前都要仔细地阅读。它必须留作将来参考，直到机器报废为止。

此说明书为专业使用者设计，它反映了在此机器商业化的今天它的技术水平，不能认为仅仅因为在新经验基础上它就会落后于时代。

任何在此书上未提到的疑问或使用方法，请在安装和使用之前询问供应商。

雷恩拒绝承担由以下情况引起的任何责任：

不适当的使用或者由非专业人士操作使用；

安装错误；

用油错误；

不进行保养维护；


未经生产商授权的改装或者拆卸；


使用非原装部件，或者型号不适用。


### 一 收货须知（开箱检查）

检查包装和所有收到货物，以确定在运输过程中的可能造成的损坏；在这种情况下对运输商提出异议。

#### 安全提示：

 这是危险标记。每当你看到此标记，就意味着对人、动物、和物品可能存在或多或少的危险。在此册中这种危险和相关的预防措施都用此标记标出。

 危险：忽略此警告可能会对人，动物或物品的安全存在重大危险。

 警告：忽略此警告可能会对人，动物或物品的安全存在重大危险。

敬请使用者仔细遵守这些措施，生产商拒绝对任何由使用不当引起的损坏和伤害承担任何责任。

液压拉马是一种动力工具，使用前应仔细阅读所有的说明、警告和注意事项，遵守安全措施以避免在操作设备时发生人身或设备的损伤！WREN对因为不安全操作及错误操作导致的损坏不负责任。

#### ▲ 警告

为避免人身伤害及可能的设备损坏，要确保每一个液压元件能够承受700BAR的压力。

#### ▲ 警告

不要超过设备的额定负荷！

尽量减少超载的危险；大行程使用时不要超过油缸额定压力的2 / 3。

在系统中使用压力表显示操作负载。压力表是系统内发生情况的窗口。

#### ▲ 警告

尽快用WREN原厂零件替换破旧的零件！

### ▲ 注意

确保各元件避免受到过热、火焰、机器扎压、利刃和化学腐蚀等伤害。

### ▲ 注意

避免损坏液压油管！

使用中应该避免液压油管严重弯曲或缠绕。使用弯曲或缠绕的油管将产生过大的背压，严重弯曲和缠绕使油管内部损坏，从而过早报废。不要将重物掉到或压在油管上。严重冲击可引起油管内部金属线损坏，加压时被损伤的油管可能破裂。

### ▲ 警告

为避免损坏设备及人身伤害，不得去掉拉马上的保护装置，不得随意拆卸拉马附件，不得任意调节安全阀。

### ▲ 注意

尽量保持拉马顶杆与工件的同轴度，以保持系统的稳定性。

### ▲ 警告

拉马工作过程中，为防止伤害事故，严禁在拉马两面站人。

## 二 产品描述

WREN LA50T属于大吨位通用型液压拉马，采用超高强度合金制造，双作用液压设计，全自动/手动控制，可以拆卸大型轴、孔类工件，轮式小车方便移动，可随时更换工作场所。

**注意 在设计、结构及应用上不得有任何未经授权的改动。**





## 三 操作使用

### 准备





- 该拉马可根据被拉工件的情况，选用2爪或3爪工作。转换2爪或3爪工作时，旋松主油缸的抱箍螺栓，转动主油缸至合适位置，然后固定。
- 根据被拉工件的情况，选择适合的拉马开口安装拉马脚。
- 根据被拉工件与拉马的相对位置，选择合适长度的补偿杆。
- 连接电源（380V，50Hz），打开电源箱，合上空气开关。

★ 设备运行前应仔细检查油管及油管接头，油泵是否有油，严禁无油运转。

### 试运转

- 按下电源开关，启动油泵，检查油泵运转情况。
- 点动  或  按钮检查拉马升降动作是否正常。
- 按下线控开关上的  或  按钮，检查拉马脚夹紧、张开动作是否正常。

### 操作

- 将拉马小车推到待处理工件附近合适的位置，点动  或  按钮，使油缸的轴心线对准工件的中心线。
- 按下  按钮，打开拉爪，推动拉马小车使工件置于拉爪内，按下  按钮使拉爪钩住工件。
- 根据工件的位置，在拉马主油缸的顶头上放置适当长度的补偿顶杆。



