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# EXECUTIVE SUMMARY

ZHERKO is a diversified engineering, construction, and mechanical services provider that has positioned itself as a reliable, agile, and innovative company in Iraq and the Kurdistan Region. Our expertise spans small-scale mechanical repair jobs to full-fledged infrastructure development, power system setup, and heavy equipment operations across commercial, governmental, and private sectors.

ZHERKO's operational model is based on agile project execution, custom client solutions, on-demand equipment mobilization, and a deeply experienced workforce.

ZHERKO.COM





# ABOUT US

ZHERKO Technical & Mechanical Services Co. is a multidisciplinary engineering, construction, and equipment services company based in the Kurdistan Region of Iraq. Since our establishment, we have built a strong reputation as a trusted and capable partner in delivering reliable, safe, and innovative technical solutions for both public and private sector projects.

With a focus on construction, mechanical works, electrical systems, and heavy machinery rental, ZHERKO supports infrastructure development, industrial operations, and on-site logistics across residential, commercial, and large-scale civil projects.

We serve a wide range of clients including government bodies, real estate developers, international contractors, NGOs, and private investors—delivering full-service project execution or customized support where needed.





# VISION & MISSION



#### **OUR VISON**

At ZHERKO, our vision is to be recognized as a regional leader in integrated construction, mechanical, and equipment services known for delivering safe, innovative, and high-quality solutions that contribute to the sustainable growth of communities and industries. We aim to shape the future of infrastructure development in Iraq and the Kurdistan Region by consistently raising the standard of excellence in every project we take on.

We envision a future where:

- Projects are executed with precision, speed, and integrity
- Clients view ZHERKO as a long-term partner, not just a service provider
- Our teams are empowered, well-trained, and driven by purpose
- Our operations contribute to safer environments and smarter cities

#### **OUR MISSION**

Our mission is to provide comprehensive, dependable, and forward-thinking services in the fields of construction, mechanical works, electrical systems, and heavy equipment solutions. We are committed to:

- Delivering each project with professional excellence, on time, and within budget
- Prioritizing safety, sustainability, and technical quality
- Adapting to our clients' specific needs through flexible, custom-built solutions
- Empowering our skilled workforce and investing in advanced tools and technologies
- Building long-term relationships through trust, transparency, and accountability

ZHERKO stands as a reliable force in the construction and technical services sector helping shape the region's development with every foundation we lay, every structure we raise, and every solution we deliver.



# DETAILED SERVICES PORTFOLIO



# MECHANICAL ENGINEERING SERVICES

ZHERKO provides a full range of mechanical engineering services tailored to industrial, construction, and infrastructure needs. From generator systems to custom-built equipment, we ensure high-performance and long-term reliability.

- Generator installation, commissioning & periodic maintenance
- > Engine overhauling and mechanical component refurbishment
- > Custom fabrication of cement mixers, silos, and support frames
- > Pump, valve, and compressor servicing
- > Preventive and corrective maintenance schedules for industrial clients

Tools Used: CNC machines, hydraulic presses, torque multipliers, thermal imagers



# CONSTRUCTION & CIVIL WORKS

ZHERKO offers end-to-end construction solutions, from site preparation to project handover. We handle residential, commercial, and infrastructure projects with a focus on structural integrity, timely delivery, and cost efficiency.

- Structural engineering and architectural design
- > Earthworks, excavation, and site grading
- > Reinforced concrete structure development
- Steel structure erection & façade works
- Demolition of obsolete buildings using safe protocols
- > Waterproofing, insulation, and façade finishing
- Infrastructure development: roads, culverts, bridges

Project Management Standards:
PMI/PMP methodology, Primavera P6, AutoCAD Civil 3D









### HEAVY EQUIPMENT & MACHINERY RENTAL



ZHERKO offers reliable Mobile Tower Crane solutions for projects requiring high-reach, high-capacity lifting in tight or dynamic work environments. Our cranes combine the vertical capabilities of traditional tower cranes with the flexibility and rapid deployment of mobile cranes—making them ideal for urban construction sites, bridge work, industrial maintenance, and infrastructure projects.





