

Overhead cranes

ABUS
CRANE SYSTEMS

ABUS CRANES MAKE LIGHT WORK OF LIFTING.



ABUS travelling cranes

ABUS is one of Europe's leading crane manufacturers, offering customers tailor-made solutions for efficient material handling and individual service from design through to maintenance. ABUS has been ensuring high quality and precision right down to the smallest component for more than four decades now. ABUS crane systems cover the entire load range up to 120 t and can easily be adapted to any factory shape or application conditions. The wide range of accessories available means that ABUS cranes are ideally suited for special applications. ABUS cranes are highly versatile and extremely reliable and have a number of features which by no means all manufacturers offer as standard equipment. Whether you need lifting, lowering, linear handling or area coverage, ABUS cranes help you keep everything under control. ABUS travelling cranes, designed for handling loads up to 120 tonnes, are the ideal solution for heavy lifting and wide spans. The ABUS travelling crane range includes five series designed for different applications and operating conditions: single girder, double girder, underslung single girder, single girder wall travelling cranes and single girder semi-goliath cranes.



ABUS single girder overhead travelling cranes ELK, ELV & ELS

ensure efficient material handling even where very little space is available in production plants or warehouses. ABUS single girder overhead travelling cranes are available with rolled section or box girders. Each model is available in different girder connection versions to allow a space-saving configuration and an optimised highest hook position.



ABUS double girder overhead travelling cranes ZLK

achieve the maximum load capacity of up to 120 tonnes. They are available in various configurations and feature the versatility required for additional requirements. For example, larger load capacities, spans and hook paths, as well as an extended range for higher crane duties are possible.



ABUS underslung single girder overhead travelling cranes DLVM & EDL

are installed on ceiling mounted tracks rather than free standing or building columns. Advantageous side approach dimensions allow the optimum use of the entire width of the production plant.



ABUS single girder wall travelling cranes EWL

and ABUS single girder semi-goliath cranes are installed on a seperate track below other types of overhead travelling crane. They are the ideal solution for serving several working areas at the same time. The ABUS single girder wall travelling crane is designed for spans up to 12 m and load capacities up to 5 tonnes.



ABUS single girder semigoliath crane EHPK

ABUS single girder semi-goliath cranes EHPK achieve spans of up to 15 m and a load capacity of up to 10 t and are ideal for use on their own crane track on an intermediate level below other types of overhead travelling cranes. Also ideal as a workplace crane for several work stations.

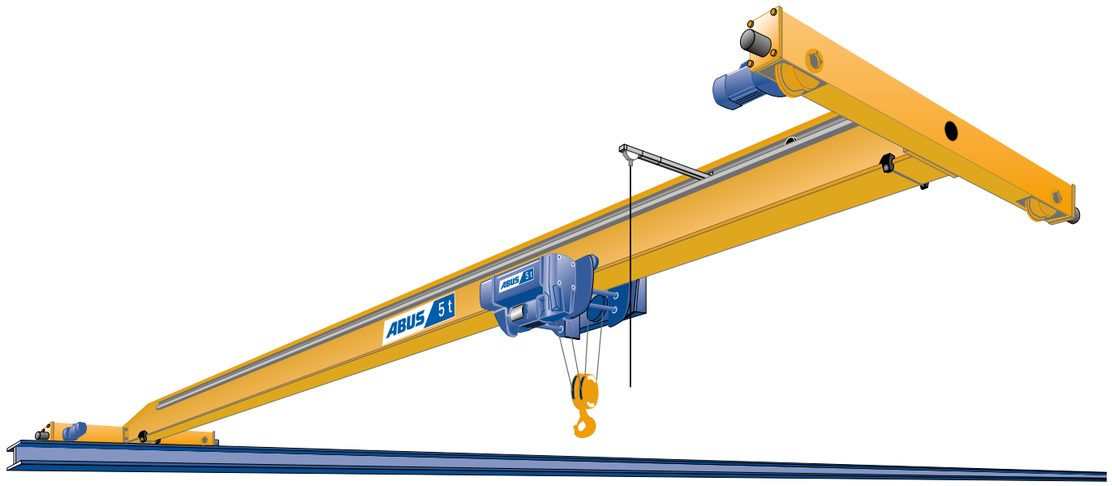


ABUS ELV, ELK and ELS single girder overhead travelling cranes

A HIGH-PROFILE SOLUTION FOR LOW BUILDINGS

ABUS single girder overhead travelling cranes allow efficient material handling with load capacities up to 16 t and spans up to 39 m even in plants with low ceilings. With a minimal safety clearance between top of crane and factory roof, and the compact dimensions of ABUS crane girders, it is possible to make full use of the available height and to reduce the cost of a new building. The ABUS range of single girder travelling cranes includes a variety of girder connection versions for highly versatile adaptation to the space and dimensions available. Standard main girder connection configuration 3 (see main girder connection configurations on page 7) is the optimum solution when planning new buildings, as the smallest side approach dimensions are achieved here. In addition, the ABUS range includes a wide variety of accessories for many different special applications. ABUS ELV overhead travelling cranes are equipped with sturdy rolled section girders while ELK and ELS cranes feature torsionally rigid welded box girders. In addition, side-mounted hoist units on ABUS ELS single girder overhead travelling cranes allow maximum use of the available lifting height.

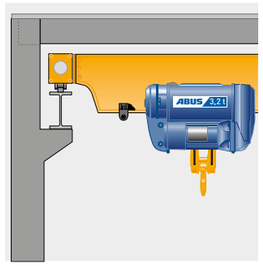
A HIGH-PROFILE SOLUTION FOR LOW BUILDINGS

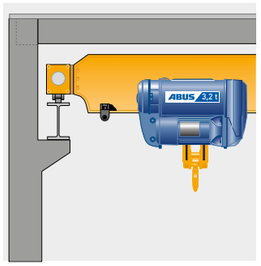


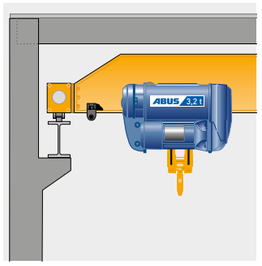
Model	Load capacity [t]	Max. span [m]
ELV single girder overhead travelling crane with rolled section girder	up to 5	18,5
	up to 6,3	17,5
	up to 8	17
	up to 10	15
ELK single girder overhead travelling crane with welded box girder	up to 5	29,5
	up to 10	27,5
	up to 16	22
ELS single girder torsion box crane with side-mounted hoist unit	up to 6,3	39
	up to 8	35
	up to 10	34

