

CEC-Cranes

Lifting Applications



We move loads - with passion!

Everything you need - CEC Cranes has got it!



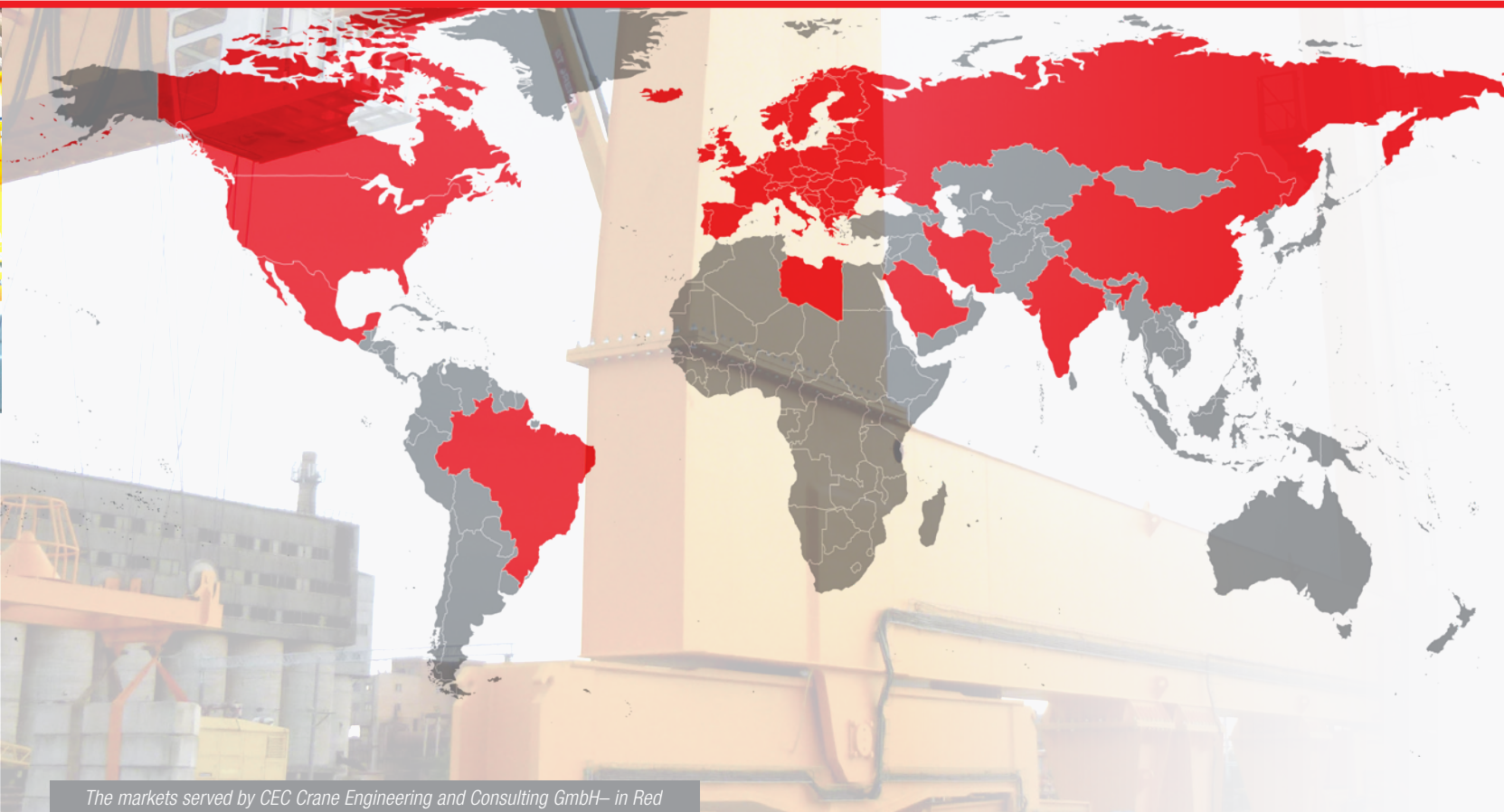
CEC Crane Engineering and Consulting GmbH is a reliable partner when it comes to moving loads of all kinds and sizes. With decades of experience and extensive expertise, we complete every project to the highest standards in quality. You will benefit from our comprehensive range of services, encompassing everything from meticulous design tailored to your specific requirements and desires, to precise manufacturing and seamless assembly – all delivered from a single source with a commitment to safety, reliability, comfort, and at competitive terms.

We provide you with everything you need – tailor-made solutions from a single source.

