



▾ **BRIDGE  
CRANES**

▾ **GANTRY  
CRANES**

▾ **SPECIAL  
CRANES**

- ▾ **CONTAINER CRANES**
- ▾ **GRAB CRANES**
- ▾ **LADLE CRANES**
- ▾ **MAGNETIC CRANES**
- ▾ **NUCLEAR CRANES**
- ▾ **EXPLOSION PROOF  
CONSTRUCTION  
and other**

▾ **TECHNICAL  
SERVICE**

▾ **DESIGNING**

**OPTIM CRANE**

always on top

## Table of contents



— Our possibilities	4
— Double-girder travelling cranes – load capacity up to 500 tons	6
— Special Cranes (atomic cranes, grab cranes, magnetic cranes, magnetic grab cranes, foundry crane, flameproof cranes, chemical industry cranes, traverse cranes, stacker cranes, cleanroom crane)	8
— Gantry cranes – load capacity up to 200 tons	10
— Container Cranes - load capacity up to 50 tons (gantry cranes)	12
— Single-girder overhead travelling cranes – load capacity up to 32 tons	14
— Single-girder underslung travelling cranes – load capacity up to 32 tons	16
— Crane components and accessories	18
— Delivery map, references	19



Transporting span beam bridge crane - load capacity 200/32/12,5 t, Verkhny Tagil GRES



Gantry crane of load capacity 50/12,5 t, span – 46 m. Polyusgold, Yakutia.

## Our possibilities

### Production

#### Full production cycle:

- incoming control of quality
- automatic cutting materials
- automatic, semi-automatic welding
- mechanical treatment of details
- details quality control after every treatment
- assembly of metal constructions, control systems,
- hydraulic, electrical and electronic devices
- painting and protection against corrosion
- **full factory assembly and testing all of nodes and components**
- quality control at each stages of production
- each production devices imported from only high-quality manufacturers
- quality guarantee

### Designing

- own engineering design department
- **maximum consideration of the Customer's requirements at the design stage**
- three-dimensional modeling
- computer calculation of the bearing
- metal constructions ready to perform nonstandard orders, including types for adverse climatic conditions
- design
- calculation of crane control systems

### Technical service

- **survey, analysis, options for reconstruction of equipment**
- modernization
- disassembling
- installation, putting into operation
- repair service
- manufacture and supply of spare parts
- training activities of operation and maintenance of cranes



Workshop manufacturing metal constructions, Svetlyj city





Lifting gantry crane of load capacity 50t in the design position. Spetsmost, Moscow



Special crane for transporting . Nickel Plant, Guatemala

# Double-girder travelling cranes – load capacity up to

# 500 TONS

Double-girder construction of our cranes allows:

- increase capacity while reducing the weight of the crane
- increase productivity through the implementation of high speed movement of cargo, trolleys, crane

Smooth stepless speed regulation and positioning accuracy through the use of cargo management system drive inverters

Crane capacity load, t	From 5 to 500
Span, m (L)	to 46 and more
Height, m (H)	6; 9; 12; 15;18; 24;30; 36; 50
Speed, m/min: - lifting - hoist movement - crane movement	from 0,1 to 30 20 to 60 40 to 120
Operation mode of the crane, ISO 4301/1	A2...A8
Operation mode mechanisms, ISO 4301/1	M3...M8
Handling device	- hook - traverse, magnet, grab and other - spreader
Crane control on the floor	- cabin - radio control - underslung remote
Control scheme of drives	- frequency - relay - mixed

With high-quality equipment and highly qualified staff, we have a minimum deviation from the dimensions on the greatest lengths, so our cranes have excellent driving performance. Increased lifting height, the extreme upper point of hook is located between the carrier girders.

