



Tailor-made modular crane systems  
for Safe Working Loads up to 2000 kg

## The ABUS HB-System in practice – A versatile workhorse





## The HB-System, not a near miss ...

The HB-System is one of the most successful developments in lifting and material handling technology, combining the effectiveness of a stationary hoist with the mobility of an overhead crane, efficiently and cost-effectively.

ABUS have all the resources it takes to develop systems like the HB in-house: experience with hoists and overhead cranes, high-quality production facilities and,

perhaps most important of all, the determination to develop more user-friendly workplaces free from unnecessary burdens. The task of ABUS was, and still is, to offer the HB-System with as many useful features as possible at as low a cost as possible. Anyone who needs assistance with lifting and handling loads at their place of work, in warehouses, workshops or factories, should have an ABUS

HB-System available, which means that these systems must be affordable. Today's HB-Systems feature a combination of advanced technology, economy, flexibility, quality and ergonomics which has gained full recognition in our market. The secret of our success has been to fulfil the individual requirements of each customer's application.



ABUS single girder  
crane EHB

# ...but right on target from ABUS! right down to the nuts and bolts



ABUS crane systems and components



Overhead Cranes



Jib Cranes



HB-System



Lightweight mobile gantry LPK



Electric Wire Rope Hoists



Electric Chain Hoists



High-Performance Components

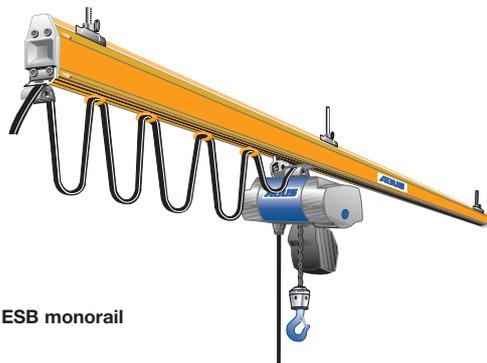
ABUS deliberately specialises in off-floor lifting and load handling systems for loads up to 120 t. Not only because this load range includes by far the majority of all materials handling applications, but also because specialisation enables us to utilise rationalisation potential most effectively.

ABUS offers a comprehensive range of readily available, efficient load handling systems: jib cranes, overhead cranes, monorail trolley tracks, electric wire rope and chain hoists, a wide variety of components and, last but certainly not least, the HB-System. Our services range from the development of solutions for bespoke applications right through to implementing complete materials handling systems.

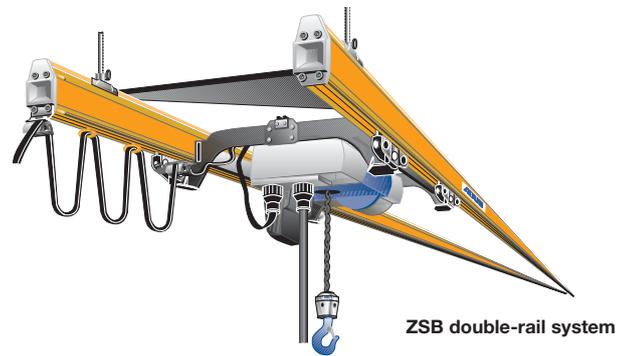
And all our services are characterised by the special ABUS attitude: we offer not only a bare product, but also practical advice and assured quality. The product guarantee which we offer is still unique in our field and individual user support and a nationwide after-sales service network with rapid, effective response are all part of the ABUS service.