We engineer, design and produce tailor-made solutions of cranes and lifting devices for the metallurgical industry, hydropower plants, and other appliances - in compliance with international norms, laws, and standards.

- As an industrial partner, CEC-Cranes merges the precision of German engineering and the legacy of craftsmanship with comprehensive proficiency in cranes and lifting equipment.
- Tailored design and mechanical engineering solutions are our core competence, forming the foundation of state-of-the-art, professional-grade products.
- Our customers stand to benefit from the extensive technical know-how provided by a single source, covering the entire product line of heavy-duty lifting.
- Safety, reliability and a long service life are significant features of our sturdy products and ensure the highest life cycle value to our customers.

Product Range



The markets served by CEC Crane Engineering and Consulting GmbH- in Red

With an extremely diversified product range, CEC Crane Engineering and Consulting GmbH delivers tailor-made solutions for various industrial application purposes across all five continents:

Bridge Cranes (EOT)	production cranes for steel-, smelting- and rolling plants, heavy-duty cranes for power plants
Gantry Cranes	container handling cranes for rail terminals; loading and unloading cranes for bulk material in grab operation
Manipulators	for precise handling and positioning of materials and equipment
Heavy-Duty Winches	winches for lifting and lowering lock gates in hydroelectric power plants, Winch systems for fixed container scrap transport in steel factories
Load Lifting Devices	for particular lifting purposes
Metallurgical Vehicles	torpedo car
Customized Design	upon specific customer request
Crane Drive System	highly advanced technology for motors used in a wide range of industrial cranes

We are certified:

Welding of rail vehicles and vehicle parts according to DIN EN 15085-2

Quality management system according to ISO 9001

Range of Services

CEC-Cranes offers a diverse range of services in the fields of crane systems and lifting equipment, tailored to meet industry-specific requirements:

Design Works and Static/ Mechanical Calculations

Our experienced engineers draft, design and calculate tailor-made solutions, which are quite impressive when implemented. We elaborate:

Structural Analysis Calculations

Draft Designs

Detailed Design

Design of the Mechanical Components

Design of the Machine Components

Design of Electrical Equipment

Calculation of the Remaining Useful Life

Manufacturing

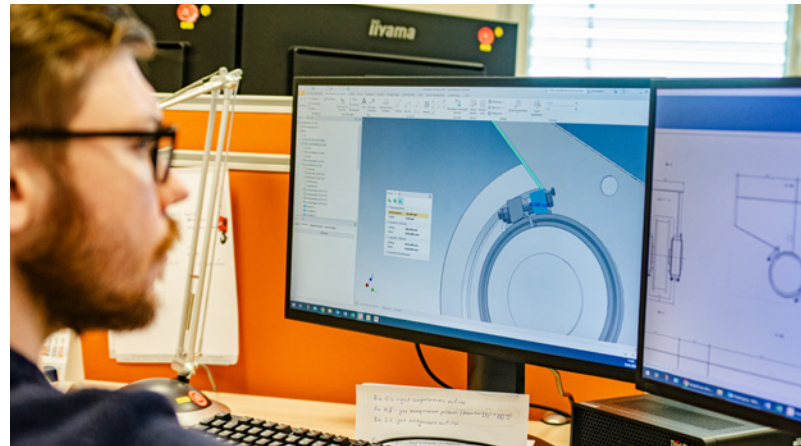
We complete your project to the highest standards in quality – whether it involves tailor-made components or complete crane systems.

Assembly

Our experienced teams assemble complete crane systems and crane components swiftly, safely and with the highest degree of technical precision.

Commissioning

After final assembly, we will gladly take care of commissioning, including relevant load tests, and introduce you to the operating system.





Inspection and Status Analysis

Our experts' exam your crane system according to the following criteria:

Visual Inspection

Inspection of the Electrical and Mechanical Components

Checking the Dimensions

Checking the Corrosion Protection

Checking the Documentation

Packaging Test

Rehabilitation, Modernization, Revamping, Expansion

We provide the following services:

Replacing Faulty Mechanical and Electrical Parts

Complete Rehabilitation of Old Machinery
and Electric Equipment

Load Capacity Increase

Components, Spare Parts, Repairs

We procure high-quality crane components and spare parts such as:

Wheels or Complete Wheelsets

Rope Sheaves

Wire Ropes

Electrical Components

Manual Chain Blocks, Load Capacity of 250 kg – 30,000 kg

Bridge Cranes (EOT)



Ladle-Handling Crane 210 t



Teeming-Crane 180-40 t



Teeming-Crane 180-40 t

Bridge Cranes

CEC-Cranes specializes in the design, manufacturing, and installation of production cranes for use in steel mills, foundries, and rolling mills, as well as heavy-duty cranes for power plants. The crane systems are fitted with overload protection and stroke-path limitation particularly in order to satisfy the specific requirements and safety regulations. Special equipment such as redundant drive systems for increased safety or individual features are perfectly integrated. Forged hooks (lamella hooks), tongs, coil hooks or magnets are used as load lifting devices.