Climatic performance	U1; U2; U3
Current lead	- trolley - cable
Operating temperature range, ° C	from -50 to +60

Additional options:

- operator panel with error and actual information on a crane
- anti-swinging load system
- centralized lubrication system
- weighing system with visualization

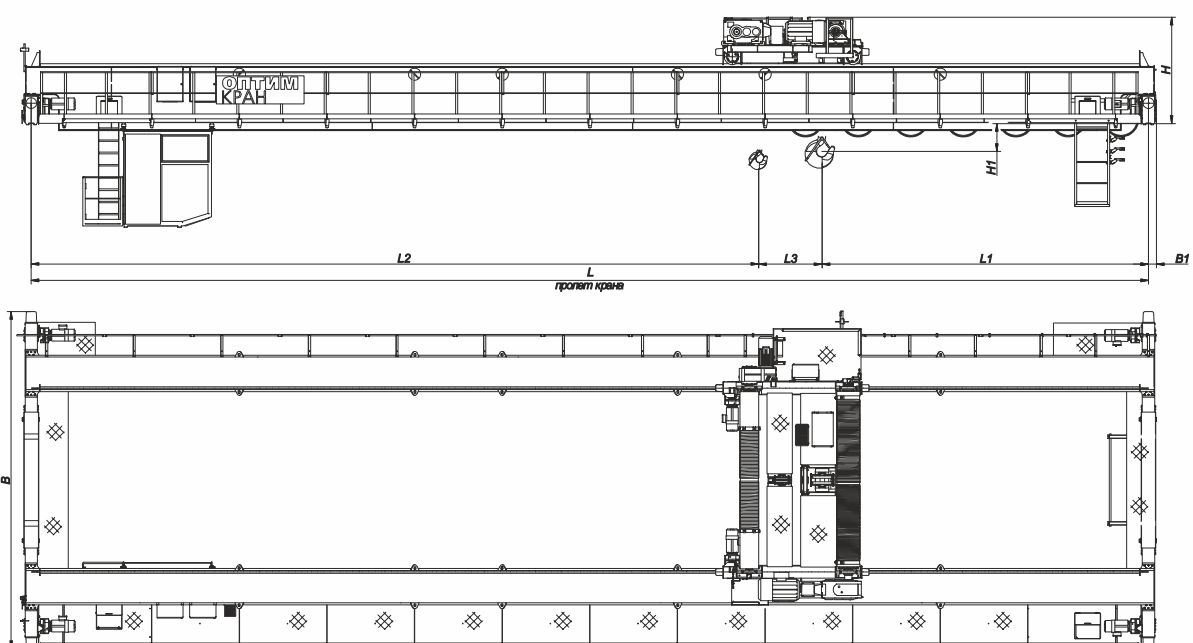


Tyazhpromarmatura, Aleksin



Belaz, Belarus

CONSTRUCTION



Special crane  
- load capacity up to

**1000 TONS**

- nuclear cranes
- grab cranes
- magnetic cranes
- ladle crane
- chemical industry cranes
- explosion proof cranes
- cranes with traverses
- stacker cranes
- cleanroom cranes)

**Nuclear cranes** - special cranes group A and group B, according to NP-043-11, displacing irradiated nuclear fuel, highly enriched uranium, transuranic materials and (or) high-level radioactive waste. Projects such cranes are designed in accordance with the Draft Nuclear Facilities (nuclear facilities) as approved by the operating organization of technical specifications and technical requirements for the initial construction (design) special cranes.

**Grab cranes** - a special bridge cranes with a bucket jaw, which are easy to pick up and transport of bulk materials, scrap and shavings, lumpy stone and fibrous materials, as well as long length wood products. Grab cranes have a winch with two drums, one of which is designed for winding the rope at the closing of closing of the jaws, and the other for winding-supporting rope (lifting). Lifting the drum is working with closed when lifting and lowering the grab.

**Magnetic cranes** - a special bridge cranes are equipped with a magnetic gripping device. These cranes are equipped with cargo electromagnets, hung on hook suspension or traverse, located in the longitudinal or transverse direction of the bridge. Because of this, the magnetic bridge crane performs specific operations with "iron" of Georgia, pulling them firmly holding its electromagnetic devices. After removing the magnet valve can operate as a hook.

