

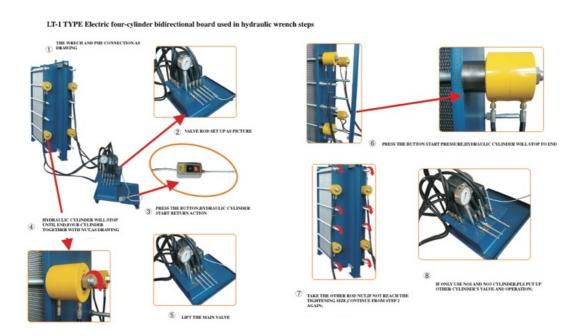
Hydraulic Wrenches

Compared with manually assembling a PHE, using hydraulic wrenches only takes two labours, and the efficiency can be increased by more than 6 times. The hydraulic wrench is composed of a pump station, a clamping cylinder, a high-pressure oil pipe, and a pipe joint. It is small, light, convenient operation and flexible handling.



1. Hydraulic Wrench

The plate heat exchanger hydraulic wrench is a disassembly and assembly tool for the gasketed plate heat exchanger, which is suitable for both manufacturers and users.





1.1 ELECTRIC SINGLE-ACTING FEATURES

- Electric pumping station, using high- and low-pressure pump combination;
- It is able to achieve fast forward and high-pressure tightening;
- Large tightening force.

1.2 FEATURES OF MANUAL SINGLE-ACTING TYPE

- Manual pumping station adopts a combination of high and low-pressure pumps;
- It can achieve high-pressure tightening with great tightening force;
- It is suitable for where there is no electrical wiring on site.

1.3 FEATURES OF ELECTRIC DOUBLE-ACTING TYPE





Electric pump is equipped with manual reversing valve. Compared with electric single-acting type, in addition to the above characteristics, it also has the characteristic that the clamping cylinder can move forward and backward quickly, which is more efficient.



2.RELEVANT APPLICATION INSTRUCTIONS FOR HEAT EXCHANGER HYDRAULIC WRENCHES

There are two series of heat exchanger hydraulic wrenches: driven hydraulic wrench and hollow hydraulic wrench. As the name suggests, the drive-type hydraulic torque wrench relies on the drive shaft to drive the corresponding specification sleeve to achieve the pre-tightening of the nut.



As long as the torque range allows, it can be replaced by the corresponding high-strength sleeve to complete the bolts of different specifications. It is a general-purpose type. The heat exchanger hydraulic wrench has a wide range of applications.

In the process of assembly and maintenance, especially emergency repair, the plate heat exchanger needs to be quickly disassembled and assembled.

In order to increase the speed of assembly and maintenance, it is desirable to install the movable splint in place at one time, that is, the large stroke of the hollow hydraulic cylinder is not less than the distance required by the movable splint.

Since the hollow hydraulic cylinder is coaxial with the screw, the bearing surface of the hollow hydraulic cylinder is a toroidal surface.

Compared with the hydraulic cylinder with the bearing surface of the same shape and the circular surface, the bearing area is smaller, and the hydraulic thrust that can be generated is also higher.

Small, hollow hydraulic cylinders that produce the same thrust are larger than those of the hydraulic cylinder. The increase in the external dimensions will increase the weight of the hydraulic cylinder, which is not convenient for manual operation.



3.THE WORKING PRINCIPLE OF THE PLATE HEAT EXCHANGER HYDRAULIC WRENCH

- 1. The plate heat exchanger hydraulic wrench is composed of working heads, a hydraulic pump and a high-pressure oil pipe. Through the high-pressure oil pipe, the hydraulic pump transmits the power to the working head, and drives the working head to tighten or loosen the nut. The hydraulic pump can be driven by electricity or compressed air.
- 2. The working head of the hydraulic wrench of the plate heat exchanger consists mainly of three parts, the frame (also called the housing), the cylinder and the transmission components.

Cylinder output force, cylinder piston rod and transmission part of the movement side, cylinder center to transmission component center this distance is hydraulic wrench put strong arm, cylinder force multiplied by force arm, is the plate heat exchanger hydraulic wrench theoretical output torque.

Due to the existence of frictional resistance, the actual output torque of the hydraulic wrench is smaller than the theoretical output torque.

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