Overview of Bridge Cranes

- Casting Cranes in 2 or 4 Girder Design, up to 450 tons
- Slab Handling Cranes With Hydraulic- or Mechanical Tongs or With Magnets
- Heavy-Duty Cranes up to 1,200 tons and 60 m Lifting Height
- Additional Models: Billet Handling Cranes, Charging Cranes as well as Various Types of Metallurgical Cranes

Gantry Cranes



Gantry Cranes

Gantry Cranes

CEC-Cranes develops and manufactures gantry cranes for a wide range of industrial sectors. Gantry cranes are generally used out-doors on large storage sites for moving scrap, steel and concrete structures, bulk material or containers. There are two types of gantry cranes:

- Loading/unloading cranes in grab operation
- Single or double gantry loading bridges



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Manipulators

Winches



Manipulators

Winches

Manipulators allow precise handling of material and machine components. The automated version guarantees short cycle times in 24-hour operation. We optimize all control parameters directly on-site – for the best performance at the highest level.

Alongside manipulators and automatic cranes, we also produce segment manipulators for installing and removing continuous casting elements for maintenance purposes.

Winches are used when hydraulic cylinders reach their technical limits.

CEC-Cranes designs and manufactures winches for roller and radial gates in hydroelectric power plants, which can safely withstand the highest loads.

Another range of application for CEC-Cranes winches is the charging of electric furnaces with scrap.

These systems essentially consist of a stationary winch, a rope sheave system, and the scrap container.

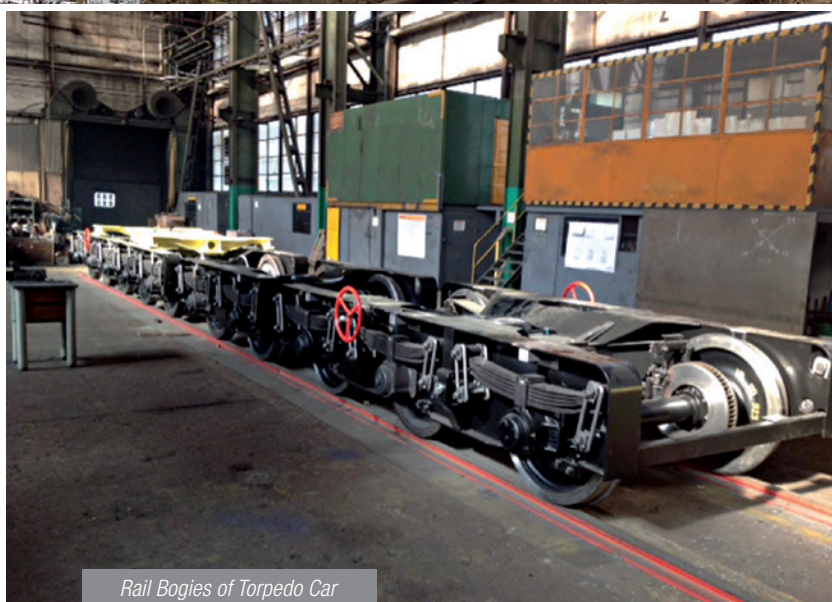
Metallurgical Vehicles



Torpedo Car 185 t Payload



Torpedo Car 185 t Payload



Rail Bogies of Torpedo Car

Metallurgical Vehicles

The torpedo car, also called cast-iron pig car or pig iron mixer car, is used to transport pig iron from the blast furnace to the steelworks. Torpedo cars can be closed tightly and keep the iron in a liquid condition much longer (up to 30 hours) than regular ladle cars.

They essentially consist of two parts:

- The undercarriage consisting of the two assembled running gears with each 2 two- and three-axle bogies. The intermediate bridge and the main bridge serve as the connection of the bogies.

A compressed air brake system is installed in the undercarriage.

- The upper carriage – pivot bearing-, whose shape is reminiscent of a torpedo, with double-sided tilting drive.

The upper- and under carriages are connected via pivoting pans. A typical torpedo wagon holds between 80 t and 320 t of liquid iron. A complete train consists of up to six torpedo cars, which are usually pulled by a locomotive. Our torpedo cars are designed for in-house traffic as well as for the public route network.