**Magnetic grab cranes** designed to handle ferromagnetic loads (eg, iron scrap, etc..), as well as of bulk cargoes. For gripping the ferromagnetic loads using an electromagnet, and the bulk - clamshell grab. Depending on the purpose of performing two trolleys: magnetic and grab or trolley equipped with magnetic and grab winches.

For cranes used in the chemical industry, are requirements not only for explosion protection, but also for resistance of materials used when working in aggressive environments, containing acid, alkali and working with chemicals. Wrong selected materials lead to strong corrosion and can induce a consequent expensive modernisation.

**Explosion proof cranes** are placed in explosive areas both outside and indoors. They are equipped with electric hoists and trolleys, depending on the type of crane.

**Cranes with traverses** are special cranes used in transshipment of non-standard cargo. Traverses are continuous box beams, and at great length - variable section, which are connected to the trolley with a flexible or hard suspension. Through traverse you can increase productivity, protect the work of staff and to avoid damage to the cargo while moving. Also used in the traverse lifting loads with height restrictions, allow to transport long loads without affecting compressive and bending loads, automate the process of slinging cargo.

Bridge **stacker cranes** are crane, which moves with the trolley fixed on it a vertical column, usually turning on which the forklift moves vertically (carriage) having a fork or a special gripping cargo.

Bridge crane stacker crane controlled on rail, installed either directly on the shelves or in the constructions of buildings. There are supported or underhung cranes.



Cleanroom cranes are especially carefully acceptance because any equipment in such customer's areas should not be origin of contamination.

Ladle cranes (metallurgic) - a group of special bridge cranes used to technological process of metallurgical plants during production and follow casting of steel.

Cranes used in hydrotechnical industry (weirs) are designed for lifting the upper gate and canal pound, lift gates intake screens and perform all the necessary auxiliary work for repair and maintenance of equipment of the construction of dams.