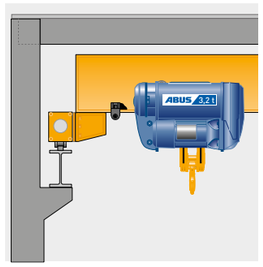
MAIN GIRDER CONNECTION VERSIONS TO SUIT FACTORY CONDITIONS

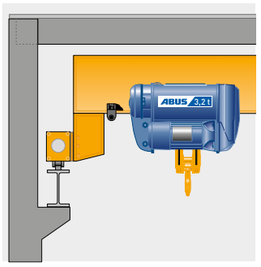
for ELV and ELK


Stooled down configuration
Version 1

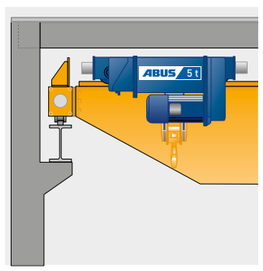

Stooled down configuration
Version 2

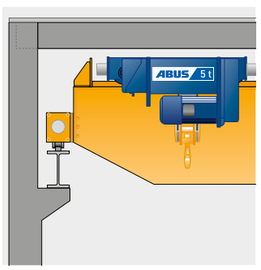

Standard main girder connection configuration
Version 3

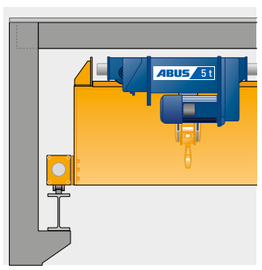

Stooled up configuration
Version 4

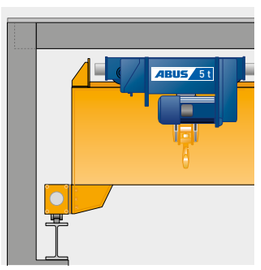

Stooled up configuration
Version 5

for ELS


Stooled down configuration
Version 1


Stooled down configuration
Version 2


Standard main girder connection configuration
Version 3


Stooled up configuration
Version 4

A HIGH-PROFILE SOLUTION FOR LOW BUILDINGS



The ideal solution for a new factory: the ABUS ELK single girder overhead travelling crane with long angle chamfer adapted to suit the building haunch (version 3), optimising available height.

Optional: thruster rollers offer an even more exact method of crane travel guidance, reducing skewing forces.

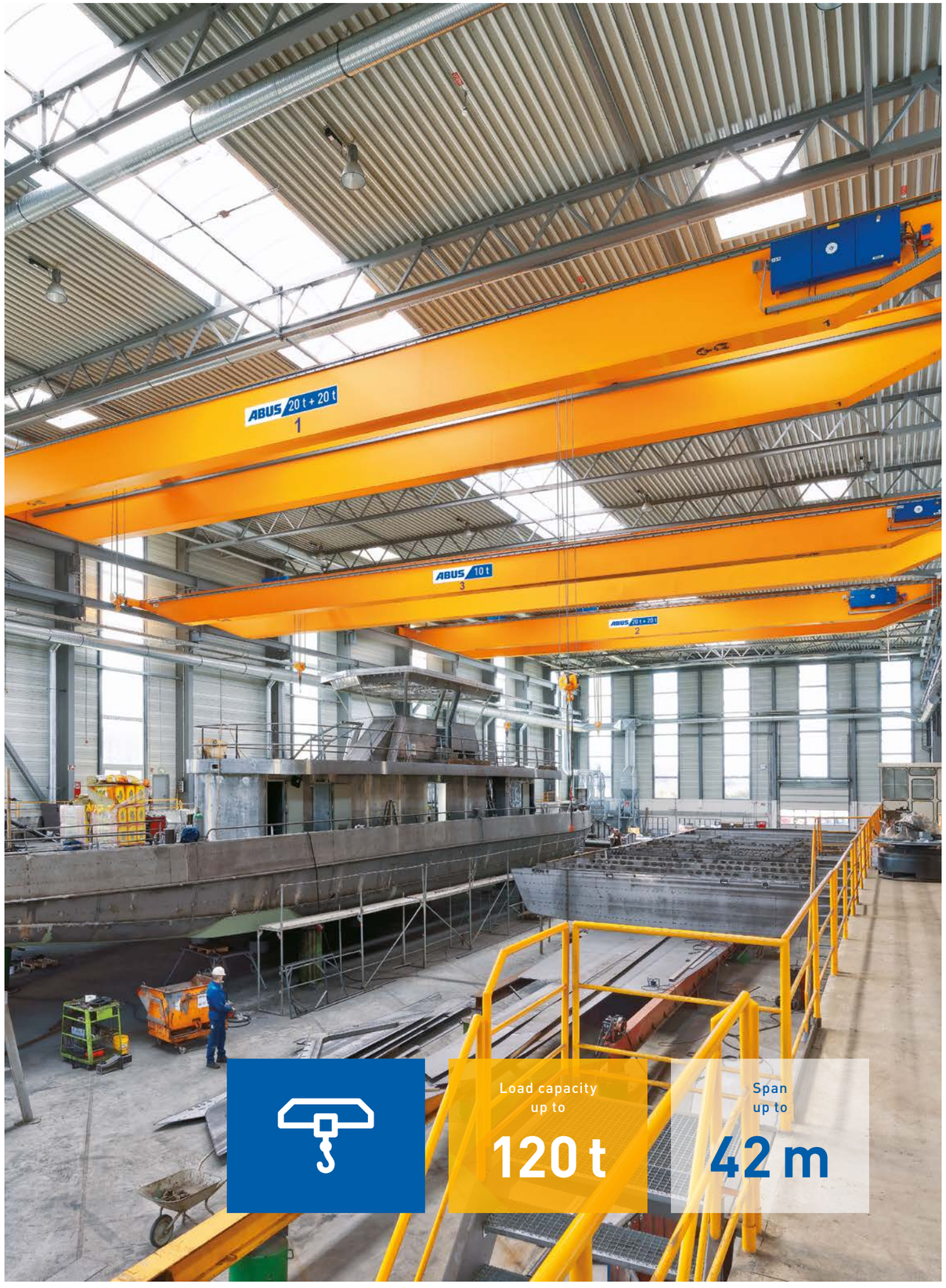




Stooled up crane bridge configurations are the ideal solution for special situations and buildings with difficult conditions.

