## P30 Gear Pump

Amidst the powerful hammering sounds of hydraulic hammers in steel mills and the smooth rotation of wind turbine blades, a gear pump named Runhe P30 is quietly supporting the operation of modern industry with a powerful output of 501 milliliters per revolution. As Runcheng Hydraulic's flagship product specifically developed for heavy-duty applications, the P30 series gear pump integrates three core advantages: high-pressure load capacity, high-flow output, and intelligent temperature control. It has become the "hydraulic heart" of mining machinery, power equipment, and port heavy-duty machinery.

I. Robust Performance: Confident Operation at 350 Bar High Pressure

The hydraulic systems of rock drilling rigs are subjected to impact pressures exceeding 300 bar year-round. The Runhe P30 achieves this by employing a three-layer reinforced cast iron housing and carburized and quenched gear sets, elevating the pressure resistance limit of traditional gear pumps to 350 bar continuous operation and 4,000 bar peak pressure resistance. The secret lies in its dual-arc sine curve tooth profile design—unlike conventional involute gears, this tooth shape eliminates relative sliding between tooth surfaces during meshing, fundamentally reducing wear. Tested lifespan exceeds 20,000 hours, representing a 30% improvement over industry averages. Even more commendable is the asymmetric unloading groove technology: the precise coordination of the conical groove on the suction side and the rectangular groove on the discharge side completely resolves the "oil trapping" issue common in P30 gear pump, suppressing vibration and noise to below 65 decibels—equivalent to the whispering level in an office environment.

II. Intelligent Temperature Control: Stable Protection in Extreme Environments

During an extreme test at a wind farm in Xinjiang in 2024, the ambient temperature suddenly dropped to -35°C. Runcheng P30 automatically heats the oil to the critical startup temperature of 35°C through the integration of an internal oil temperature sensor chip and a closed-loop air cooling system, preventing oil solidification at low temperatures. Meanwhile, in a rolling mill lubrication station at a steel plant in Guangdong Province operating at 150°C, its PTFE composite seals remain elastic and leak-free. This "ice and fire resistance" adaptability stems from Runhe's proprietary medium-compatible platform: from ISO VG68 anti-wear hydraulic oil to sulfur-containing crude oil, from food-grade glycerin to weakly corrosive emulsions, the pump body materials—cast iron, stainless steel, and aluminum alloy—cover 12 industry certifications including FDA and EN 10088.

III. The Power Engine for All Industries

In the field of giant construction machinery: In the rotating mechanism of Sany Heavy Industry's 800-ton excavator, the dual P30 pump drives the hydraulic motor at a flow rate of 340 m<sup>3</sup>/h, outputting torque equivalent to 12 household car engines per second.

In the clean energy sector: In the yaw system of the State Power Investment Corporation's Ulanqab Wind Power Base, the P30 pump regulates blade angles with  $\pm 0.5\%$  pressure accuracy, reducing wind power losses by 240 million kWh annually.

In the field of civilian manufacturing: At a chocolate factory in Shandong Province, a custom-made 316L stainless steel pump conveys thick sauce at 70°C with a feed speed of 5 mm/s, achieving zero pollution in a Class 100,000 cleanroom.

IV. Value Commitment Throughout the Entire Lifecycle

Runhe understands that equipment reliability directly impacts user benefits. The P30 pump is

equipped with the HLO-Cloud intelligent management system, which can monitor bearing vibration spectra and oil particle content in real time. When a gantry crane pump unit at a Jiangsu port showed early signs of wear, the system issued a warning 48 hours in advance. Engineers arrived on-site with spare parts for replacement, avoiding a single shutdown loss exceeding 1.8 million yuan. Currently, Runhe has deployed 20 emergency service centers globally, committing to 48-hour spare part delivery and 72-hour technical response, with a service network covering 37 countries along the Belt and Road Initiative.

"From rock excavation deep within mine shafts to the gentle rotation of wind turbine blades in the clouds, the P30 pump demonstrates the depth and warmth of Chinese manufacturing through its precise 501-milliliter circulation." Runhe Hydraulic invites you to experience the exceptional performance of the <u>P30 gear pump</u> firsthand.

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