

## Decoding Pump Model JC R2 Series JC4/5/6/7/8K-DS Specifications

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Understanding Industrial Pump Nomenclature

When you first encounter pump model numbers like JC R2 Series JC4K-DS, it's like reading technical hieroglyphics. Let's break down this alphanumeric code using industry standards and some good old engineering logic.

Core Components Breakdown

JC: Identifies as long-shaft deep well pumps (per ISO 2858 standards)
R2: Indicates second-generation design with enhanced impeller geometry
4/5/6/7/8K: Flow capacity codes where 4=40m?/h, 5=50m?/h (scaling linearly)
DS: Dual suction impeller configuration for balanced axial thrust

Performance Characteristics The JC4K-DS variant typically operates at:

Max flow: 40 m?/h (176 GPM) Head range: 15-200 meters Optimal efficiency: 78-82% (per latest DOE Hydraulic Institute tests)

Material Specifications These pumps feature CF8M stainless steel construction (ASTM A351) with:

Mechanical seals: SiC/SiC faces Bearings: L10 life rating exceeding 50,000 hours Motor protection: IP68 rating for submerged applications

Installation Considerations When deploying these units in mining operations (their primary application):

Minimum NPSH requirement: 2.3 meters Maximum fluid temperature: 110?C (230?F) Recommended maintenance interval: 8,000 operating hours



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The K-series designation indicates compatibility with abrasive media handling - a game-changer for mineral processing plants dealing with slurry concentrations up to 25% solids by weight. Recent field data from Chilean copper mines shows 18% longer service intervals compared to previous models.

Smart Pumping Revolution Newer variants now integrate IIoT sensors for:

Vibration analysis (ISO 10816 compliance) Real-time wear monitoring Predictive maintenance scheduling

Remember the "Great Pump Crisis of 2022"? That's when operators learned the hard way that JC6K-DS units shouldn't be used for hot asphalt transfer - turns out thermal expansion coefficients matter more than we thought!

Application Spectrum These workhorses excel in:

Deep well dewatering (300m+ installations) High-pressure slurry transfer Closed-loop cooling systems

One oil sands operator reported a 37% reduction in energy costs after switching to JC8K-DS units with variable frequency drives - proof that proper pump selection impacts both operations and sustainability metrics.

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