# ABUS HB-System

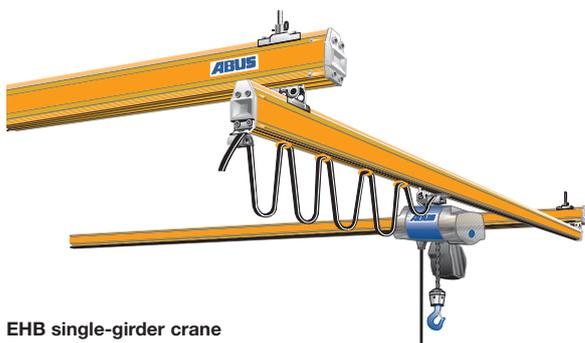
## The systematic approach to ideal solutions



ESB monorail



ZSB double-rail system

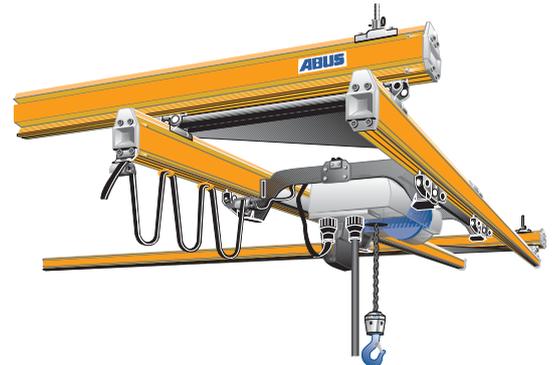


EHB single-girder crane

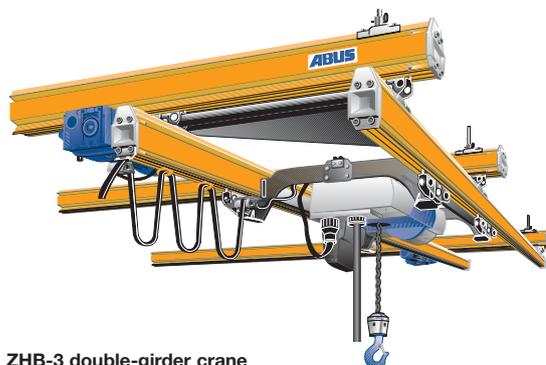


EHB-X stooled up single-girder crane

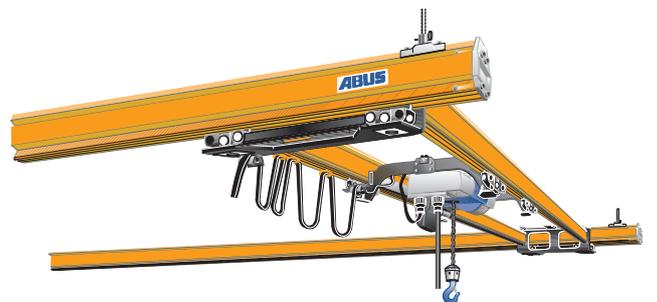
The ABUS HB-System offers tailor-made modular solutions. The components of the system are both practical and cost-effective and can be combined to build just the system which the application demands. All HB-Systems feature an extremely low-build design, ensuring that maximum hook height can be reached in the space which is available. Three types of profiles cover a load capacity range up to 2000 kg. All electrical connections are made using an easy plug-in connector system. And the system can be adapted and individually fitted to almost any type of room or ceiling design.



