Types of hydraulic pumps

The hydraulic pump, also known as the oil pump, is an important part of the hydraulic system. It supplies the required pressure oil to the system and drives the actuator to perform various prescribed actions. The hydraulic pump is a device that converts the mechanical energy of the motor or other energy into hydraulic energy. So it belongs to the drive element in the hydraulic system.

The various oil pumps used in hydraulic transmissions, their working principle and the working principle of hydraulic jacks are the same, they all rely on the change of the working volume of the sealed working volume of the oil pump to work. The working hydraulic pump is called the volumetric oil pump. In order to ensure the normal operation of the oil pump, the volumetric oil pump has a sealed and variable space. The oil suction chamber and the oil discharge chamber are separated from each other to ensure continuous oil absorption and removal of working oil. The oil tank of the device should be connected to the atmosphere to ensure that the oil is not lower than a standard atmospheric pressure. This is the main feature of the internal structural components and external working conditions of the volumetric oil pump. The volumetric oil pump is divided into gears according to the structure of the sealed working volume.

Pump, leaf pump and plunger pump.

The main performance parameters of the hydraulic pump include pressure, displacement, flow rate and volumetric efficiency.

The working pressure of the oil pump refers to the oil pressure on the nameplate. The rated pressure on the nameplate refers to the maximum pressure required for the pump to run continuously. The lower running can ensure the sealing performance, efficiency volume, structural strength and service life of the oil pump. The maximum pressure refers to the permission pressure of the oil pump in a short time. The specific pressure reached by the oil pump during operation is called the actual working pressure, and the pressure is called The size depends on the load of the actuator. Due to the different uses of the hydraulic system, the requirements for the oil pressure are different. In order to facilitate the design and production of the hydraulic components, the pressure is divided into five grades.