# KEY FEATURES & ADVANTAGES

- ➤ Fast Setup & Dismantling
  Unlike fixed tower cranes, our mobile models
  can be transported and erected on-site in a
  matter of hours minimizing project delays and
  reducing setup costs.
- ➤ High Reach with Compact Footprint Ideal for congested urban or confined job sites where space is limited, yet vertical reach is essential.
- → 360° Slewing & Telescopic Boom Options Allows for full rotation and extended boom length, giving full coverage of the site without repositioning.
- Remote & Cabin-Controlled Operation Equipped with both cabin and wireless remote control options to enhance operator safety and visibility in complex lifting operations.
- ➤ Load Capacities & Models
  ZHERKO provides mobile tower cranes with
  lifting capacities ranging from 6 to 20 tons, with
  boom heights exceeding 30 meters, depending
  on site requirements.





ZHERKO offers high-capacity Crawler Cranes also referred to as Crawler Chains designed for large-scale lifting operations across construction, infrastructure, and industrial sectors. These cranes are mounted on a set of heavy-duty tracked undercarriages ("crawlers"), providing exceptional stability, weight distribution, and off-road mobility, making them ideal for challenging terrains and heavy-load lifting tasks.

# **KEY FEATURES & SPECIFICATIONS**

#### **▶** Lifting Capacity:

Available models with capacities ranging from 50 to 700 tons, suitable for major infrastructure, bridge, and plant construction projects.

#### **▶** Boom Lengths & Extensions:

Equipped with long-reach lattice booms and jib attachments to achieve extended lifting heights and radii.

#### **▶** 360° Continuous Rotation:

Full rotational capability provides unrestricted movement around the worksite.

#### > Tracked Undercarriage Mobility:

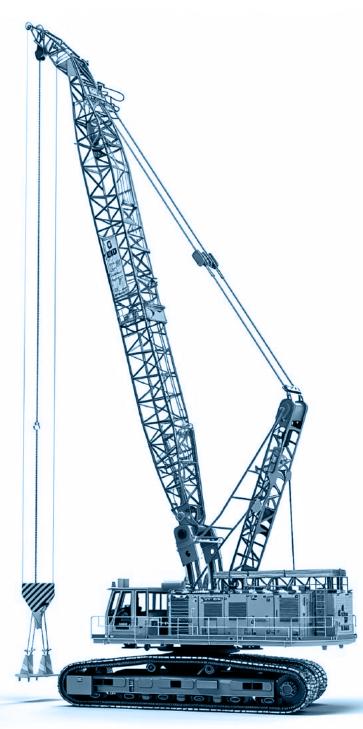
Moves easily on uneven ground, muddy areas, and unpaved worksites where wheeled cranes cannot operate efficiently.

#### **▶** Self-Erecting Systems:

Some models feature self-assembly capabilities, reducing auxiliary crane needs and speeding up deployment.

#### **Applications**

- Bridge and highway construction
- Wind turbine erection and maintenance
- Large-scale concrete and steel structural installations
- Power plant and refinery equipment lifting
- Precast panel and girder installation
- Long-term construction projects requiring stable base operation







At ZHERKO, we provide specialized Bridge Construction Equipment designed to support the complete lifecycle of bridge development from foundation works and superstructure lifting to finishing, safety systems, and maintenance access. Our fleet is tailored to handle the complexities and technical demands of both small and large scale bridge projects, ensuring precision, safety, and efficiency.