Load Lifting Devices

Customized Design



Universal Lifter



Work Roll Lifter



Mobile Service Platform for the Inspection and Repair of the Penstocks
for Pumped Storage Power Plant

Load Lifting Devices

Customized Design

We will equip your crane system with the most suitable load lifting devices.

If conventional load lifting devices do not yield the best results, we develop individual solutions, which are perfectly suited.

The ideal solution to fulfill your specific requirements is not amongst our standard line of products?

Not a problem – we develop customized designs to meet your requirements and individual demands perfectly.

Inquire about our services. We are at your disposal!

Refurbishment & Modernization



Refurbishment 110 t Lafle Handling Crane

Refurbishment, Modernization, Revamping, Expansion

In order to increase the efficiency, effective use and extension of the service life, we modernize or revamp your crane system accordingly.

We carry out modifications and modernization on crane systems of all makes and types and elaborate individual solutions accordingly.

These include, but are not limited to:

- Load Increases
- General Refurbishment
- Revamping of the Control and Drive Technology
- Assembly and Disassembly
- Undercarriage Refurbishment

Crane Drive System CEC RVS 102®



RVS 102®-Contro-Unit



RVS 102®-Thyristor Unit



RVS 102®-Contro-Unit

Crane Drive System CEC RVS 102®

In our electrical workshop, we specialize in the production of comprehensive crane control systems, including the highly advanced and proven RVS 102® control unit. This cutting-edge technology is designed for variable speed motors used in a wide range of industrial cranes, operating under the most challenging conditions (available for applications up to 1000 A).

Our robust units offer a cost-effective, reliable, and precise digital crane control solution, ideal for both retrofitting existing installations and implementing new projects. The RVS 102® system is specifically engineered for the moder-

nization of cranes in heavy industry with slip ring motor control, catering to various movements such as lifting, traveling, rotating, and more.

The dimensions and connections are compatible with common brands and can be used for all slip ring motor drives without electronic control.

The RVS 102® consists of a control unit suitable for PLC-level functions, based on an ARM processor with extensive communication capabilities, and the AC-Drive processor-based thyristor stack unit with high power output for power electronics.

Wheelsets for Rail Vehicles



Fabrication of Wheelsets for Rail Vehicles

Wheelsets for Rail Vehicles

CEC is the official representative of the company Taiyuan Heavy Railway Transit Equipment Company (TYHI) in Europe. TYHI produces wheelsets, wheels, and axles for locomotives, freight trains, express trains, industrial rails and metallurgical vehicles, mining vehicles and wheels for the metallurgical industry. THYI manufactures according to the standards of TB, AAR, EN, and HPQ (Deutsche Bahn).

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Wälzwagen Express

Die Vorteile

- solide Konstruktion bringt Haltbarkeit und lange Lebensdauer
- niedrige Bauhöhe (zwischen 7 und 20 cm) mindert Kippgefahr, ist als Mini-Kranrad oder als Fahrwerk einsetzbar und benötigt nur geringen Lastanhub bzw. Lastverbleib in geringer Höhe
- geringer Kraftbedarf zur Überwindung des Rollwiderstandes (bei großen Rollendurchmessern unter idealen Bedingungen weniger als 3 % Gesamtlast)
- Einsatzvielfalt
- Jahrzehntelange Erfahrung (rd. 70 Jahre) im Einsatz von Wälzwagen Express zu Wasser (auf dem Wasser, unter Wasser, im Wasser, Off-Shore) und zu Lande (Brückenbau und -vershub, Transporte kompletter Häuser und Sporttribünen, von Großanlagen (Hochöfen), Großmaschinen, Hangartoren, Reaktorteilen, als Maschinenteil in Rohrbiegemaschinen)
- universelles Transportgerät oder schwere Rollenbahn
- sehr kostengünstiges Bauteil

