

# Forged Crane Wheels - High-Quality Load-Bearing Components for Industrial Cranes

Original link: <https://www.globalweihua.com/crane-hook/forged-crane-wheels/>

Forged crane wheels are core load-bearing components in various industrial crane systems, playing a critical role in ensuring the stable, safe, and efficient operation of cranes. Manufactured through advanced forging processes, these wheels exhibit exceptional mechanical properties, wear resistance, and load-bearing capacity, making them indispensable for heavy-duty material handling scenarios across industries.

## Forged Crane Wheels Advanced Manufacturing Process

Our forged crane wheels are produced using a strict and sophisticated forging process, ensuring superior quality and performance:

- **High-Quality Raw Material Selection:** We adopt high-strength alloy steels (such as 42CrMo, 60Si2Mn, etc.) as raw materials. These materials have excellent toughness, hardness, and fatigue resistance, laying a solid foundation for the durability of the crane wheels.
- **Precision Forging:** The raw materials are heated to the optimal forging temperature (typically 1100-1250°C) and then subjected to repeated die forging. This process refines the metal grain structure, eliminates internal defects (such as porosity and segregation), and enhances the material's density and mechanical strength.
- **Heat Treatment:** After forging, the crane wheels undergo quenching and tempering heat treatment. Quenching improves the surface hardness and wear resistance, while tempering reduces internal stress and improves toughness, achieving an ideal balance between hardness and toughness.
- **Precision Machining:** The heat-treated blanks are processed through CNC lathes, grinders, and other precision equipment to ensure strict dimensional accuracy (including diameter, width, concentricity, and surface roughness) that meets or exceeds industry standards.

## Outstanding Product Features & Advantages

- **High Strength & Load-Bearing Capacity:** The forging process significantly improves the material's tensile strength and yield strength. Our forged crane wheels can withstand extremely high loads, ranging from tens of tons to hundreds of tons, adapting to the heavy-duty requirements of large cranes.

- **Excellent Wear Resistance:** The quenched surface of the wheels has a high hardness (HRC 45-55), which effectively reduces wear caused by long-term contact and friction with crane rails. This extends the service life of the wheels, reducing replacement frequency and maintenance costs.
- **Superior Fatigue Resistance:** The refined grain structure and reasonable heat treatment process make the crane wheels have strong fatigue resistance. They can resist the alternating loads generated during crane operation for a long time without cracking or deformation, ensuring operational safety.
- **Precise Dimensional Accuracy:** Advanced CNC machining technology ensures that the dimensional tolerance of the wheels is controlled within a very small range. This guarantees smooth matching with crane axles and rails, reducing vibration and noise during operation, and improving the overall stability of the crane.
- **Stable Performance Consistency:** Strict quality control throughout the production process (from raw material inspection to finished product testing) ensures that each batch of forged crane wheels has consistent performance, avoiding quality fluctuations that may affect crane operation.

## Wide Application Scenarios

Our forged crane wheels are widely used in various types of cranes and industrial equipment, including but not limited to:

1. Bridge cranes, gantry cranes, jib cranes in steel mills, metallurgical plants, and foundries
2. Container cranes, portal cranes in ports, docks, and logistics yards
3. Overhead cranes, electric hoists in warehouses, workshops, and construction sites
4. Special cranes for heavy machinery manufacturing, power plants, and chemical industries

## Forged Crane Wheels Technical Parameters

| Parameter             | Specification                                               |
|-----------------------|-------------------------------------------------------------|
| Material              | 42CrMo, 60Si2Mn, 45# steel, etc. (customizable)             |
| Diameter Range        | Φ200mm - Φ1500mm (customizable according to customer needs) |
| Surface Hardness      | HRC 45-55                                                   |
| Load-Bearing Capacity |                                                             |

|                   |                                            |
|-------------------|--------------------------------------------|
|                   | 5t - 500t (depending on material and size) |
| Surface Roughness | Ra ≤ 1.6μm                                 |
| Heat Treatment    | Quenching + Tempering                      |

## Forged Crane Wheels Quality Assurance

We adhere to the principle of "quality first" and have established a complete quality management system certified by ISO9001. Each forged crane wheel undergoes strict testing before leaving the factory, including:

- Raw material chemical composition analysis and mechanical property testing
- Non-destructive testing (NDT) such as ultrasonic testing and magnetic particle testing to detect internal and surface defects
- Hardness testing and metallographic structure analysis
- Dimensional accuracy inspection using precision measuring instruments (such as coordinate measuring machines)

We also provide customized services according to customers' specific requirements, including size, material, heat treatment process, and surface treatment. Our professional technical team will work closely with you to provide the most suitable forged crane wheel solutions.

If you are looking for reliable, high-performance forged crane wheels, please contact us today. We are committed to providing you with excellent products and professional services!

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