Optional twin hoist operation for for the transport of particularly heavy and bulky loads. The wire rope hoists are controlled from the crane control either individually or as a pair. A real safety advantage for your transport task.



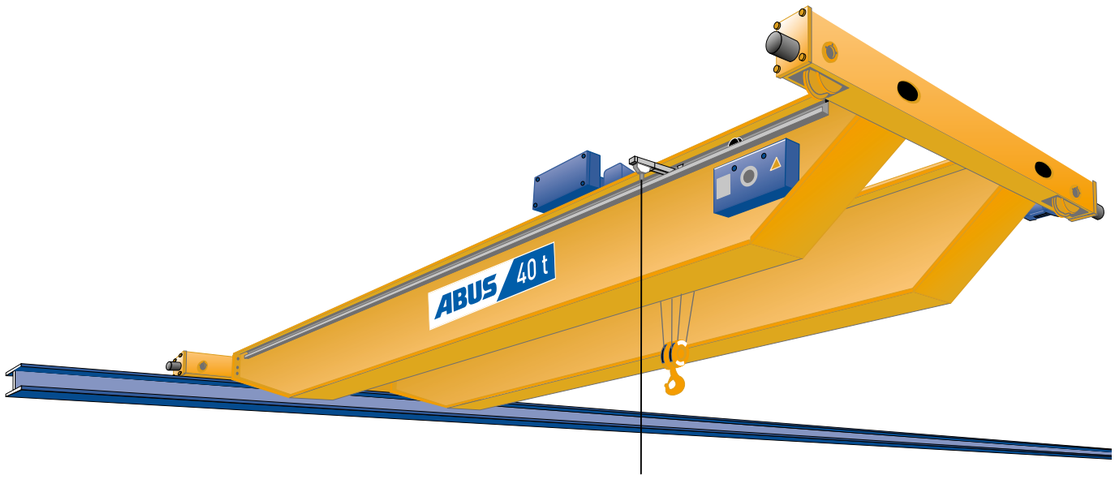


ABUS ZLK double girder overhead travelling cranes

THE HEAVY BRIGADE

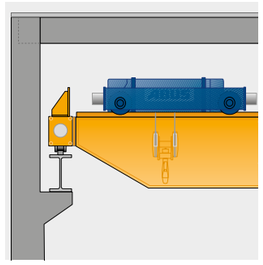
Two girders are simply stronger than one, making ABUS double girder overhead travelling cranes the ideal solution for the area coverage handling of heavy loads up to 120 t. Like all ABUS factory cranes, they can be perfectly integrated into planned or existing factory structures thanks to different main girder connection configurations and guarantee the highest level of functionality, flexibility and safety at all times. The ABUS range includes a wide variety of accessories for many different special applications. ABUS ZLK double girder cranes feature welded box beams. All the sections used for main girders and end carriages are computer-optimised for high performance and low weight, benefits that pay in terms of strength and cost efficiency. ABUS double girder overhead travelling cranes achieve spans of up to 42 m and offer the best prerequisites for additional requirements, such as higher crane duties, the installation of maintenance platforms or auxiliary hoists.

THE HEAVY BRIGADE

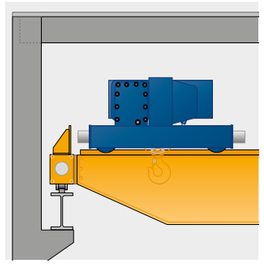


Model	Load capacity [t]	Max. span [m]
ZLK double girder overhead travelling crane with welded box girder	up to 16	42
	up to 40	40
	up to 50	37
	up to 100	30

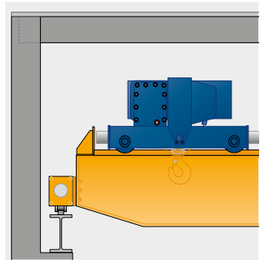
MAIN GIRDER CONNECTION VERSIONS TO SUIT INDIVIDUAL FACTORY CONDITIONS



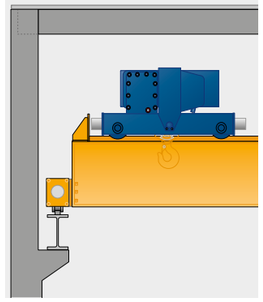
Standard main girder connection in combination with stooled down crab unit



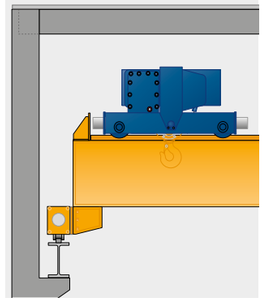
Standard main girder connection configuration – Version 1



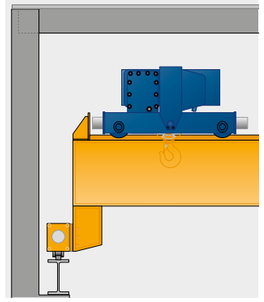
Stooled up configuration Version 2



Stooled up configuration Version 3



Stooled up configuration Version 4



Stooled up configuration Version 5

THE HEAVY BRIGADE



In the photographed application shown, the ABUS overhead travelling crane operates the crane flap, allowing the crane to travel back inside.

Stooled down crab units allow double girder overhead travelling cranes to be installed even where there is little space above the crane track. The higher position of the crane bridge with a stooled down crab unit may be a decisive advantage, for example when handling bulky machines or large tanks.





The end carriage may be mounted on eight wheels for even load distribution. Heavier loads can then be carried on a smaller crane track and the reinforcement otherwise needed in existing buildings may not be required.



When transporting long and bulky goods, two adjacent cranes work in parallel to provide one risk-free load movement.

Fitting the cranes with a maintenance platform offers optimum accessibility to all components and thus decisive advantages, especially when carrying out maintenance work.





Optional twin hoist operation for for the transport of particularly heavy and bulky loads. The wire rope hoists are controlled from the crane control either individually or as a pair. A real safety advantage for your transport task.