ZHB double-girder crane



ZHB-3 double-girder crane



ZHB-X stooled up double-girder crane

# ABUS HB-System

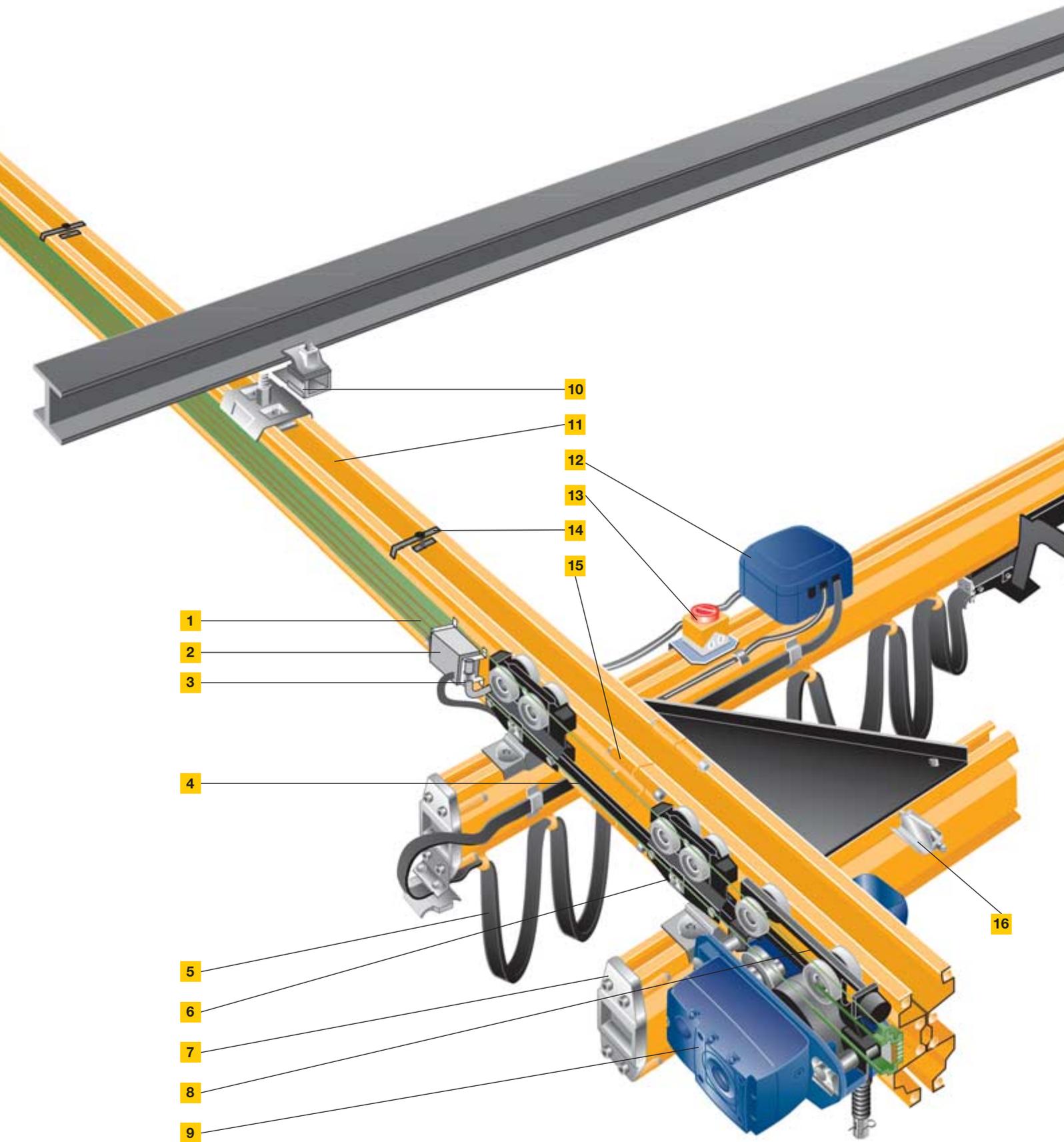
## Summary of types, ratings and key dimensions