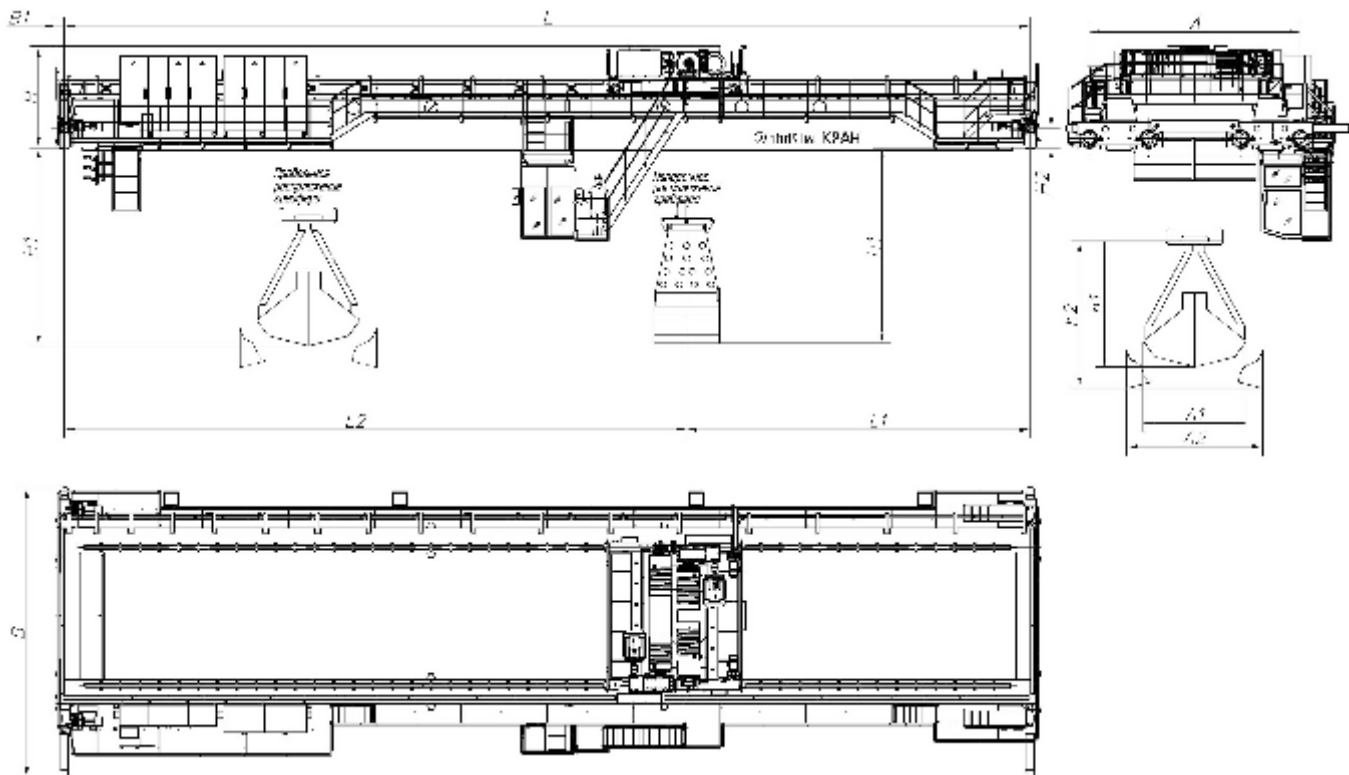


Grab crane – capacity load 20 t, Kazakhstan



Model polar crane

CONSTRUCTION



## Gantry cranes – load capacity

# 200 TONS

Electric gantry cranes are designed to perform a variety of loading and unloading works of any complexity and for different modes of operation, including the usual hook, grab, magnetic, work with containers.

Crane drive control based on modern frequency converters provide smooth, stepless regulation all of crane movements for precise positioning and cargo security.

Crane capacity load, t	From 5 to 200
Span, m (L)	to 42 and more
Height, m (H)	6; 9; 12; 15; 18;
Speed, m/min: - lifting - hoist movement - crane movement	from 1 to 30 20 to 60 40 to 120
Operation mode of the crane, ISO 4301/1	A2...A8
Operation mode mechanisms, ISO 4301/1	M3...M8
Handling device	- hook - traverse, magnet, grab and other - spreader
Crane control	- cabin - radio control - underslung remote
Control scheme of drives	- frequency - relay - mixed

The crane moves on a rail crane runway on four trolleys.

Each of the trolleys is driven.

Frame of trolley is a welded box construction. Location of drive trolleys has enough traction to the drive wheels of the crane rail for any mode of loading crane and regardless of the location of trolley relative to the bridge.

Climatic performance	U1; U2; U3
Current lead	- trolley - cable
Operating temperature range, °C	from -50 to +60

Additional options:

- operator panel with error and actual information on a crane
- anti-swinging load system
- centralized lubrication system
- weighing system with visualization



