

cast iron pump

In hydraulic transmission systems, gear pumps are among the most fundamental and essential power components. Their cast iron construction allows them to operate continuously and reliably even under high-pressure, high-temperature, and high-impact conditions. Runhe helps you understand exactly how to use, purchase, and select this pump by addressing three key aspects: application, customization, and selection.

From mines to farm fields, [cast iron pumps](#) are used more widely than you might imagine. In agricultural machinery, the hydraulic lifting systems of tractors, the header drives of combine harvesters, and the pumping systems of sprayers all rely on them to provide stable power. Underground mining machinery and oil drilling and production equipment operate in harsh environments that place stringent demands on the contamination resistance and shock resistance of hydraulic components—areas where cast iron pumps have a natural advantage. In industrial equipment, injection molding machines, die-casting machines, and machine tools demand high stability in pressure and flow rate; cast iron pumps deliver smooth output with minimal pulsation. Runhe's [cast iron pumps](#) are widely used across multiple industries, including automated equipment, agricultural machinery, lifting equipment, construction vehicles, smart warehousing systems, and port and marine applications.

Standard products sometimes fail to meet the specific requirements of all equipment. Many customers face challenges such as incompatible interfaces, mismatched materials, limited installation space, and specialized performance requirements. As a hydraulic equipment manufacturer with 12 years of industry experience, Hebei Runhe offers comprehensive custom manufacturing services, handling the entire process from design to production based on customer drawings and requirements. Specifically, the following types of requirements can be customized: inlet and outlet threads and flange connections can be adjusted to meet equipment needs; materials can be replaced to suit operating conditions such as corrosive media, high-temperature oils, and food-grade applications; special installation requirements can be accommodated to fit different installation spaces and connection methods; and performance specifications such as high pressure, high temperature, and low noise can be customized. Standard products may not fit, may not last, or may compromise efficiency; custom solutions, however, ensure a perfect dimensional fit, materials optimized for specific operating conditions, and performance that precisely meets specifications.

When selecting a pump, focusing solely on “displacement and pressure” can lead to problems. The first pitfall is considering only displacement without considering speed—pumps with smaller displacement can operate at higher speeds, while those with larger displacement tend to have lower rated speeds. If you use a pump rated for 2,000 RPM with a diesel engine running at 3,000 RPM, the bearings and gears will wear out within half a year. Before selecting a pump, make sure you know the speed of the prime mover. The second pitfall is ignoring the installation dimensions—shaft diameter, keyway dimensions, flange bolt circle diameter, and inlet/outlet threads. If you place an order without verifying the dimensions of the old pump, the new one won't fit when it arrives. The third pitfall is choosing the wrong material—cast iron is sufficient for standard hydraulic oil, but when pumping corrosive chemical raw materials, wastewater containing particles, or food-grade media, the wrong material can cause problems in no time. Before purchasing a pump, confirm three things: the speed of the prime mover, whether the

installation dimensions match, and what the pumped medium is. Clarify these points before placing an order to save time and money on repeated trial-and-error.

At Hebei Runhe, every pump undergoes rigorous testing from raw materials to the finished product. If you have any customization needs or questions about model selection, please feel free to contact us—we'll help you understand your application, ensure your customization meets your needs, and select the right model.

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