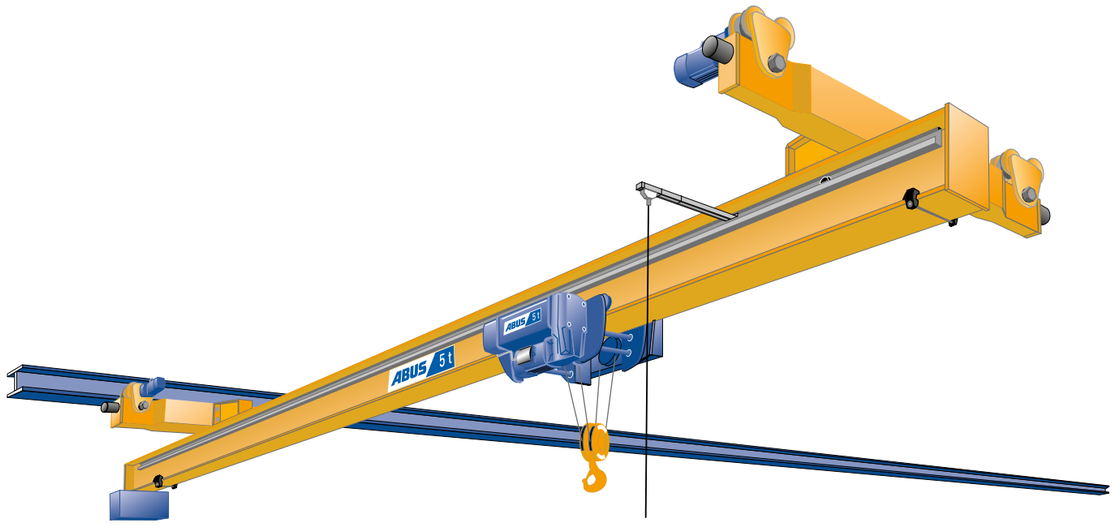


ABUS DLVM, EDL and EDK underslung overhead travelling cranes

HIGH PERFORMANCE UNDER SPECIAL CIRCUMSTANCES

Complex factory configurations pose special problems, but they are easy to solve with ABUS underslung overhead travelling cranes. The crane track is mounted directly on the factory ceiling and not on free standing structural or building columns, allowing efficient material handling solutions even in tight spaces with difficult design conditions. With minimum side approach dimension and cantilevers to suit individual conditions, ABUS underslung overhead travelling cranes make full use of the space available. The highest hook position can also be raised by installing the main girder up between the end carriages. These cranes are designed for load capacities up to 8 t and spans up to 25 m. DLVM and EDL underslung overhead travelling cranes are equipped with rolled section girders while EDK cranes feature torsionally rigid welded box girders. A full range of accessories is available.

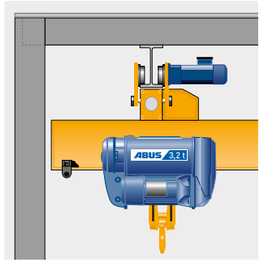
HIGH PERFORMANCE UNDER SPECIAL CIRCUMSTANCES



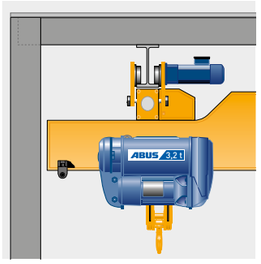
Model	Load capacity [t]	Max. span [m]
DLVM underslung overhead travelling crane with rolled section girder and welded main girder connection	up to 3,2	14
EDL underslung overhead travelling crane with rolled section girder and bolted main girder connection	up to 5	17,5
	up to 6,3	17
	up to 8	9
EDK underslung overhead travelling crane with box girder and bolted main girder connection	up to 6,3	25
	up to 8	13

MAIN GIRDER CONNECTION VERSIONS TO SUIT INDIVIDUAL FACTORY CONDITIONS

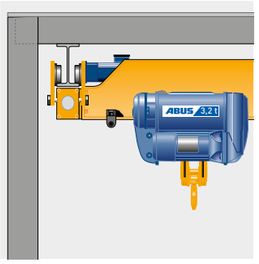
for EDL and EDK



Standard main girder connection configuration – Version 1 (variable cantilever for minimum side approach dimension)



Standard main girder connection configuration Version 1, 'angled' (variable cantilever for minimum side approach dimension)



Stooled up configuration Version 2 (optimised hook height without crane girder cantilevers)

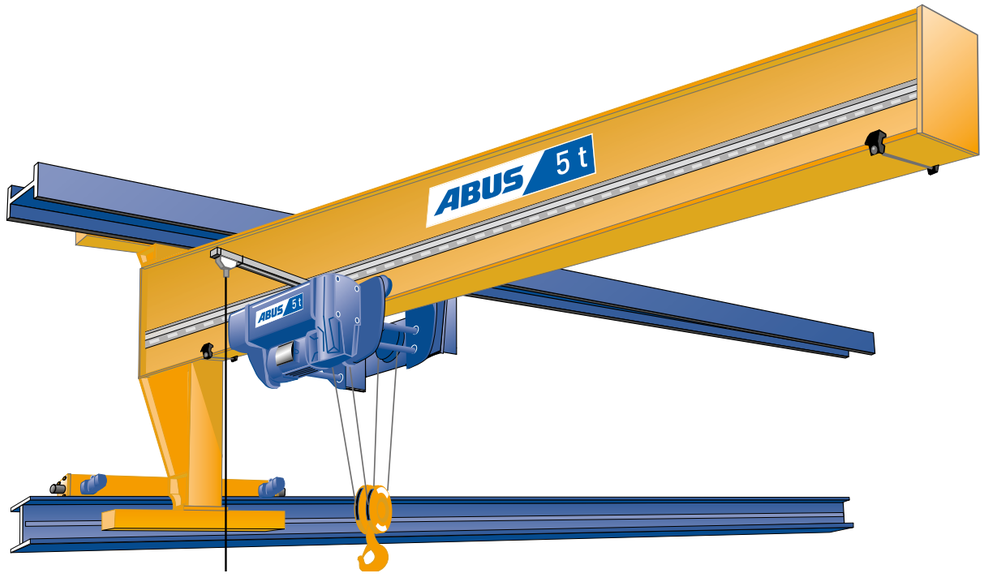


ABUS EWL single girder wall travelling crane

A HIGH-PROFILE SOLUTION FOR THE LOWER WORKING LEVEL.