Gantry crane of load capacity 70t, span – 42 m. Stoilensky GOK. Stary Oskol



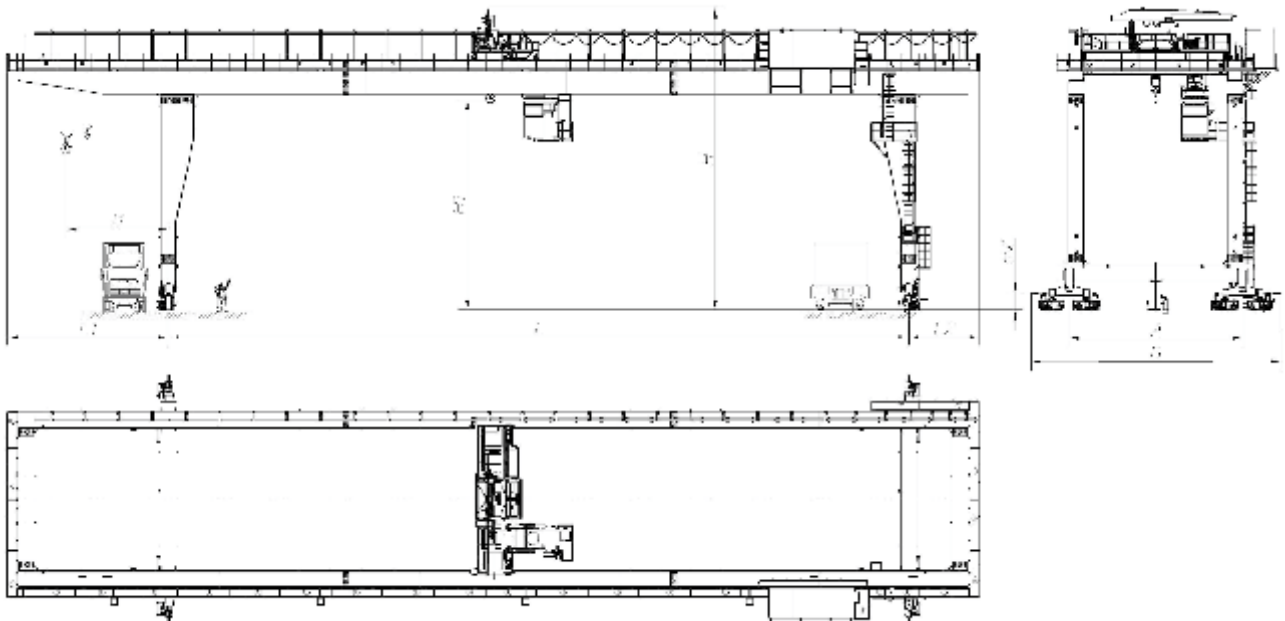
Plant mineral fertilizers.  
URALCHEM, Kirovo-Chepetsk





Gantry crane of load capacity 50t, span – 32 m. Gazpromtrubinvest. Volgorechensk.

## CONSTRUCTION



# Container Cranes (gantry cranes) - load capacity up to

# 50 TONS

Gantry cranes container designed for stacking and overload containers. Gantry container cranes are equipped with gripper -srederom optimal for gripping containers. With this implementation, gantry container crane can perform specific operations highly efficient container handling, which can not handle normal gantry crane.

### Technical solutions

Box type of metal constructions has a high fatigue resistance under heavy and superheavy modes. Efficiency of this technology solutions is confirmed by the world experience in creating machines of this class.

U-shaped design with cross-beam allows rackets 20-45 foot containers between the legs of the crane without turning the whole lift height, which significantly reduces time work and increases productivity.

Crane capacity load, t	up to 50 t
Span, m (L)	to 50 m
Stacking height levels of containers accord, the scheme	2+1; 3+1; 4+1;5+1 and more
Overload containers	All type of containers: 20,30, 40,45 ft
Speed, m/min: - lifting - hoist movement - crane movement - turn container	from 1 to 30 20 to 60 40 to 120 1-1,5 rpm
Operation mode of the crane, ISO 4301/1	A5...A8
Operation mode mechanisms, ISO 4301/1	M5...M8
Trolley	- supported - suspension
Turn container	On trolley On spreader

Handling device - spreader	A) Mechanical mounted on hook (separately for 20 ft and 40 ft containers) B) Automatic with electric drive gripper heads (fixed to the frame 20 ft mounted frame for 40 ft containers) C) Telescopic (20 - 40 ft), electric (without hydraulics) D) Telescopic (20 - 40 ft), electrohydraulic
Crane control	- cabin - radio control - underslung remote - combined
Control scheme of drives	- frequency
Current lead	- trolley - cable drum
Operating temperature range, ° C	Standard -40 to +40 possible - 50 to +60



