High-pressure gear pump structure

High pressure gear pumps are often used for flow metering or for the transport of viscous or dilute fluids. Used in hydraulic netting machines, auxiliary components: fuel tank, oil filter, oil pipe and accessories. It is very important to be widely used in industry. The following is a small series to share with you the structure of the high-pressure gear pump and to understand its working performance.

The high pressure gear pump has high pressure and is suitable for injection and pressurization. The four bearing sleeves of the gear oil pump are installed in the pump body, and the end face clearance is automatically adjusted according to the working pressure, so the pressure of the pump is stable, the output flow pulsation is small, and the volume ratio is high. The pump consists of the pump body, pump cover, gears, bearing sleeves and shaft end seals. The gears and shafts of the 2CY gear pump are nitrided, have high hardness and wear resistance, and are installed in the bushing together with the shaft. All moving parts in the pump are lubricated with the medium they transport. The gear pump has a simple and compact structure, convenient use and maintenance, strong adaptability and high efficiency.

Because of the simple structure, small volume, low manufacturing cost, uniform oil supply, large allowable speed range, performance and maintenance can meet the requirements of hydraulic lifting machine, so it is the most widely used in the hydraulic system of fishing net lifting machine. The oil pump is a conversion device that converts the input mechanical energy into the pressure energy of the flowing oil. During the oil suction process, the working space volume gradually increases, forming part of the vacuum, and the oil in the oil tank enters the oil pump under the action of atmospheric pressure. During the oil pressure process, the volume of the working space gradually decreases, and the oil is squeezed out. . Gear oil pump suction and pressure oil process.

When the gear pump draws oil in the first position, the driving gear 1 occupies a considerable volume between the teeth in the teeth of the driven gear, and the volume is equal to the female portion by the tooth width. As the gear rotates, the driving gear teeth gradually withdraw from the passive gear teeth. To the second position, the volume occupied by the teeth between the passive gear teeth is greatly reduced. Due to the increase of the volume, the pressure is reduced, under the action of atmospheric pressure. The sputum in the fuel tank flows from the inlet pipe into the suction chamber and into the teeth. When the third position is reached, the driving gear teeth completely exit between the passive gear teeth, and the oil is completely filled between the teeth, completing the oil suction process. When the gear just turns, the oil in the enclosed volume is brought to the pressure oil zone. In the first position, the driven gear teeth have not yet entered the inter-tooth 3 of the driving wheel, and the inter-tooth 3 is filled with oil. When the gear is turned to the second position, the driven gear teeth 4 begin to enter the driving gear teeth 3, and the oil is squeezed out to a part, and the extruded oil is equal to the shadow portion by the tooth width. When the position to the third position is increased, the portion of the tooth 4 that enters the interdental portion 3 is enlarged, and more oil is squeezed out, so that the oil is continuously extruded to complete the oil pressing process. The CB gear oil pump is a non-variable medium and high oil pump whose single-stage transmission volume cannot be adjusted. It consists of the following main components: oil pump housing, oil pump cover, gear shaft, bushing, seals and connectors, etc.