★ 注意：拉马工作时必需使用压头，以保护拉马其他另部件不受损坏。

★ 如拉马受力后主油缸的轴心线与工件的中心线不同心，可点动(升)或(降)按钮进行调节。

#### 自动操作：

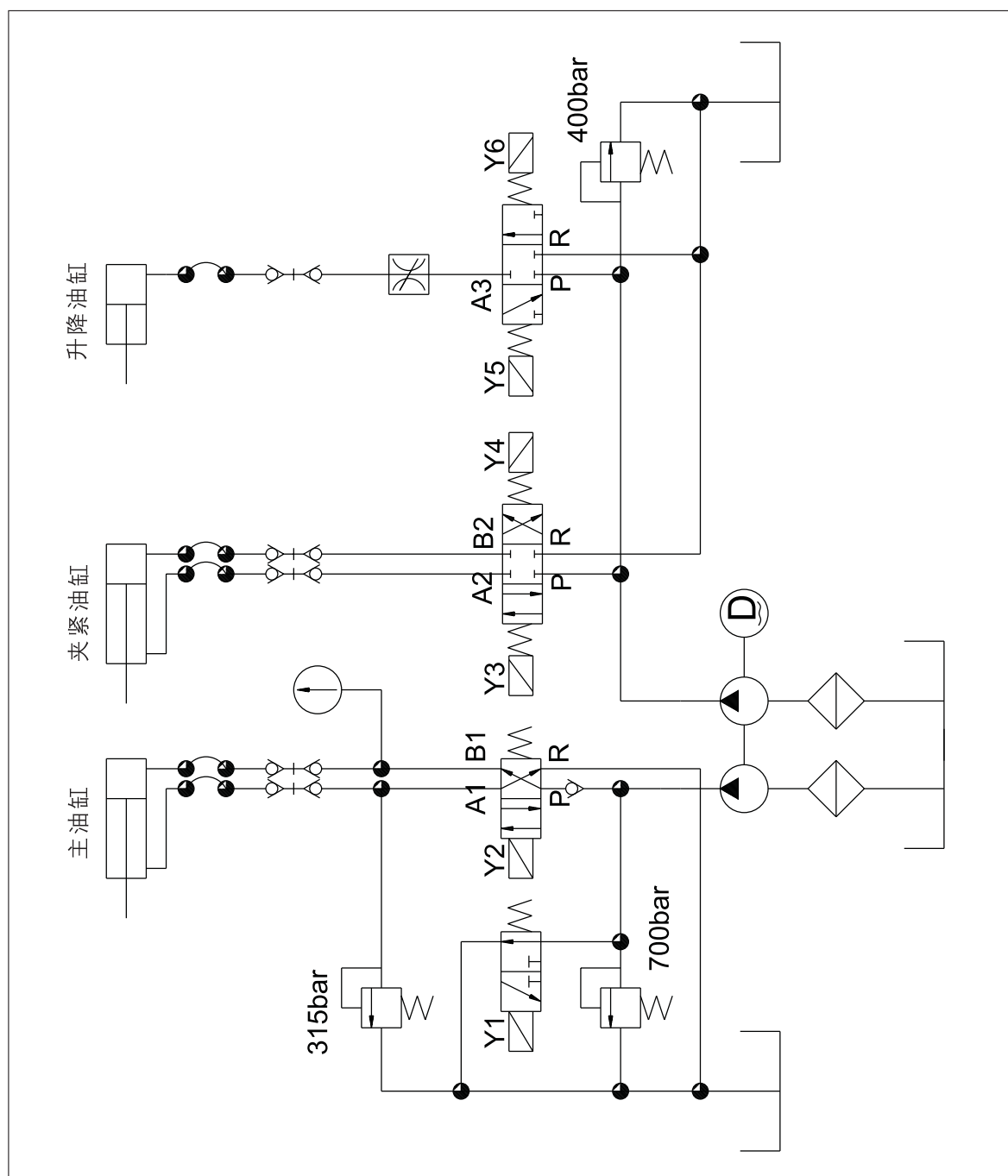
按下(自动)按钮，然后按下(夹紧)按钮，直到(红)指示灯亮(此时主油缸开始伸出)即可松开(夹紧)按钮，工件拉出后，可按下(手动)按钮，停止自动拉拔动作，再按住(张开)按钮至拉爪从工件上松开。