The ABUS single girder wall travelling crane is designed for operation on a lower level beneath a large overhead travelling crane system. These cranes provide additional handling possibilities and ensure smooth and troublefree material handling between different working areas. A wall travelling crane installed at right angles across the hall can serve several working stations. ABUS single girder wall travelling cranes are available for load capacities up to 5 t with jib lengths up to 12 m.

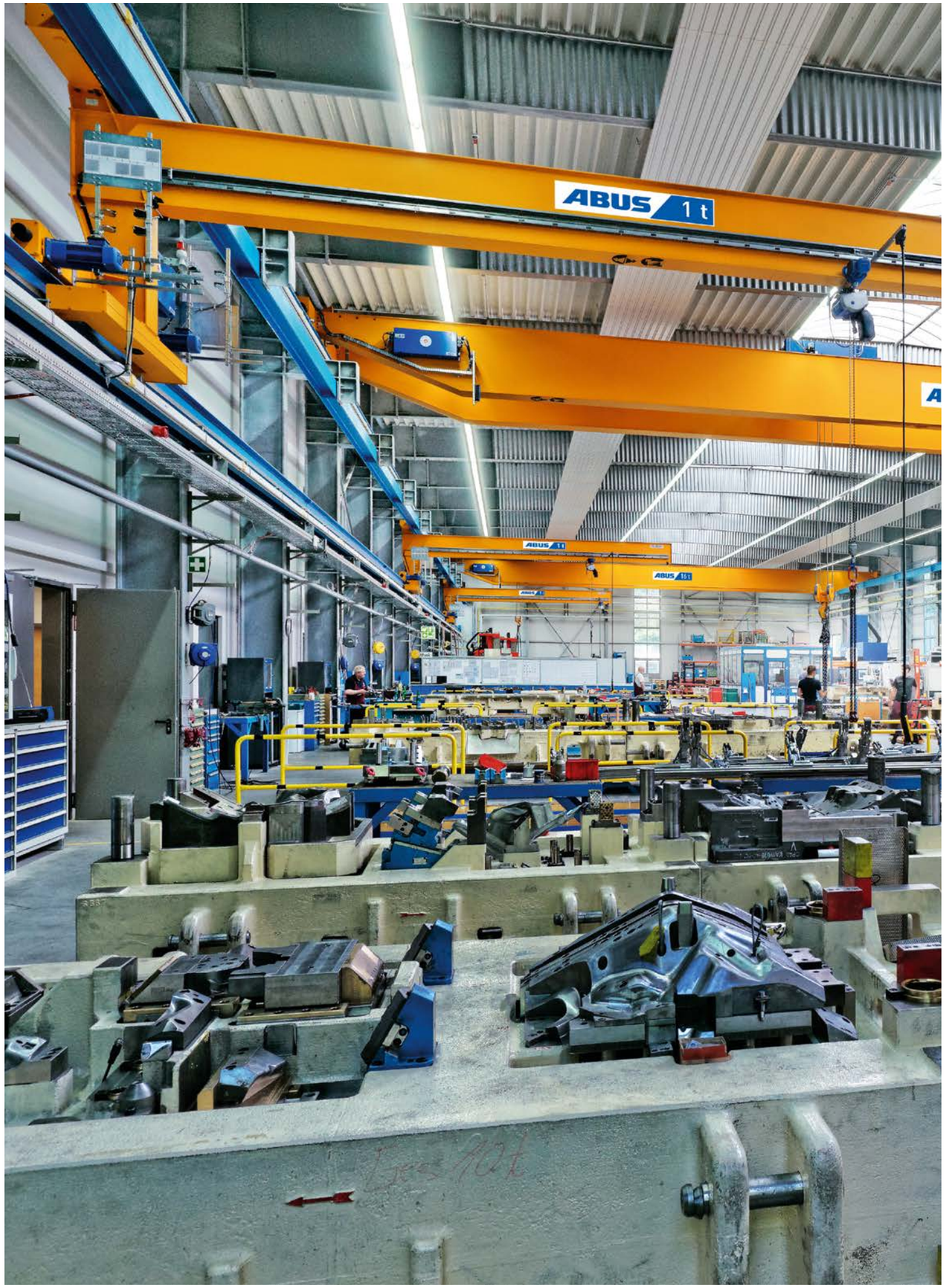
A HIGH-PROFILE SOLUTION FOR THE LOWER WORKING LEVEL.



Model	Load capacity [t]	Max. jib length [m]
EWL single girder wall travelling crane with welded box girder	up to 5	12

With two hoists in tandem operation, ABUS single girder wall travelling cranes can also be used for the precise positioning of long loads.





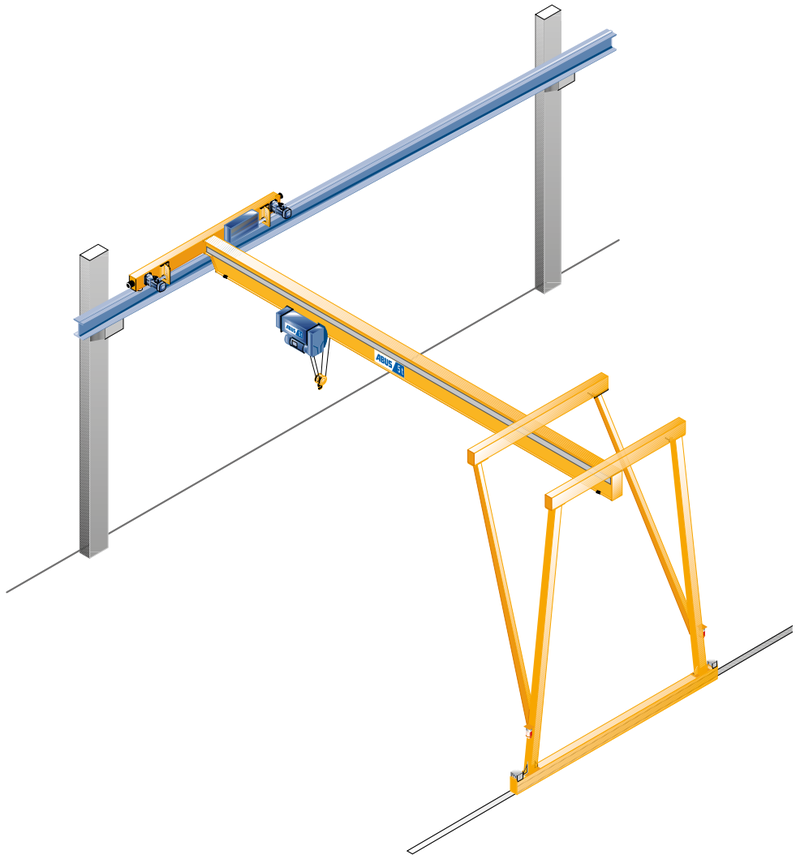


ABUS EHPK single girder semi-goliath crane

A POWERFUL PARTNER ON MORE THAN ONE LEVEL.