Universal telescopic spreader

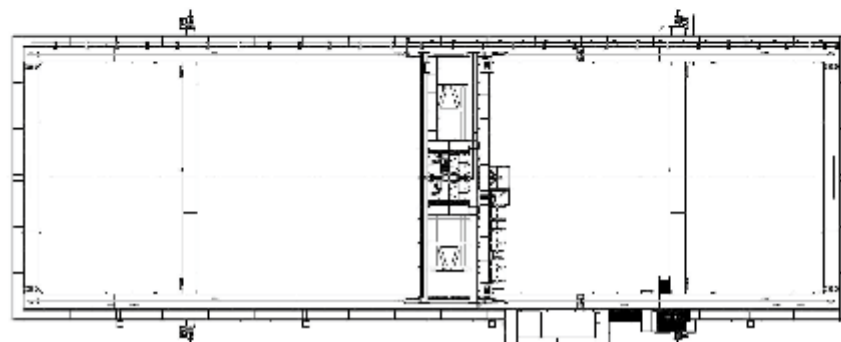
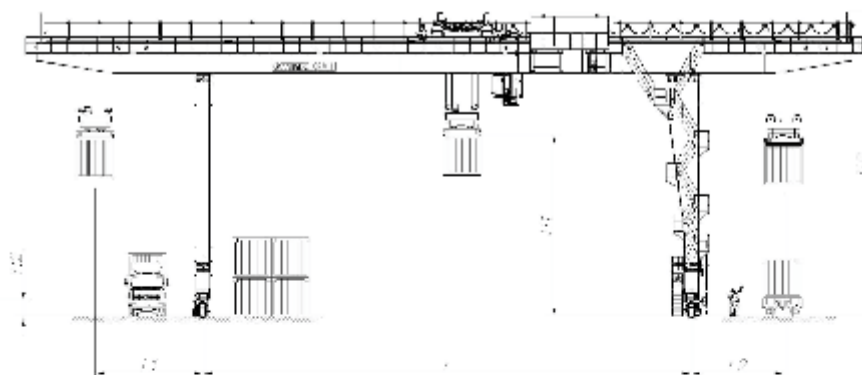
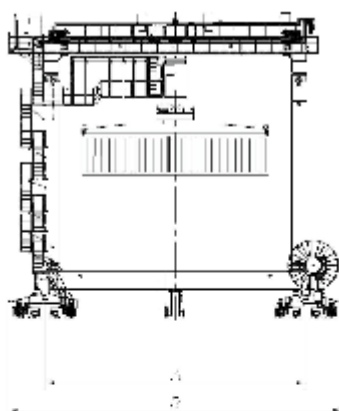


Single- automatic cable drum



Gantry cranes container for 20 ft, 40 ft container. Asia-Auto, Kazakhstan

### CONSTRUCTION



# Single-girder overhead travelling cranes – load capacity up to

# 32 TONS

- compact geared-motors with built-in brakes, controlled by frequency converters

- hoists with reduced construction height for maximum lift height
- current lead to the trolley via a flexible suspension along the rigid profile
- control panel moves independently of the hoist
- possibility of radio control
- imported components
- quick installation and easy maintenance

Crane capacity load, t	From 0,25 to 32
Span, m (L)	to 31,5 and more
Height, m (H)	3; 6; 9; 12; 15;18; 24;30; 36
Speed, m/min: - lifting - hoist movement - crane movement	from 0,1 to 12 to 20 to 60
Operation mode of the crane	A1...A5

Operation mode mechanisms, ISO 4301/1	M3...M5
Handling device	- hook - traverse, magnet, grab and other
Crane control on the floor	- radio control - underslung remote
Control scheme of drives	- frequency - relay - mixed
Climatic performance	U1; U2; U3
Current lead	- trolley - cable
Operating temperature range, ° C	from -50 to +60