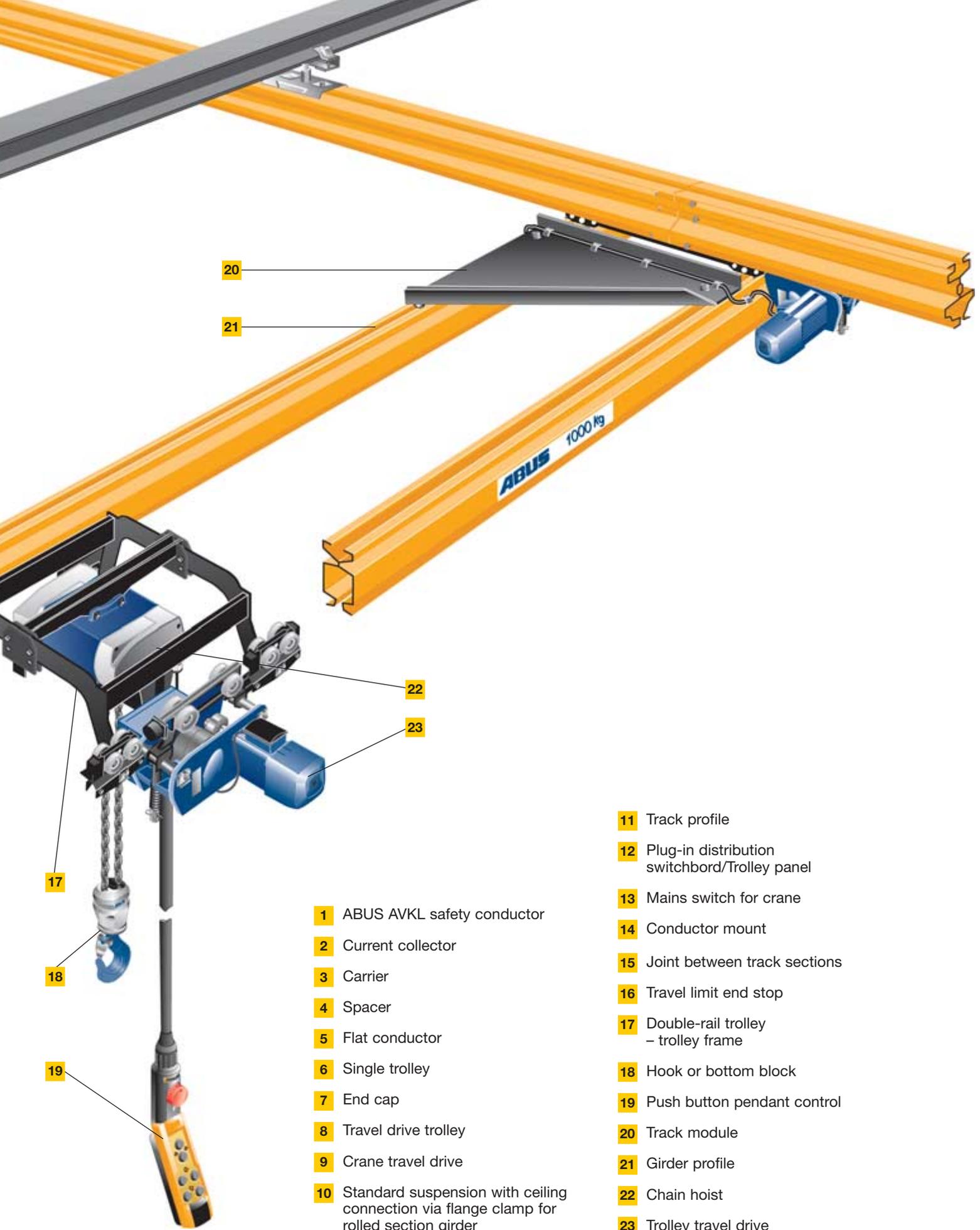
Type	Load capacity kg	Maximum crane girder length mm	Track length mm	Maximum suspension distance mm
ESB monorail	125	–	any	10500
	250	–		10300
	500	–		9000
	1000	–		7300
	2000	–		5100
ZSB double-rail system	125	–	any	10500
	250	–		10500
	500	–		10300
	1000	–		9000
	2000	–		7300
EHB single-girder crane	125	10000	any	10300
	250	10000		9500
	500	10000		8200
	1000	8000		6900
EHB-X stooled up single-girder crane	125	8000	any	10500
	250	8000		9700
	500	8000		8600
	1000	7000		7200
ZHB double-girder crane	125	12000	any	8900
	250	12000		8400
	500	12000		7300
	1000	12000		6200
	2000	8000		4100
ZHB-X stooled up double-girder crane	125	8000	any	9300
	250	8000		8800
	500	8000		7800
	1000	8000		6700
	2000	6000		5200
ZHB-3 double-girder crane	125	22000	any	on request
	250	22000		
	500	21000		
	1000	15000		



