

► BPS700 Product Components :



NO	Name
1	Lithium battery
2	Pressure gauge
3	Exhaust valve
4	Pressure regulating valve
5	Safety valve
6	Oil suction filter
7	Unloading valve
8	Fuel filler
9	Quick connector
10	Start switch
11	Lock switch

► Function Introduction Of the Components:

► Start Switch

This device is equipped with a lock switch. When the lock switch is pushed to the middle position, the start button will be locked and cannot be pressed; when the lock switch is pushed to either side, the locking state of the start button is released, allowing control over the start and stop of the electric pump. This effectively prevents accidental contact with the start button during the process of picking up the electric pump, ensuring safe use.



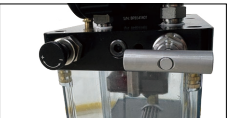
► Pressure Regulating Valve

BSP700 The pressure regulating valve can be configured to accurately control the pressure of the electric pump, increasing clockwise and decreasing counterclockwise. The electric pump is equipped with a built-in check valve, which can only adjust the pressure from low to high in the starting state.



► Manual Unloading Valve

BSP700 Configure the manual unloading valve by tightening the unloading valve clockwise. After the electric pump starts, oil is discharged from the outlet. When the target pressure is reached, the pressure is maintained. When the unloading valve is loosened counterclockwise, the electric pump unloads and the actuator returns to the return stroke.



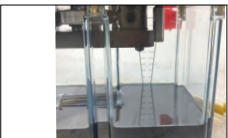
► Automatic intake / exhaust port

The automatic air intake/exhaust port has the dual function of exhaust and sealing to prevent oil leakage and ensure the safe operation of the equipment.



► Oil filter

The oil filter removes impurities from the oil before it enters the pump head, preventing pollutants from entering the pump body, ensuring the clean and efficient operation of the hydraulic system, and extending the service life of the equipment.



► Oil Level Indicator

Before starting, check the pump's horizontal oil level. It should be above 2/3 of the upper oil level meter. A low oil level can lead to long time oil free operation, which shortens the pump head's lifespan, affects pump use, and may damage the motor. If needed, open the hydraulic oil port and add the original pump's anti wear hydraulic oil (recommended brand: ISO VG46).

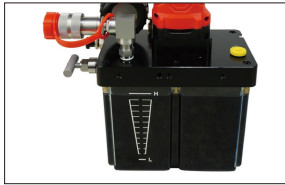
♦The observed oil level shall be observed after all execution elements return.



► Product Use Steps:

1. Preparation before use

- Battery charge confirmation: Before the first use, the battery should be fully charged before use. Check the battery charge before each use to avoid the device cannot start or damage the battery due to low charge.
- After confirming that the battery appearance is not damaged, bulging, leakage and other abnormal conditions, the battery shall be correctly installed along the battery slot to ensure that it is in place.
- Check the hydraulic oil level of the pump. The oil level should be above 2/3 of the upper oil gauge. When the hydraulic oil is insufficient, open the filling port and inject the anti-wear hydraulic oil of the same model as the original pump (it is recommended to use hydraulic oil grade ISO VG46). The maximum filling amount is the top of the oil gauge.



Hydraulic oil level gauge



If the oil level is below 2/3, please rotate out the plug of this outlet and carry out the operation of refueling.

- Install the exhaust plug, align the exhaust plug with the fuel filling exhaust port, and then rotate it slowly in a clockwise direction until it is tightened to the appropriate degree. Ensure that the tank ventilation function is guaranteed; replace the exhaust plug during handling or transportation, and reinstall the sealing plug to ensure that the seal prevents oil leakage.



Exhaust plug



Install the exhaust plug

- If the exhaust valve is not opened to discharge air, it will seriously affect the normal operation of the equipment. The air in the oil tank will cause pressure fluctuation and flow deviation, cause wear and failure of components, and reduce the stability and accuracy of operation.

2. Start And Set The Pressure

- Install the battery, push the lock switch to either side, press the start button, the motor starts, check whether the motor is running normally, and at this time observe the pressure gauge to check whether the initial reading of the pressure gauge is zero.



Press the start button and lock it.



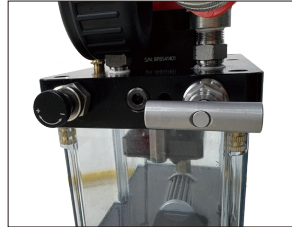
In the no-load state of the system, confirm that the initial reading of the pressure gauge is zero.

♦If the initial reading of the pressure gauge is not zero or the motorpressure gauge is zero. operation is abnormal, stop immediately for troubleshooting.

-Set the working pressure and slowly rotate the regulator in the clockwise direction (i. e. toward the '+' direction), following the value of the pressure gauge. When the reading of the pressure gauge rises to the target pressure value, stop turning the regulating valve immediately and lock the regulating valve nut.



Rotate the pressure regulating valve slowly in a clockwise ('+') direction.



Turn the unloading valve clockwise to tighten and counterclockwise to loosen.

♦The pressure regulating valve can only adjust from low pressure to high pressure, and cannot be adjusted in reverse. If the system pressure exceeds the target value, loosen the unloading valve immediately, reduce the system pressure to 0, and then adjust the pressure in the order from low pressure to high pressure again.