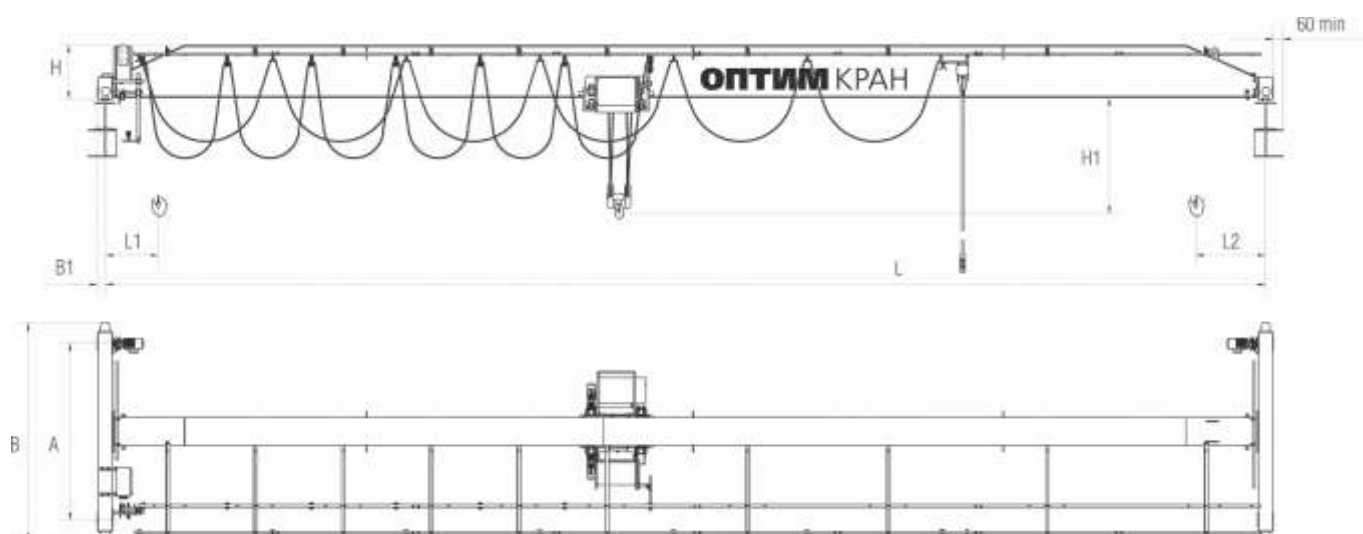


10 pcs of cranes of load capacity 5t, the new fabrication shop. Vnukovo



Assembly workshop truck trailers. Grunwald, Kaliningrad

CONSTRUCTION



# Single-girder underslung travelling cranes

– load capacity up to

# 32 TONS

- underslung cranes provide accessibility throughout the production area of the manufactory
- span compensation deviations runway due to the unique design of the terminal girder (own design)
- outreach of the cantilever allow you to increase the service area beyond the span of the crane
- thanks to a simple attachment to existing ceiling structure it simplify the construction of supports for the crane runway
- low power consumption
- optimal load distribution on the runway

Crane capacity load, t	From 0,5 to 32
Span, m (L)	to 31,5 and more
Height, m (H)	3; 6; 9; 12; 15;18; 24;30; 36
Speed, m/min: - lifting - hoist movement - crane movement	from 0,1 to 12 to 20 to 60
Operation mode of the crane, ISO 4301/1	A1...A5
Operation mode mechanisms, ISO 4301/1	M3...M5
Handling device	- hook - traverse, magnet, grab and other
Crane control	- radio control - underslung remote

