

hydraulic gear pump catalogue

Within the lifeblood of modern industry, hydraulic systems serve as indispensable lifelines. As the starting point of this lifeline, gear pumps shoulder the vital mission of converting mechanical energy into hydraulic energy. Since its inception, Runhe Hydraulic Technology Co., Ltd. has remained dedicated to technological R&D and product innovation in the field of hydraulic transmission, committed to providing efficient and reliable hydraulic solutions for global customers. After over a decade of steady growth, the company has established a modern enterprise system integrating R&D, production, sales, and service, boasting an intelligent manufacturing base spanning nearly 100 acres.

Runhe Hydraulic understands that every gear pump is more than a simple mechanical component—it is a critical element bearing the trust and expectations of our customers. Our product development team, led by seasoned hydraulic experts, utilizes advanced CAD/CAE design systems and precision testing equipment. From conceptual design to final shipment, every step embodies the ingenuity and craftsmanship of Runhe's team. This unwavering commitment to quality has enabled Runhe gear pumps to stand out in the fiercely competitive market, becoming the preferred brand for numerous equipment manufacturers.

Opening the Runhe [hydraulic gear pump catalogue](#) our foundational series: the RH-CB Series External Gear Pumps. Featuring classic involute gear design, these pumps incorporate high-strength ductile iron housings and surface-nitrided gears, maintaining stable output even at 2.5MPa pressure ratings. Notably, at a rated speed of 1450 r/min, this series achieves volumetric efficiency exceeding 95% while maintaining noise levels below 68 dB(A), earning it the reputation as the “quiet exemplar” in hydraulic systems.

For industrial applications demanding higher pressure ratings, our RH-QX Series Internal Gear Pumps deliver exceptional performance. This series innovatively employs fluid static pressure-supported gear rings and CAE-optimized tooth profiles, reducing flow pulsation by over 30% compared to conventional products during continuous operation at 28MPa high pressure. The RH-QX82-200 model achieves high-speed operation at 3600r/min, perfectly suited for specialized applications like wind turbine pitch control systems.

With the advent of Industry 4.0, Runhe Hydraulics pioneered the RH-QXM high-speed servo motor pump unit. This innovative product integrates dual-row angular contact bearings and an active anti-cavitation valve, surpassing the traditional 6050 r/min speed limit of gear pumps. Paired with an embedded Hall sensor for closed-loop flow control and achieving positioning accuracy of $\pm 0.1\text{mm}$, it has gained widespread adoption in precision manufacturing sectors like lithium battery electrode rolling mills.

To meet diverse customer requirements, our RH-AP series modular pump stations adopt an integrated “pump+valve+control” design. This solution combines gear pumps, proportional valves, and PID controllers onto a single flange face, reducing installation space by 40%. Through IoT interfaces, it enables real-time monitoring of oil temperature, contamination levels, and vibration status. This intelligent system has successfully reduced failure rates by 60% in remotely maintained mining equipment, earning high praise from clients.

In technological R&D, Runhe Hydraulics consistently leads the industry. Our proprietary triple dynamic compensation sealing technology automatically balances axial clearance through stepped floating side plates. Combined with spiral relief grooves, it eliminates 90% of trapped oil energy. Furthermore, nano-silicon carbide coating reduces seal surface wear to one-fifth that of

traditional chrome plating. This breakthrough technology extends Runhe gear pump service life beyond 8,000 hours under extreme conditions, setting a new industry benchmark.

Environmental sustainability permeates every stage of Runhe Hydraulic's manufacturing process. We invested heavily in introducing MVR waste heat recovery evaporation systems, achieving an environmental goal of saving 1,500 tons of water per 10,000 pump sets. Our innovative phosphating slag recycling process transforms production solid waste into high-quality building gypsum. These green manufacturing initiatives not only provide robust support for our customers' products to pass EU carbon footprint audits but also helped a forklift manufacturer achieve a significant 18% reduction in hydraulic system energy consumption.

Runhe Hydraulic gear pumps find extensive applications across diverse sectors. In Northeast China's frigid agricultural regions, our specialized RH-CB32B low-temperature gear pump employs polyetheretherketone (PEEK) seal rings paired with low-pour-point anti-wear hydraulic oil technology. This enables rapid pressure establishment within 10 seconds at -40°C , ensuring seeders operate reliably during frozen ground conditions. At a Zhejiang injection molding plant, the RH-QX41-050R pump unit employs a dual-closed-loop pressure-flow algorithm to reduce clamping pressure fluctuations from ± 15 bar to ± 2 bar. This minimizes product weight variation from 1.2% to 0.3%, saving the client over 2 million yuan annually in raw material costs. During field testing with Sichuan Forest Firefighting, the RH-QXM42-HS pump set maintained full-power output at 70°C ambient temperature via its dual-circuit oil cooling channels, ensuring 72-hour continuous operation of firefighting equipment.

To guarantee optimal customer experience, Runhe Hydraulics has established a comprehensive service system. Our precision selection cloud platform automatically generates three optimized configuration solutions and a full lifecycle cost analysis report based on customer-submitted parameters such as pressure curves, medium viscosity, and ambient temperature. Our fault prediction system successfully warned of potential oil contamination risks in an RH-AP pump station at a Shandong steel mill, remotely guiding filter replacement and preventing 3.6 million yuan worth of roller bearing damage. Our three major warehousing centers in East China, South China, and North China operate in coordination to ensure 48-hour emergency delivery. We also offer an innovative "consumables contracting" service model where customers pay service fees based on actual flow usage, while we assume full responsibility for pump unit maintenance and spare part replacement.

From micron-level precision control to heavy-duty drives handling thousands of tons, and from traditional manufacturing to smart manufacturing, Runhe Hydraulic gear pumps consistently earn market trust through outstanding performance and reliable quality. We understand that every gear pump carries our customers' critical expectations. Therefore, we remain committed to crafting excellence with dedication and delivering value through service. This [hydraulic gear pump catalogue](#) not only showcases Runhe Hydraulic's technical prowess but also embodies our promise of shared growth with our customers.

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