# KEY FEATURES & SPECIFICATIONS

#### 1. Heavy-Lift Cranes

- Crawler Cranes & Mobile Tower Cranes (700–50 tons)
- Used for lifting pre-cast segments, girders, steel trusses, and deck components
- Equipped with long booms and jibs for extended reach

## 2. Bridge Launching Gantries / Beam Launchers

- Ideal for segmental and girder bridge construction
- Supports erection of beams over obstacles (roads, rivers, railways) without ground support
- Includes hydraulic lifting and self-launching systems

#### 3. Formwork & Falsework Systems

- Custom scaffolding, shoring, and support platforms for piers and decks
- Compatible with cast-in-place and segmental bridge construction
- Includes modular steel systems with adjustable spans



ZHERKO provides reliable dumping truck services to support a wide range of construction, mining, earthmoving, and infrastructure projects. Our fleet consists of high-capacity, well-maintained dump trucks designed for transporting loose materials efficiently and safely across all types of job sites.

#### **KEY FUNCTIONS**

Dump trucks are essential for the transportation and controlled unloading of bulk materials such as:

- Excavated soil and sand
- Aggregates and gravel
- Construction debris and demolition waste
- Asphalt, concrete fragments, and raw materials



# HYDROLYTIC CRANE



ZHERKO offers a modern fleet of hydraulic cranes designed to handle a wide range of lifting tasks across construction, industrial, and infrastructure projects.

These cranes combine precision, mobility, and lifting power, making them essential for operations that require safe and efficient vertical movement of heavy loads.

#### **KEY FEATURES**

- Lifting capacities from 10 to 300 tons
- > Telescopic booms for flexible height and reach
- 360-degree rotation for maximum maneuverability
- Mounted on wheeled or truck platforms for easy site transport
- Computerized load management and safety systems

#### **APPLICATIONS**

- Steel structure installation
- Bridge and overpass construction
- Tower erection and removal
- Loading and unloading heavy equipment or containers
- Utility and maintenance work at height

# ADVANTAGES OF ZHERKO'S HYDRAULIC CRANES

- Operated by licensed, experienced crane operators
- Inspected regularly for safety and performance compliance
- Available for short-term or long-term rental
- Supported by mobile service units for quick on-site response
- > Integrated with project lifting plans and HSE protocols











ZHERKO provides a wide range of earthmoving equipment to support diverse construction, infrastructure, and industrial projects. Our fleet includes modern, high-performance excavators, bulldozers, and loaders designed for maximum productivity, fuel efficiency, and operator safety across all terrains.

Each machine is available with flexible rental terms and can be deployed with certified operators or on a bare-rental basis. Backed by regular maintenance, on-site technical support, and a wide selection of attachments, our equipment ensures reliable performance and adaptability for everything from foundation works to large-scale earthmoving operations.

#### KEY CAPABILITIES

- Excavators: Ideal for trenching, demolition, and lifting equipped with multiple attachments and ranging from 2 to 200 tons.
- Bulldozers: Used for land clearing, grading, and pushing heavy materials available with various blade types and rippers.
- Loaders: Efficient for loading, stockpiling, and transporting soil and debris options include wheel and track types.

All equipment is well-maintained, available with or without operators, and supported by on-site technical teams for smooth, reliable operations.







ZHERKO provides a complete range of specialized machinery for road construction projects, serving both urban infrastructure developments and large-scale highway works. Our equipment fleet is built to handle the full scope of tasks involved in road construction—from initial grading and compaction to asphalt laying and surface finishing.

ZHERKO provides a wide range of lowbed and flatbed trailer solutions for the safe and efficient transportation of heavy machinery, construction materials, and oversized cargo. These trailers are essential for moving equipment that cannot be transported on standard trucks due to height, weight, or dimension restrictions.

#### EQUIPMENT AVAILABLE

- Asphalt pavers for precise and consistent asphalt application
- Motor graders for shaping and leveling road foundations
- Road rollers for compacting soil, gravel, and asphalt layers
- Cold milling machines for removing and recycling pavement layers
- Bitumen sprayers to ensure uniform binder application
- Water tankers and mechanical sweepers for site maintenance and dust control







#### CONCRETE WORK

Our concrete services cover a broad range of applications including foundations, slabs, columns, beams, and retaining walls. We use certified mixes and follow strict curing practices to ensure long-term structural integrity and resistance to environmental stress.