ABUS ZHB double-girder cranes

# HB-System components





- 1 ABUS AVKL safety conductor
- 2 Current collector
- 3 Carrier
- 4 Spacer
- 5 Flat conductor
- 6 Single trolley
- 7 End cap
- 8 Travel drive trolley
- 9 Crane travel drive
- 10 Standard suspension with ceiling connection via flange clamp for rolled section girder

- 11 Track profile
- 12 Plug-in distribution switchboard/Trolley panel
- 13 Mains switch for crane
- 14 Conductor mount
- 15 Joint between track sections
- 16 Travel limit end stop
- 17 Double-rail trolley – trolley frame
- 18 Hook or bottom block
- 19 Push button pendant control
- 20 Track module
- 21 Girder profile
- 22 Chain hoist
- 23 Trolley travel drive

# ABUS HB-System

## Features you can use to the full



ABUS ESB monorail



ABUS EHB single-girder crane



ABUS ZHB double-girder crane

The practical design features of the ABUS HB-System bring perceptible benefits for users and their applications:

- With its modular design, the system can simply be tailored to provide cost-effective solutions for users' applications.
- A wide variety of suspension designs are available, permitting installation in conditions which you would scarcely have thought possible.
- Load capacities can be defined in accordance with individual requirements, up to 2000 kg; later extension is often possible.
- The number of component parts is reduced to the bare minimum, simplifying erection, saving time and helping to prevent errors – just what you need if your own specialists are to erect the system.
- No special tools are required for erection.
- With the special plug-in connectors typical of ABUS systems, electrical installation is also quick and safe.
- ABUS drives and hoists provide a variety of electrical functions for more rational, safer working – with low noise, smooth starting and lifting and smooth switching between speeds.
- In addition, all components are designed for optimum interaction. For example, a low headroom ABUS electric chain hoist combined with a double rail trolley on an HB-System (types ZSB, ZHB, ZHB-X or ZHB-3) ensures optimum space utilisation and maximum hook height.
- The fundamental advantages of the ABUS HB-System continue to bear fruit in the period following initial investment. The system can be maintained, modified, modernised and updated efficiently and cost-effectively.

# ABUS HB-System

## Keeping a high profile



Track profiles:  
a) HB160  
b) HB200  
c) HB250

### Distinctive features:

#### enclosed-track profiles

Advanced CAD<sup>1)</sup> and FEM<sup>2)</sup> systems were used to design and optimise the track profiles of the HB-System. The results are three types of profile covering the entire load capacity range of the HB-System up to 2000 kg. All the profiles are made from cold-rolled halves welded together to form a high-grade enclosed-track profile, within which the load trolley is housed.

ABUS opted for enclosed-track profiles because they effectively protect the trolley running gear and also offer advantages in terms of maintenance.

They also have two additional major advantages. The favourable structural design of the track girder system means that wide suspension spacing is possible, even with high load capacities. And high-grade bolted joints warrant high joint factors and improved load capacity.

In combination, these two features significantly reduce the work involved in installing an HB-System and enhance the productivity of the system.

Manual operation of cranes and trolleys is almost effortless.

- 1) CAD = Computer Aided Design
- 2) FEM = Finite Element Method



### Our masterpiece: the suspension

Our engineers have paid particular attention to the suspension, and for good reasons too. The quality of the suspension and connections is an essential feature in ensuring the quality and availability of the entire HB-System.

A characteristic feature of the ABUS HB-System is a flexible suspension using ball-and-socket joints. These low-build systems are adjustable in height and are therefore particularly versatile. The pendulation motion of the suspension absorbs horizontal forces from the crane system, reducing loads on roof structures and buildings.