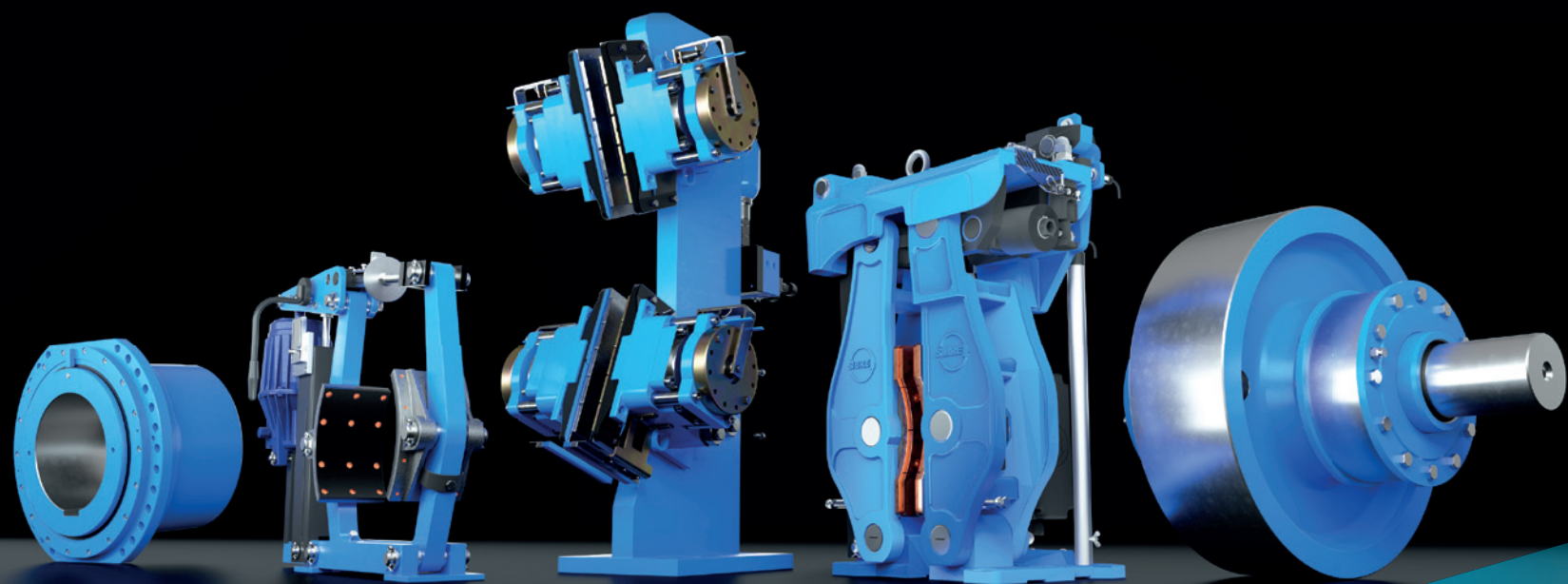


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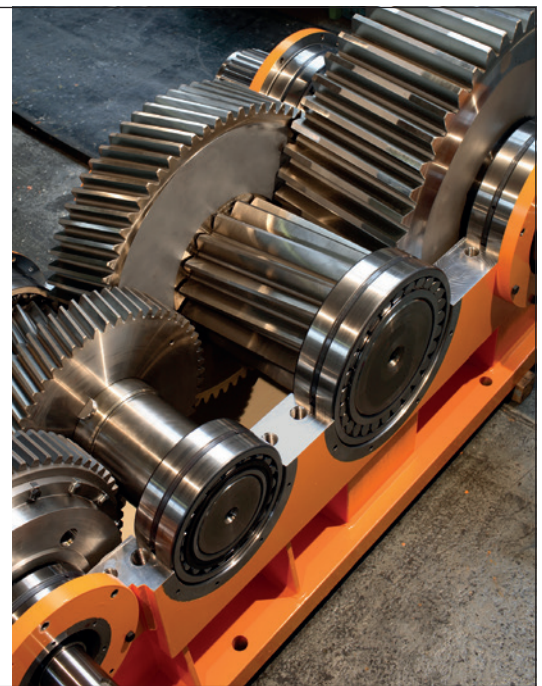
GTL

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M Metalna - SRM

Wir bei Metalna-SRM sind uns bewusst, dass die Überwachung der Kundenbedürfnisse und die Einführung kontinuierlicher Verbesserungen in allen Geschäftsprozessen für die Entwicklung neuer Produkte und den Geschäftserfolg wichtig sind. Deshalb **investieren wir in Wissen und neue eigene Ausrüstung**, um Geschäftsziele zu erreichen.

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Competence Centre for Cranes and Crane Runways

We provide a broad spectrum of engineering and measurement services for manufacturers and operators of cranes:

- project planning and design
- static and mechanical calculations
- dynamic analysis of drive systems
- expert activities
- measurement tests and analysis of cranes and crane runways (geometry, forces, stresses)
- development and delivery of crane safety technology (load monitoring)
- software for dimensioning of cranes and hoists



Engineering company for
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Do not hesitate to contact us without obligation -
we will be we will be happy to advise you.

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We move loads - with passion!