#### Capabilities include:

- Casting of reinforced concrete structures
- Slab-on-grade and elevated slab installations
- Concrete finishing (power trowel, broom, exposed aggregate)
- Precast and in-situ concrete works
- Use of concrete pumps for highreach or limited-access areas



#### **FORMWORK SYSTEMS**

ZHERKO provides and installs various types of formwork systems tailored to project needs, ensuring precise shaping and support during concrete curing.

#### **Steel Reinforcement:**

Reinforcement is critical for structural performance. ZHERKO supplies, fabricates, and installs reinforcing steel bars (rebar) in accordance with design specifications.

#### Rebar services include:

- Cutting, bending, and placing as per structural drawings
- Use of mechanical couplers and welded mesh
- Steel fixing for foundations, walls, beams, and slabs
- Compliance with local and international codes (ASTM, BS, or DIN)



- Traditional timber formwork
- Modular steel and aluminum formwork
- Climbing formwork for vertical structures
- Slipform systems for continuous pours
- Custom-built formwork for complex geometries

Our formwork is designed to maximize reuse, reduce waste, and deliver accurate finishes while maintaining safety during erection and dismantling.









# STEEL REINFORCEMENT

Reinforcement plays a vital role in ensuring structural strength and durability. ZHERKO provides complete solutions for the supply, fabrication, and installation of reinforcing steel bars (rebar) based on project design requirements.

Our approach extends beyond basic bar placement, offering tailored reinforcement systems that improve structural integrity, minimize material waste, and accelerate onsite installation.

#### Rebar services include:

- Cutting, bending, and placing as per structural drawings
- Use of mechanical couplers and welded mesh
- Steel fixing for foundations, walls, beams, and slabs
- Compliance with local and international codes (ASTM, BS, or DIN)

#### Why Choose ZHERKO?

- Skilled workforce trained in concrete and reinforcement standards
- On-site batching, quality control, and testing
- Integrated project planning for formwork, pouring, and curing
- Proven experience in both small-scale and large-scale construction

ZHERKO's commitment to quality and precision in concrete work ensures structures that are not only strong and functional but also built to last.



# ELECTRICAL AND LABOR CAMP SOLUTIONS



Our electrical team designs and implements reliable systems that serve both operational machinery and essential worker accommodations supporting productivity, safety, and comfort.

#### **KEY SERVICES**

# Planning and Layout of Temporary or Permanent Electrical Systems

We design and implement electrical networks for newly developed or ongoing project sites. Services include:

- Load calculations and breaker sizing
- Distribution route planning (overhead or underground)
- Power zoning for different operational areas
- > Compliance with IEC, NEC, and local code











## Street Lighting and Internal Wiring for Camps or Compounds

We install full lighting systems for:

- Internal roads and outdoor spaces
- > Dormitories, kitchens, bathrooms, and offices
- > Emergency and solar lighting options

Our internal wiring covers all living and working areas, ensuring proper lighting, power outlets, and appliance connectivity.



## Generator Synchronization Panels & Distribution Boards

We build and install custom synchronization panels for running multiple generators in parallel for seamless power management. Services include:

- ATS (Automatic Transfer Switch) systems
- Load-sharing setups
- > Distribution panels with circuit protection
- Monitoring and safety shutdown systems



## Electrical Setup for Worksites Housing Laborers (Welders, Carpenters, Drivers)

ZHERKO provides tailored electrical infrastructure to meet the needs of diverse trades on-site. This includes:

- Dedicated lines and power points for welding, cutting, and carpentry tools
- Lighting and ventilation systems for workshops and sheds
- Mobile power units for tools and field operations







#### **ADDITIONAL CAPABILITIES**

**Earthing & Surge Protection** 

strikes. Services include:

operations

workshops and sheds

Installations

ZHERKO offers a range of supportive, value-added services that enhance project efficiency, safety, and flexibility. These capabilities ensure we can meet unique site requirements and deliver fully integrated solutions beyond our core offerings.







integration (upon request)



Energy efficiency planning for long-term camps



# WELDING, GRINDING, CARPENTRY& GENERAL WORKS

ZHERKO provides essential onsite and workshop-based technical services that support a wide range of construction and mechanical operations. Our skilled technicians handle structural welding, precision grinding, and customized carpentry, ensuring safety, strength, and functionality in every detail.