The ABUS single girder semi-goliath crane is the ideal solution for operation in the areas beneath a large overhead travelling crane system. Similar to the ABUS single girder wall travelling crane, due to its configuration at right angles to the downshop tracks, this crane can serve several adjacent work stations. The ABUS single girder semi-goliath crane is available with Safe Working Loads of up to 10 to and spans up to 15 m. The torsion resistant and sturdy box girder construction allows crane travel without any lateral guidance of the portal leg at floor level. The lower end carriage travels either directly on the even and load bearing shopfloor, or in the case of higher wheel loads, on a suitable steel plate mounted flush to the plant floor. A raised or countersunk guide rail with the consequent trip hazards are avoided. The EHPK is fitted with lift-off prevention devices on the high level end carriage as well as obstacle detection and clearly visible rotating lights at floor level.

A POWERFUL PARTNER ON MORE THAN ONE LEVEL.



Model	Load capacity [t]	Max. span [m]
EHPK single girder semi-goliath crane with welded box beam	up to 5	15
	up to 10	10



Guide rollers on the high level end carriage as standard.

Obstacle detection on the floor level end carriage as standard and no guide rail on the floor required.





Highly visible flashing lights at operator level

STANDARD EQUIPMENT ON ABUS OVERHEAD TRAVELLING CRANES – SETTING AN EXAMPLE

ABUS quality – right down to the last detail

ABUS overhead travelling cranes are supplied with comprehensive high performance standard equipment including many features often only offered as accessories. These features make ABUS cranes especially safe and reliable and allow precise adaptation to the customer's individual needs. Like the cranes themselves, each of these components items meets stringent quality requirements and has been thoroughly tested.



Motor circuit breakers

offer additional safety for cranes with ABUS wire rope hoists by limiting the thermal load on long and cross trolley travel motors in two-phase and severe inching operation and when the drive system is blocked. After the circuit breaker has been tripped, there is no need to replace a fuse before restarting the hoist or crane.



ABUS plug-in connectors

make contact easily and reliably. They are already preassembled and reduce repair and maintenance times to a minimum. Using these connectors, hoists, geared motors and control units can be connected up quickly and easily without the assistance of an electrician.



ABUS contactor-type control systems

bring together all the control signals from the crane system. These systems feature modular design for maximum versatility and easy adaptation to customers' requirements. Interfaces to the main items of optional equipment (radio remote control, signal horn, limit switches, anti-collision devices, etc.) are preinstalled ready for connection. The clear configuration with ducted wiring makes maintenance work easier. Timers prevent excessive inching and power contactors are generously sized for long service lives.



Radio remote control

Thanks to a free choice of location and more freedom of movement for the crane operator, it enables a good overview of the entire working area, thus saving a lot of time. The compact hand-held transmitter with inductive charging station is one of the available controller options. The ABURemote works with standard batteries - more than 40 hours at a stretch.



Load indication in the display of the ABURemote Button radio control.



The **ABUS load indicator system** features a comprehensive range of switching and monitoring functions. The system offers an extremely short load detection time of only a few hundredths of a second, effectively protecting ABUS wire rope hoists against overloading. The measurement principle allows the load on the hoist to be limited without reducing the lifting height available.

The main functions include:
- overload protection
- part-load switches
- operating hours meter
- current monitoring for motor protection
- redundant circuitry for additional safety
- mains power and fault diagnostic
- braking with use of motor as a generator to reduce wear on brakes
- load population recorder (optional)



ABUS ACCESSORIES:
JUST WHAT YOU NEED FOR INDIVIDUAL SOLUTIONS

With the comprehensive range of accessories offered by ABUS, every ABUS overhead travelling crane can be precisely adapted to the customer's requirements, ensuring optimum performance. The range includes additional safety devices and equipment for additional functions such as electric limit switches, integrated load analysis systems, crane lighting and maintenance walkways.



The ABUS tandem control system

allows the crane operator to control two electrically coupled overhead travelling cranes at the same time. Ideally, the ABUS radio remote control system should be used in combination with the tandem control system. With this control configuration, two crane operators can control the two cranes separately, or one operator can control both cranes, either separately or together. A real safety advantage when transporting long goods with 2 cranes.



ABUS maintenance walkways

allow access to the entire length of the crane girder, bringing all the main components of the crane system within easy reach, a major prerequisite for safe and efficient maintenance work.



Load suspension devices

can be used with ABUS cranes for special material handling tasks. For example, ABUS cranes can be equipped with vacuum lifting units for lifting plates or with C-hooks for handling coils.



The ABULiner

is an effective solution when precise positioning is required with variable speed hoists. This frequency converter also allows the maximum speed to be increased above the rated speed when lifting part / reduced loads. ABULiners are also available for long and cross travel.



LED Matrix dispaly

with three different digit sizes from 60 mm to 180 mm, digits, letters as well as special characters can be seen up to a reading distance of approx. 80 m. Due to the small space requirement, it can be fitted to the crane in a variety of positions. Crane status displays as well as scrolling text can also be implemented.



ABUS crane lighting systems

effectively illuminate the working space under a crane, avoiding the shadows normally cast by crane girders working beneath normal factory lighting. ABUS uses highly efficient energy-saving LED lights. The number of lights, as well as their light intensity reflect customer requirements.



ABUS cross-type limit switches

limit long travel and cross travel, automatically slowing or stopping the crane or the hoist at the end of the track. These limit switches may also be applied for crane zoning if it is necessary to divert a hoist on a crane around a prohibited area. The switch is operated by a switching lug installed on the crane track or on the crane bridge.



ABUS ACCESSORIES:
JUST WHAT YOU NEED FOR INDIVIDUAL SOLUTIONS

Anti-sway motion sequences with two speed operation

For those wanting to optimally transport sensitive or large loads, ABUS is expanding its pole-switchable system with the AZS smooth starting unit and the SU-2 smooth switching relay. These electronic systems are adjustable and allow the crane operator to use the acceleration and improved deceleration characteristics for sensitive control of the long and cross travel motions as an alternative to the frequency converter.