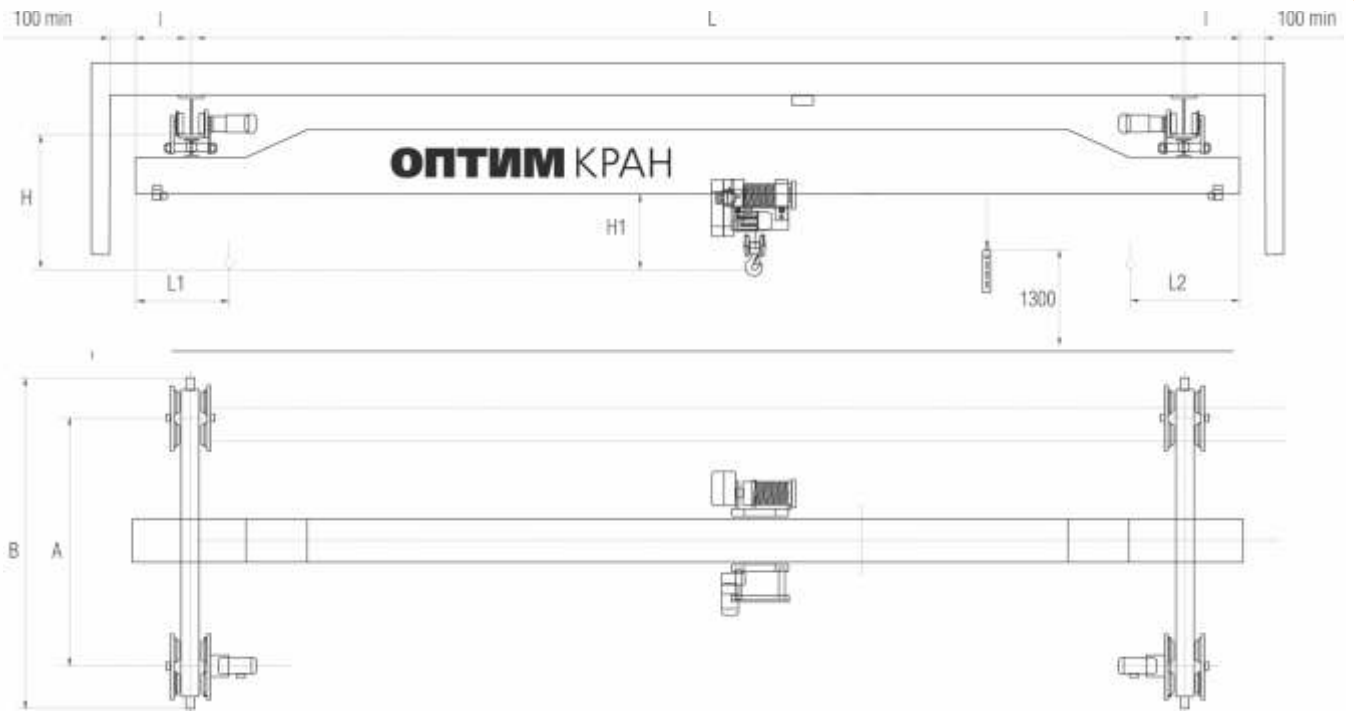
Control scheme of drives	- frequency - relay - mixed
Climatic performance	U1; U2; U3
Current lead	- trolley - cable
Operating temperature range, ° C	from -50 to +60



House-Building Plant. Morton, Naro-Fominsk



CONSTRUCTION



Assembly line of the plant Avtotor

# Crane components and accessories

- bearing metal constructions
- main girders
- end carriages
- trolleys
- **control cabin**
- underslung power cables systems
- electrical cabinets
- cable trays
- crane buffers
- handling devices (traverses, spreaders)



Cabin control for crane



Trolley, moving parts



Assembly of electrical cabinets based on "Siemens"



Trolley – capacity load 200 t

## Delivery map, references

Our Customers - companies:

- of shipbuilding
- of fuel and energy complex, including NPP
- of engineering, including automotive industries
- space industry
- **RZD (Russian Railways)**
- transport and logistics complex
- metallurgy
- oil and gas complex
- wood-processing complex
- building industries and others





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