

# YCB arc Gear Pump

I. Overview and characteristics of YCB arc gear pump:

[YCB arc gear pump adopts the most advanced point contact gear which is considered to be the most advanced pump in the world](#), that is, the double arc plus sinusoidal curve is combined into a tooth shape, which can completely eliminate the involute gear conveying pump. He has won national key scientific and technological achievements projects and won the third prize of scientific and technological progress of the State Education Commission. The circular arc gear has a continuous contact between the two meshing tooth profiles, which does not cause oil trapping phenomenon, and completely solves the phenomenon that the pump vibration, noise and bearing load increase due to the trapped oil phenomenon of the involute gear pump. Therefore, the arc gear pump has low efficiency and low noise, and has good energy saving effect.

This series of arc gear pumps mainly consists of gears, shafts, pump bodies, pump covers, bearing sleeves and shaft end seals. The gears are manufactured in a double arc sinusoidal profile. Compared with the involute gear, the most prominent advantage is that the tooth profile has no relative sliding during the gear meshing process, so the tooth surface has no wear, stable operation, no liquid phenomenon, low noise, long service life and high efficiency. The pump is free from the constraints of traditional design, making the gear pump a new field in design, production and use.

The pump is equipped with a safety valve as overload protection. The full return pressure of the safety valve is 1.5 times the rated discharge pressure of the pump. It can also be adjusted according to actual needs within the allowable discharge pressure range. However, please note that this safety valve can not be used as a pressure reducing valve for a long time, and can be installed separately on the pipeline when needed.

The pump shaft end seal is designed in two forms, one is a mechanical seal and the other is a packing seal, which can be determined according to the specific use and user requirements.

Second, YCB arc gear pump use:

[YCB arc gear pump is mainly used for lubricating oil in lubrication system in various mechanical equipment](#). It is suitable for conveying viscosity of  $5 \times 10^{-6} \sim 1.5 \times 10^{-3} \text{m}^2/\text{s}$  (5-1500cSt) and temperature below 300°C. Lubricating oil. Stainless steel YCB arc gear pump can transport non-lubricating oil, beverage and low corrosive liquid. With copper gears, it can transport low internal point liquids such as gasoline and benzene. In addition to the configuration of ordinary motors, this series of pumps can also be equipped with explosion-proof motors of the same specifications according to user needs.

Third, YCB arc gear pump application range:

1. The YCB circular arc pump can be used as a transmission and booster pump in the oil transportation system;
2. It can be used as a fuel pump for conveying, pressurizing and spraying in the fuel system;
3. It can be used as a hydraulic pump for providing hydraulic power in a hydraulic transmission system;
4. It can be used as a lubricating oil pump in all industrial fields.