The ABUS Anti-collision device

protects cranes, preventing accidental collision via photoelectric distance measurement. Automatic switchover to a lower speed as the two hoists approach each other is a standard feature. A shut-down function can be incorporated. ABUS can also supply collision prevention devices designed to maintain a specified minimum spacing and other special designs.

Important: Not suitable to be used for distancing required because of structural reasons. In such cases the light barrier system may be composed of fail-safe components and check and malfunction indicators.



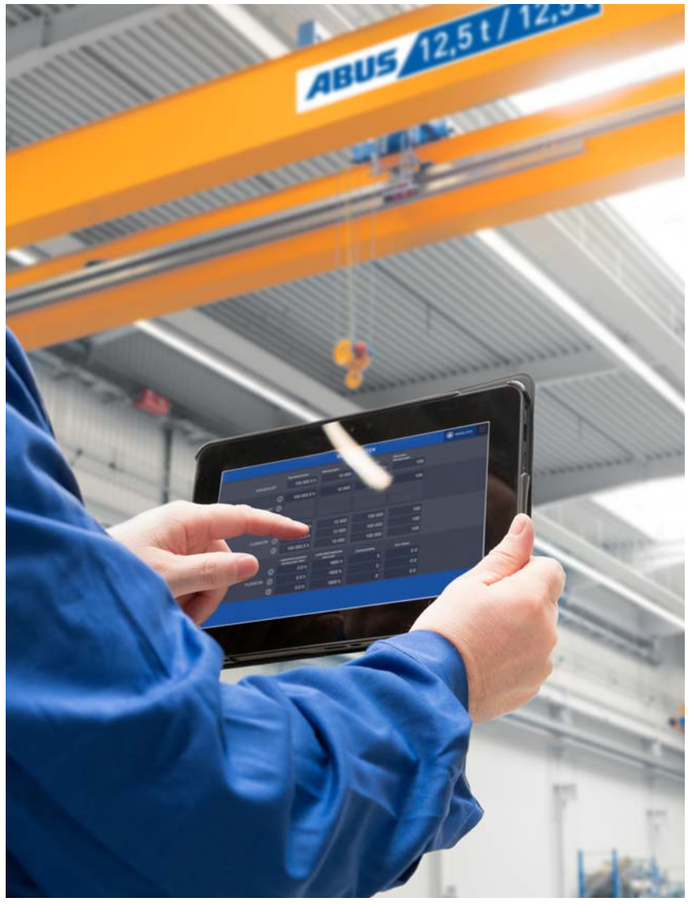
Calibrated weighing hook

Knowing what is hanging on the hook is important for many crane operators: weighing goods and invoicing them to customers, loading trucks, charging production plants with weighed material, complying with safety regulations for loads or determining the weight of containers - the ABUS weighing hook block is often the economically advantageous solution. It is a digital commercial scale of accuracy class III with EU approval from the German National Metrology Institute. The crane scale is calibrated and delivered ready for operation. The weighing electronics consist of modern SMD technology in a robust industrial design. The weighing module integrates optimally into the bottom block of ABUS wire rope hoists.



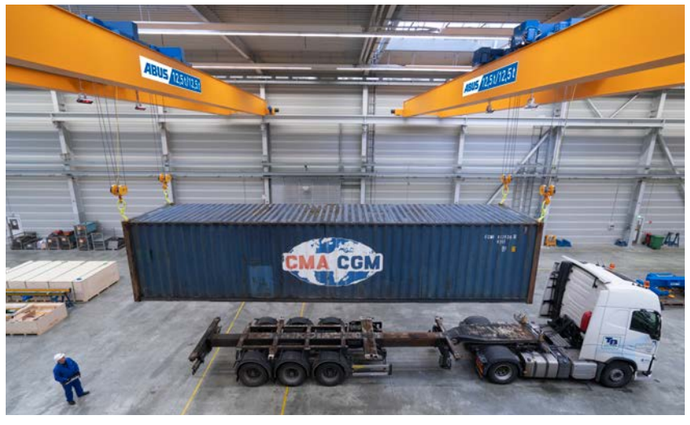


ABUCONTROL: LIFTS CRANES TO A NEW LEVEL

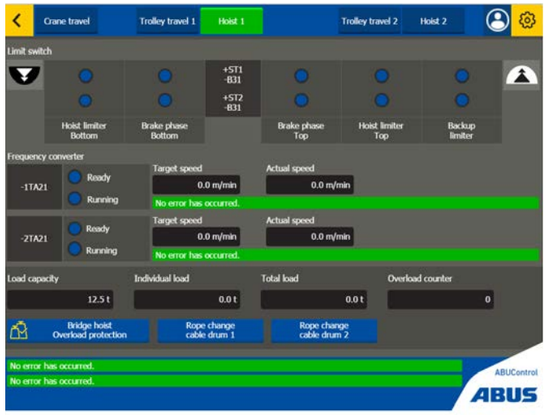


ABUS cranes with control via ABUControl can be adapted to your application by the means of travel profiles. Cranes with two fixed speeds move in a completely different way to cranes controlled by frequency converter, for example. **Travel and hoist profiles** allow cranes to be adapted to your current or required situation. This means your crane operators no longer have to adjust existing cranes and perceive the increased productivity of an additional crane system.

The **ABUS sway control** increases safety and convenience during transportation of goods in sensitive areas. Sway control is based on mathematical calculations. Travel speeds, acceleration and deceleration of crane and hoist, the hook position and length of the load lifting attachment are taken into account. Even people who rarely operate cranes can transport loads safely with the aid of the sway control feature.



The **ABUS synchronisation control** of two hoists on one crane enables the safe handling of long products. Divergence of lifting speeds is prevented effectively through constant regulation even where different wire rope hoists are used. This requires the crane to be equipped with a frequency converter for lifting. Travel speeds are regulated even on cranes which run in tandem. Two cranes, maximum of four hoists and their hoisting motions, all regulated.



Operating data, settings, service information. By means of the modern KranOS interface, you can keep tabs on the crane. For wireless use with any laptop or tablet with browser. Speeding up regular annual inspections into the bargain.