We also offer dependable general labor services—including «Hindi» support teams—for lifting, assisting operators, cleaning, and maintaining smooth workflow across active job sites. These services form the backbone of successful, on-time project execution.

- ➤ ARC, MIG, and TIG welding for industrial use
- Steel frame and pipe welding
- Heavy-duty metal cutting and surface grinding
- On-site carpentry for formwork, furniture, scaffold construction
- "Hindi" category: Unskilled but essential general labor force for all supporting work including lifting, cleaning, and assisting operators



At ZHERKO, we prioritize precision, safety, and accountability across every project. Our Site Supervision & Quality Control services ensure that each phase of construction, mechanical work, or installation is executed to the highest technical and safety standards.

We deploy experienced site engineers, supervisors, and HSE officers who work closely with client representatives and contractors to maintain consistent quality and meet project timelines.

#### **KEY OFFERINGS**

#### **Certified Supervision Teams**

We assign licensed civil, mechanical, and electrical engineers alongside trained safety officers to oversee daily site activities, ensuring proper execution and adherence to approved plans and specifications.



#### **Project Monitoring via PMIS**

Using Project Management Information Systems (PMIS), we provide structured monitoring, progress tracking, and real-time issue reporting throughout the project lifecycle.





#### Client-Side Dashboards & Reporting

Optional access to a secure web portal offers clients live visibility into site progress, milestone completions, test results, and updated documentation.

#### **Quality Assurance (QA) Testing**

We conduct rigorous inspections and tests such as:

- Concrete cube strength tests
- Weld quality inspections (NDT where required)
- > Electrical load and continuity tests
- Material compliance verification

# Health, Safety & Environmental (HSE) Audits

Regular HSE reviews are performed to ensure compliance with safety standards, prevent on-site incidents, and promote a zero-harm environment.



#### **DELIVERABLES INCLUDE**



Daily/weekly progress reports



HSE compliance sheets



QA/QC certificates and inspection logs



Final handover documentation with checklists and approvals

# TIRE RECYCLING DIVISION

As part of ZHERKO's commitment to environmental responsibility and circular economy practices, we have established a dedicated Tire Recycling Division. This branch focuses on the collection, processing, and repurposing of used tires through advanced mechanical and shredding technologies.

#### **PROCESS OVERVIEW**

- Collection & Sorting: Discarded and worn-out tires are collected from industrial, commercial, and municipal sources.
- Crushing & Granulation: Tires undergo mechanical crushing, followed by steel and fiber separation to produce highpurity rubber granules or crumb rubber.
- Material Separation: Our system efficiently separates rubber, steel wire, and textile fibers for reuse in various industries.
- Recycling & Repurposing: The processed rubber is used in the production of:
  - Rubber tiles and flooring for gyms and playgrounds
  - Asphalt additives for noise-reducing and longer-lasting roads
  - Industrial insulation and safety mats
  - Sports field surfaces and shockabsorbent materials



# **ENVIRONMENTAL & ECONOMIC IMPACT:**

- Reduces tire waste in landfills and open areas
- Prevents toxic emissions from uncontrolled tire burning
- Lowers demand for virgin rubber and petroleum-based materials
- Creates employment opportunities in green industries

ZHERKO's tire recycling initiative not only supports sustainable construction but also contributes to a healthier environment and resource-efficient economy. We continue to invest in modern recycling technology to improve recovery rates and expand the applications of recycled rubber.



# FIELD OPERATIONS IN FOCUS













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