-Pressure Calibration:

- After the pressure setting is completed, tighten the nut of the pressure regulating valve and release the start button. The motor stops running. After loosening the unloading valve to relieve pressure to 0, tighten the unloading valve again.
- Hold the start button again to start the motor and observe whether the pressure is consistent with the target value.
- If the two pressures are consistent, it is effective; if not, repeat the adjustment until the standard is reached.

-Final pressure relief: release the unloading valve, reduce the pressure to 0, connect the load equipment and restart.

-Connect the load equipment. The BPS700 rechargeable hydraulic pump is equipped with one outlet with NPT3/8 thread and a standard quick connector (GEJN). The rated pressure of the electric pump is 700Bar. It is recommended to use the matching male and female connectors or oil pipes for connection.

-Loosen the start button, stop the motor and push the hydraulic oil pipe into the outlet port base after keeping it axially aligned. Rotate the sealing joint and turn the outer lock ring clockwise to the limit mark and then tighten it.



The oil pipe is axially aligned and fully pushed into the outlet



Turn the outer lock ring tight

♦BPS700 When using rechargeable hydraulic pumps, they must be connected to a matching joint or hose with the same or higher pressure. Connecting to a joint or hose with lower pressure ratings may cause the joint to fly out or the oil pipe to rupture, potentially causing personal injury to the user. When connecting the oil pipe, ensure it is not excessively bent or weighed down by heavy objects; otherwise, it could lead to the rupture of the oil pipe and result in personal injury to the user.

3. Operation And Adjustment Of Work

-After setting the pressure and connecting the oil pipe and the actuator, turn the unloading valve clockwise, push the lock switch to either side, hold down the start button, the system starts to supply oil, when the actuator reaches the specified position and reaches the target pressure, release the start button, the system enters the pressure holding state.



Long press the start switch, release the button after re-aching the set pressure, and the system maintains pressure.

4. Monitoring During Operation

-During operation, the unloading valve should be fully tightened and kept in a normally closed state to ensure the pressure holding function of the system. The system pressure indication value should be monitored in real time, and the target pressure should not be exceeded to maintain the stability of the system pressure.

-Pay attention to the oil level of the oil gauge. If it is lower than 1/3, stop the machine to replenish oil.

-Check whether the pipeline and interface are leaking, and whether the pressure gauge fluctuates abnormally.

5. Pressure Relief And Shutdown

After the work is over, follow the following steps to stop the BPS rechargeable lithium battery hydraulic pump:

-Pressure relief operation: loosen the manual pressure relief valve in a counterclockwise direction to relieve the pressure of the hydraulic system and ensure that the system pressure is reduced to 0.

-Disassemble the oil pipe: after all the actuating elements have returned, pull out the hydraulic oil pipe and tidy up the tools.

-If long downtime is required:

- Remove the battery from the lithium pump and place it in the correct position in the toolbox.

- Turn the exhaust port clockwise to avoid hydraulic oil leakage.

-Battery maintenance:

- Avoid placing the battery in high temperature (above 60°C) or low temperature (below -20 °C) environment, otherwise it may affect the performance and life of the battery.

- If the battery is idle for a long time, it is recommended to charge and discharge the battery every 1 month. Charge the battery to 50% -60% of the power and store it in a cool and dry place to extend the battery life.

► Troubleshooting:

Troubleshooting Guide		
Issue	Possible causes.	Solution
1. The pump does not start	The battery is not installed or the battery is not properly installed.	Check whether the circuit is connected normally and restart.
	Battery power is exhausted.	Check whether the circuit is connected normally and restart.
	The locking switch is not in the position on both sides.	Check the voltage and turn off other electrical loads.
	The pump assembly is damaged.	Replace the high-power socket strip.
2. The motor stops during pressurization	Battery power is too low.	Check the voltage and turn off other electrical loads. Replace the strip and check the input voltage.
3. The pump is not pressurized or the upper pressure is too low	Oil is insufficient.	Check the oil level and inject new hydraulic oil.
	The relief valve is loose or not tightened.	Tighten the relief valve.
	External leakage of pump.	Observe leaks and carry out repairs or replacement of accessories.
	The hydraulic oil is too dirty to block the suction port.	Change the hydraulic oil and clean the suction port.
	Internal leakage of the pump.	Contact the manufacturer for repair.
	System leakage.	Check for system leaks and repair them.
4. The system establishes pressure, and the tool does not move	Overload.	Check and select the right load.
	System blockage.	Check whether the system is blocked and clear the system.
5. Too little traffic	The hydraulic oil is too dirty to block the suction port	Change the hydraulic oil and clean the suction port.
	There is a throttle valve in the system.	Adjust the throttle valve flow.
	System blockage.	Check if the system is clogged and unblock the system.
6. The tool cannot be returned normally	The return of the tool has a large damping	Check and remove the large damping term.
	The system has a return oil throttle valve.	Check the system and adjust the throttle valve.
7. Severe fever	The system throttle valve is adjusted to a small extent.	Check the circuit and readjust the flow valve.
	Motor fault.	Contact the manufacturer for maintenance.