#### 手动操作：

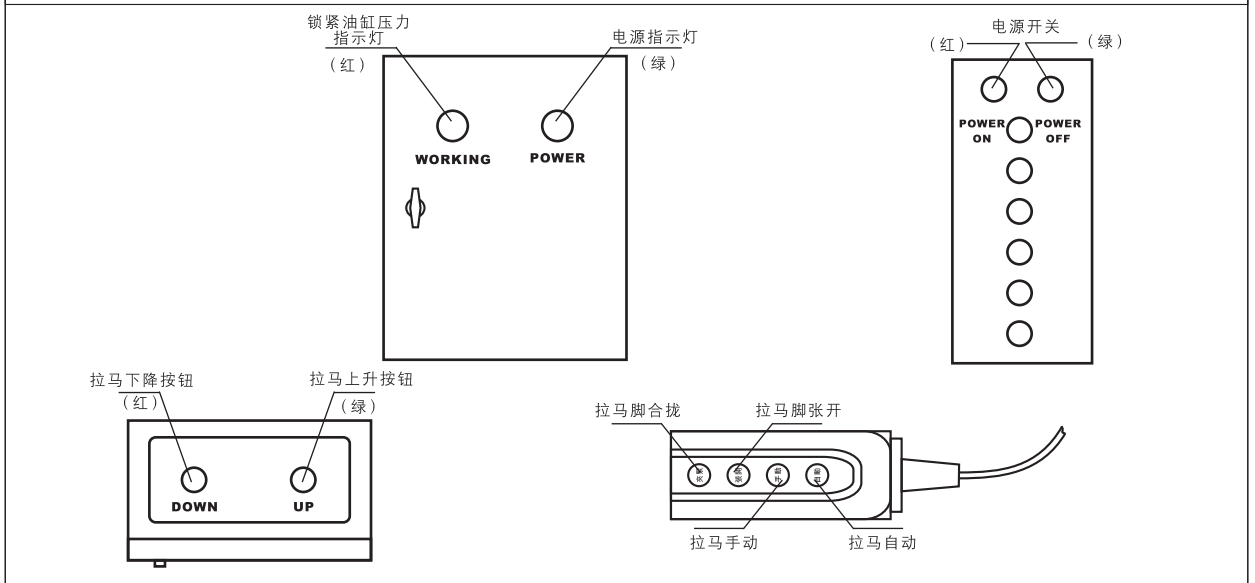
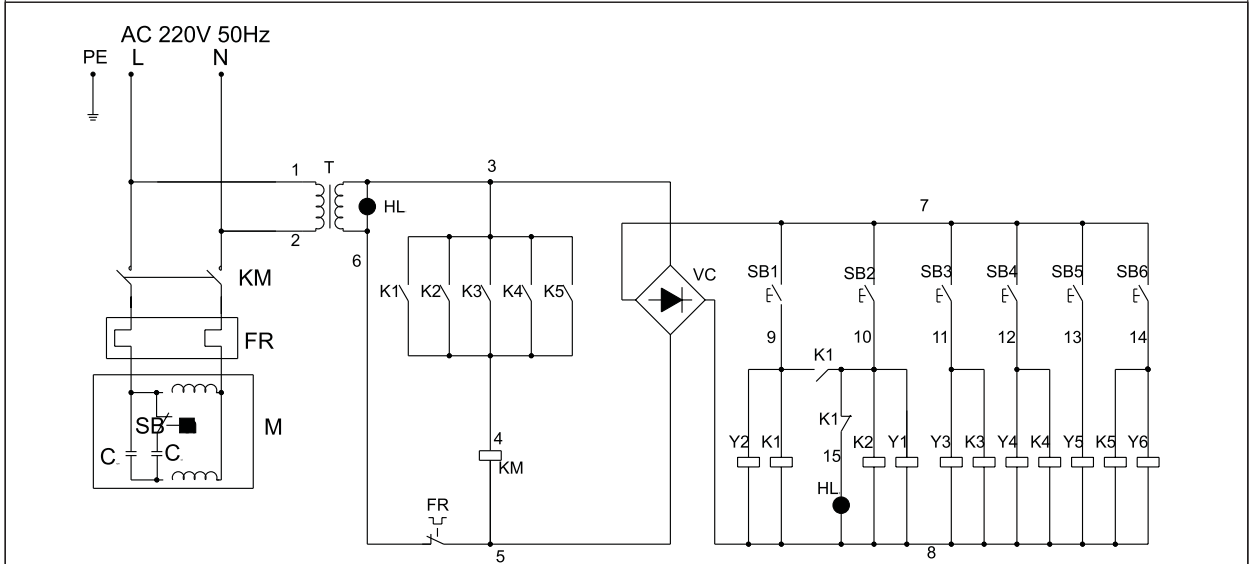
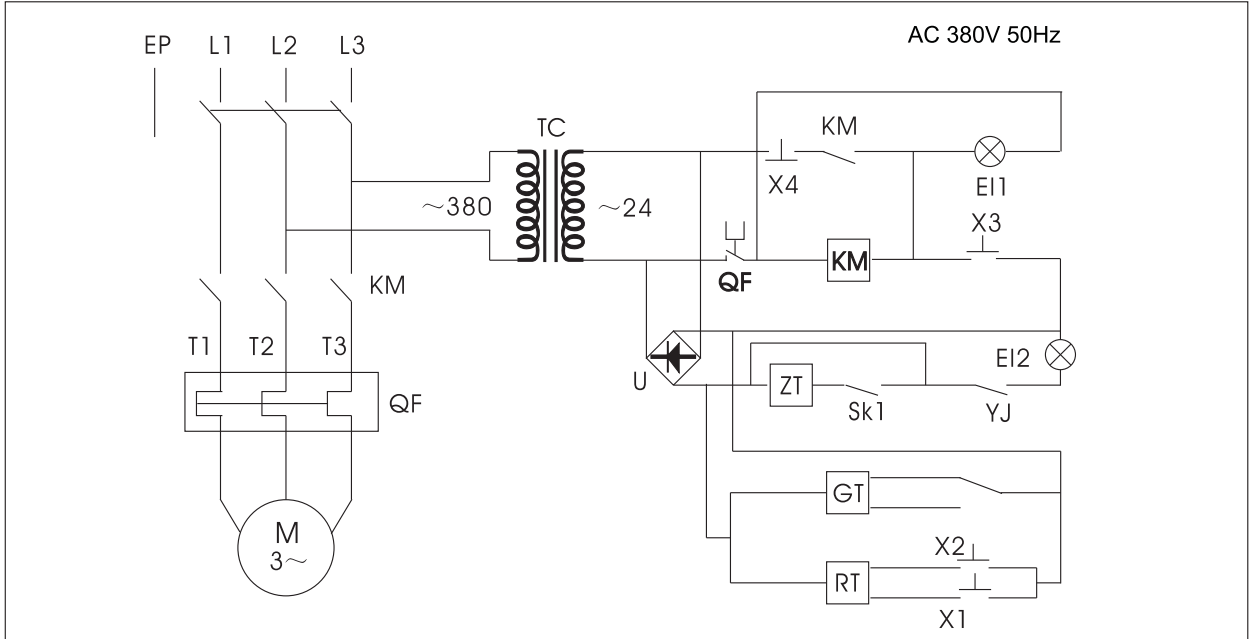
按下(夹紧)按钮，直到(红)指示灯亮(此时主油缸开始伸出)即可松开(夹紧)按钮按下(手动)按钮，工件拉出后，然后按住(张开)按钮至拉爪从工件上松开。

★ 在操作中，手动与自动可根据实际需要交替进行。

### 四 液压拉马油路原理图



# 五 电器图



## 六 外型图