Enclosed-track profile with trolley

ABUS has a whole range of connections for attaching HB-Systems to ceilings or other elements of buildings. Together, the suspension and the ceiling mount ensure that an HB-System can be installed in almost any conditions.

# ABUS HB-System

## Variations on a powerful theme

### ABUS ESB monorail



**Linear point-to-point coverage**  
**Load capacity: up to 2 t**

- curved sections available as an option
- low headroom
- wide suspension spacing
- optional electric hoist travel



### ABUS ZSB double-rail system



**Linear point-to-point coverage**  
**Load capacity: up to 2 t**

- wide suspension spacing
- chain hoist installed between rails for improved lift height
- extremely low-build design
- optional electric hoist travel
- optional mobile control





### ABUS EHB single-girder crane

#### Area coverage

**Load capacity: up to 1 t**

**Crane girder length: up to 10 m**  
(depending on load capacity)

- very light crane; ideal for use in lightweight buildings
- easy to move manually
- low headroom
- short end approach dimensions
- wide suspension spacing



### ABUS EHB-X stooled up single-girder crane

#### Area coverage

**Load capacity: up to 1 t**

**Crane girder length: up to 8 m**  
(depending on load capacity)

- stooled up crane for optimum use of available space
- easy to move manually
- ultra low headroom
- short end approach dimensions
- wide suspension spacing
- optional electric long + cross travel
- optional mobile control



# ABUS HB-System

## Variations on a powerful theme

### ABUS ZHB double-girder crane



#### Area coverage

**Load capacity: up to 2 t**  
**Crane girder length: up to 12 m**  
 (depending on load capacity)

- wide suspension spacing
- very low headroom
- chain hoist installed between crane girders for improved lift height
- optional electric long + cross travel
- optional mobile control



### ABUS ZHB-X stooled up double-girder crane



#### Area coverage

**Load capacity: up to 2 t**  
**Crane girder length: up to 8 m**  
 (depending on load capacity)

- stooled up crane for optimum use of available space
- ultra low headroom
- wide maximum suspension spacing
- optional electric long + cross travel
- optional mobile control



### ABUS ZHB-3 double-girder crane



#### Area coverage

**Load capacity: up to 1,6 t**  
**Crane girder length: up to 22 m**  
 (depending on load capacity)

- long crane spans possible
- lower headroom compared with EOT
- wide suspension spacing
- electric long + cross travel
- optional mobile control



# ABUS HB-System

## The power house



Fig.  
ABUCompact GM4

### ABUS electric chain hoists

All ABUS HB-Systems are fitted with ABUS chain hoists ABUCompact. The new generation of ABUCompact chain hoists feature a fresh new design and convincing technical solutions. The 3 phase 400 volt hoists units are available in three different sizes to reliably handle loads up to 2000 kg with a low-build design for optimum utilisation of the space available and a precision lifting function for the careful lifting and lowering of sensitive goods.

The small GMC hoist rounds off the ABUCompact range. With infinitely variable lifting speed and a load capacity of 100 kg or 200 kg, this unit, supplied ready for connection to a 230 V power socket, is the ideal hoist for flexible and low capacity applications.

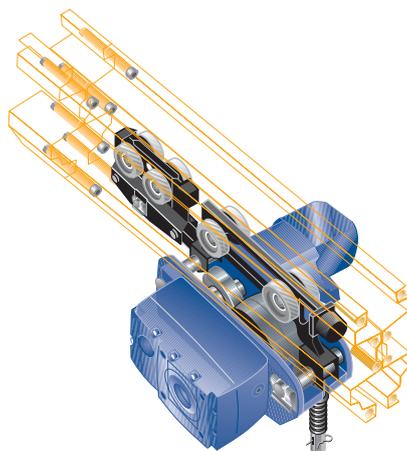
The motor and the gear unit are of modular design, allowing us to produce a wide variety of versions for lifting speeds up to 20 m/min and FEM groups up to 4m at attractive prices.