ABUControl relies on tried and trusted freely available components from renowned electronics manufacturers. Replacement or repair requires neither 'specialist knowledge' nor 'software licences'. You remain in complete control of the crane at all times and have a free choice of service partner. ABUControl - a unique promise for simple maintenance and repairs.

ABUS THROUGH AND THROUGH: ADVANCED PRODUCTION, TYPICAL PRECISION

The high quality standards achieved by ABUS crane systems are only possible because of the extreme care taken in production at the ABUS plants in Lantenbach and Herreshagen. Our production facilities represent the state of the art, from the preparation of steel plate using high-performance blast cleaning systems and welding using machinery with automated weld sequences through to the application of the high-quality paint system. Highly automated, highly versatile production facilities ensure an ideal combination of precision, cost-effectiveness and constant high quality levels. Highly specialised machines developed in-house, such as the mobile portal welding unit, ensure smooth and troublefree production at all times; customers can rely on rapid completion to schedule and just in time delivery. They can also be sure that all the mechanical, electrical and electronic components of an ABUS crane have been thoroughly tested prior to shipment and that any item of equipment bearing the ABUS name represents ABUS quality through and through.

A PICTURE OF QUALITY: ABUS WELDED BOX GIRDERS

Depending on the individual model, ABUS overhead travelling cranes are either fitted with rolled section girders or welded box girders. While rolled section girders are mainly used for low to medium load capacities and narrow spans, welded box girders are designed for the highest load capacities (up to 120 t) and the widest spans (up to 42 m). Every ABUS box girder is tailored from high quality steel sheets to ensure that these units are a unique combination of strength, size, quality, reliability and precision. In this brochure, we can only give you a first impression of the production process. If you would like more evidence of the efficiency of material flow and the performance of our production facilities, the best way is to see for yourself during a visit to our plants. We look forward to seeing you. Following thorough inspection, the steel plates are derusted and descaled to ensure excellent weld and paint finish quality. The shotblasting unit is equipped with high-performance turbines and can produce surfaces to DIN 55928, Grade SA 2 1/2. It can be adjusted to any steel grade and plate thickness.



Plates of the lengths required for box girders are welded together on a PLC-controlled welding machine. The butt welding machine can process plates of different thicknesses and the automatic weld sequence control system ensures the highest welding quality possible.



Before the next processing stage, web plates are stabilised with welded on buckling stiffeners. Following assembly on the box girder line, the box girder is ready for processing by the portal welding unit.



The moving portal welding unit designed in-house by ABUS personnel welds the web plates to the upper and bottom flanges and the rails on the top of the girder. The welding unit can complete up to eight welds simultaneously. The high-performance burners are automatically controlled by a PLC.



Following the welding of the closure plates and the installation of the end carriages, the paintwork required for the specific application is applied.



ABUS FOR QUALITY THAT STANDS OUT – THE ABUS SERVICE

The ABUS service begins with comprehensive advice for customers. If you wish, we will be only too pleased to assist you in the planning process before you take a decision on the system you intend to purchase. ABUS prepares quotations precisely in accordance with your requirements using computer aided systems and you can be sure of ABUS competence and commitment right through to the commissioning of your crane system. After commissioning, our world-wide service network ensures optimum availability.

ABUS for service without frontiers.
ABUS experts offer comprehensive service not only in Europe but throughout the world. ABUS subsidiaries and international partners ensure that your crane system is ideally adapted to your technical requirements and complies with all the applicable national legislation and regulations. ABUS and its partners operate spare parts stock holding in a number of countries. You can also rely on the support of our central spare parts depot and our unique service at ABUS headquarters.

ABUS training – designed for good service
ABUS sales and estimating engineers and service operatives receive thorough training at the ABUS training centre in Gummersbach and their theoretical and practical training is continually updated to maintain the high standards of our global service. Our product range, our development activities, our computer programs and our production facilities are also adapted continuously to meet the requirements of our international customers.

ABUS is represented in more than
50 countries throughout the world.

A convincing service in all respects.
- advice in the planning phase
- installation, dismantling and modification of crane systems
- inspection and overhaul of crane systems by local partners
- repair and maintenance
- upgrading and modernisation
- personnel training





THE ABUS RANGE AT A GLANCE



ABUS overhead travelling cranes

Load capacity: up to 120 t
Span: up to 42 m (depending on load capacity)
Applications: area coverage
Characteristics: comprehensive standard equipment and wide range of accessories to suit individual requirements



ABUS electric wire rope hoists

Load capacity: up to 120 t
Characteristics: compact dimensions, two lifting and travel speeds as standard feature, comprehensive standard equipment and wide range of accessories

ABUS HB systems

Load capacity: up to 2 t
Crane girder length: up to 22 m (depending on load capacity)
Applications: area coverage and linear handling
Characteristics: highly versatile for adaptation to individual requirements, designed for modular extension, wide range of suspension hangers, low headroom options, comprehensive standard equipment and wide range of accessories



ABUS electric chain hoists

Load capacity: up to 4 t
Characteristics: low headroom configuration, two lifting speeds as standard feature, comprehensive standard equipment, ready for installation, wide range of accessories





ABUS jib cranes

Load capacity: up to 6.3 t
Jib length: up to 10 m (depending on load capacity)
Applications: swept area coverage, mainly for use in loading or workbench applications
Characteristics: slewing range up to 360° depending on model



ABUS lightweight portal cranes:

Load capacity: up to 2 t
Characteristics: with four stop rollers, easy to move, height and width individually adaptable

KRANHAUS: FASCINATING INSIGHTS INTO THE WORLD OF CRANES

Transport loads single-handedly with a powerful overhead travelling crane, experience the ease of our crane systems yourself, ride on a 8-metre-high crane – the KranHaus at our company headquarters in Gummersbach offers an overview of current crane technology as well as an exciting insight into real-life working situations in a building that has 1,600 m² of space. In the crane workshop above the crane building, service technicians, installation engineers, service engineers and crane operators are trained. Seminars on the themes of crane maintenance, repair and servicing take place in the modern training rooms that are equipped with special technology. You are also warmly welcome to get to know the KranHaus yourself, and to optimise your particular material handling application requirements with us.





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Enjoy a ride on a crane 8 m high



Feel the different drive concepts for yourself



On 3 levels, different crane systems are waiting to be tested at length by like you.

Complete solutions from ABUS















You can find further product information on our entire product portfolio at:
https://www.abuscranes.com/downloads

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