The chain hoists have a number of features which are particularly beneficial in terms of reduced maintenance requirements; long-life brake linings (normally, adjustment is only required after 1 million full-load braking operations); permanently lubricated precision gearbox; adjustable sliding clutch; specially hardened low-wear chain; plug-in connectors for easy installation and maintenance and many other features.

Where single girder trolleys are used, the chain hoist is simply suspended from the trolley and is ready for operation as soon as the connectors have been plugged in.

### ABUS travel drives

When needed, the HBF friction wheel drive provides the power for an HB-System. The drive motor has a smooth performance curve for soft starting and braking. Where loads in excess of 500 kg are handled and the crane girder is longer than 6 m, the HBF drive is an almost indispensable component of the system. These compact units can be integrated in the trolley itself if a double girder trolley is used, saving approach dimensions.

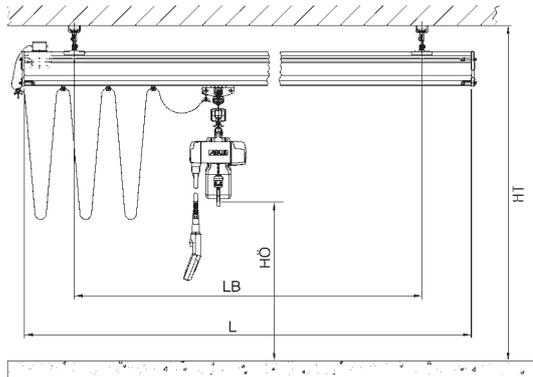


The ABUS electric chain hoist used in connection with double-girder crane systems is built directly into the crab frame without a suspension eye. This will achieve optimum hook height in tight applications.

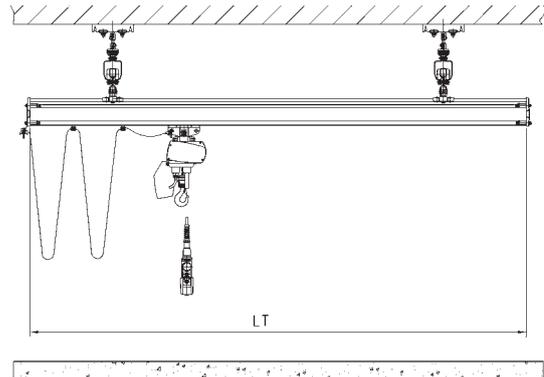
## The first step towards your HB-System

Just copy this form, complete it and fax it to us for an initial quotation without obligation.

Company \_\_\_\_\_ Postcode/Town \_\_\_\_\_  
 Name \_\_\_\_\_ Phone/extension \_\_\_\_\_  
 Address \_\_\_\_\_ Fax no. \_\_\_\_\_  
 e-mail \_\_\_\_\_



View A



View B

**Please provide:**

- Advice by telephone
- ABUS quotation
- A site visit from ABUS representative
- ABUS brochure "The product overview"

**Technical data for desired crane installation:**

**A. B. Point-to-point travel**

Load capacity: \_\_\_\_\_ kg  
 Track length (L): \_\_\_\_\_ mm  
 Suspension distance (LB): \_\_\_\_\_ mm  
 Number of trolleys on one track: \_\_\_\_\_  
 Electrical hoist travelling:  Yes  No

**B. Area-coverage travel**

Load capacity: \_\_\_\_\_ kg  
 Crane girder length (LT): \_\_\_\_\_ mm  
 Track length (L): \_\_\_\_\_ mm  
 Suspension distance (LB): \_\_\_\_\_ mm  
 Number of cranes on one track: \_\_\_\_\_  
 Electrical hoist travelling:  Yes  No  
 Electrical crane travelling:  Yes  No

**On-site conditions:**

Connection height (HT): \_\_\_\_\_ mm  
 Highest hook position required (H0): \_\_\_\_\_ mm  
 Steel beams in ceiling from which to hang  
 Concrete ceiling from which to hang