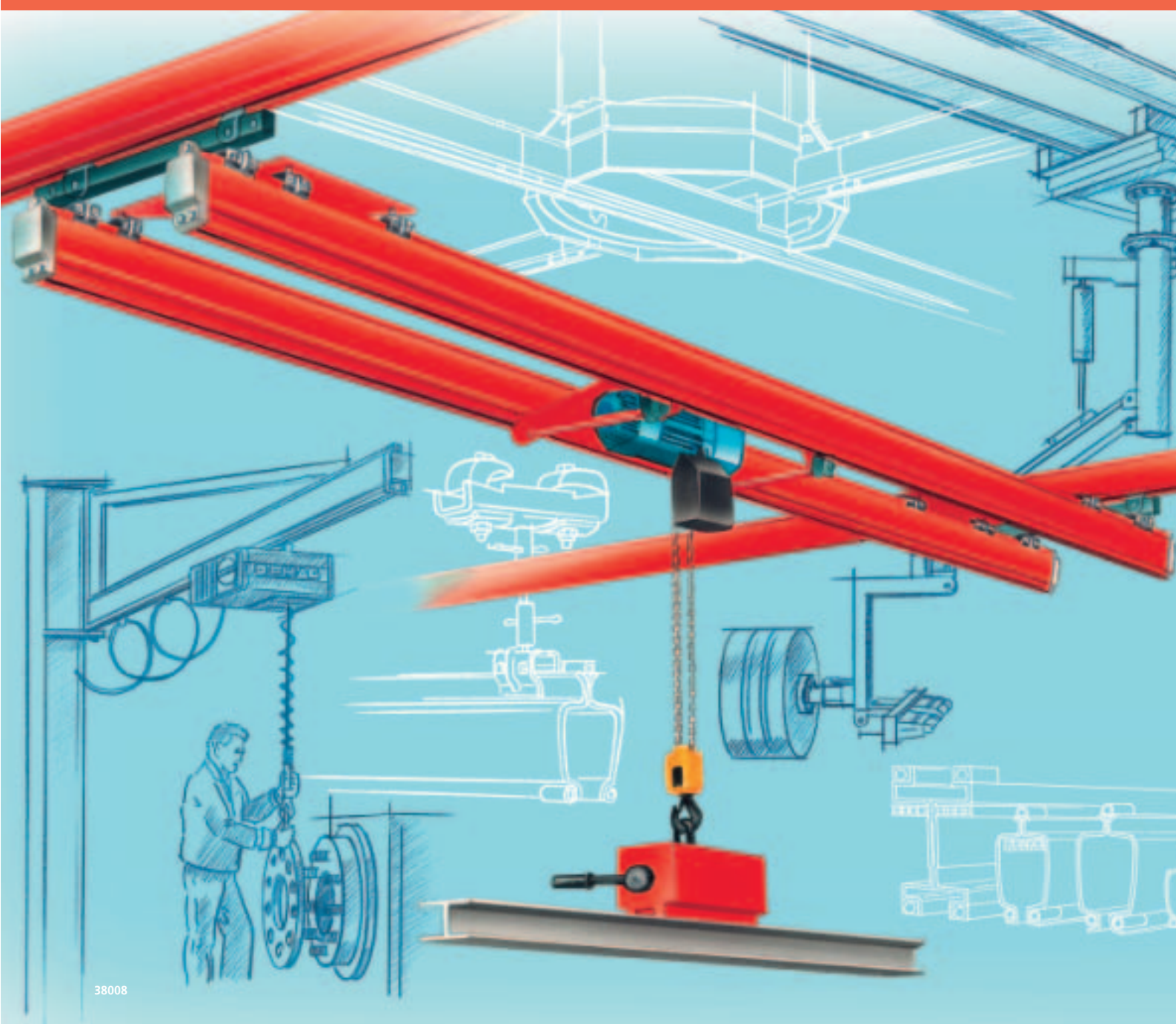


KBK classic and KBK ergo | Overhead transport, exact
crane construction kit | positioning, ergonomic handling



Overhead materials handling

The KBK classic crane construction kit from Demag Cranes & Components has a successful track record going back many years. Installations built with these components can be found in facilities and workshops of almost any type and every size. Characteristic for the KBK classic crane construction kit are the many possibilities for handling loads quickly, safely and efficiently above the working and production level – without having to use any of the available floor space for crane runway supports or travel paths. In addition, you can arrange all workplaces for maximum productivity.

The KBK ergo modular system makes it possible to extend crane installations based on the KBK classic system in such a way that loads can be picked up safely outside the crane runway or crab area, transported to positions which cannot even be reached from above and positioned for optimum ergonomics. KBK ergo components can be used to safely accommodate forces acting against gravity.

KBK crane construction kit...

KBK installations are suitable for linear as well as area-serving transport operations, for point-to-point connections or systems with many branch tracks. They can be built in a range of load capacities up to 3,200 kg to provide highly effective handling operations to meet your requirements.

... rugged design and flexibility,...

Made up of many modular components, the KBK crane construction kit can be tailored to meet your individual equipment requirements. The basic elements are cold-rolled special profile sections in various sizes. They feature high rigidity and strength for a low deadweight. They also make it easy and cost-effective to extend and convert KBK installations as your company grows or when production requirements change.

... simple installation, reliable and efficient

A further typical benefit is the simple and fast assembly thanks to standardised connection dimensions and bolted connections.

Commissioning is simple and maintenance work can be carried out quickly. Made of standardised products manufactured in large series, KBK components give you the certainty of

- optimum cost-to-benefit ratio,
- high functional reliability,
- long service life.

Comprehensive service

We offer you comprehensive services for your KBK project:

- Consultation on site, also with a practical demonstration of our product applications using our mobile product show
- Project engineering including state-of-the-art IT support; design for special solutions
- Delivery, assembly and commissioning
- After-sales service to maintain the high safety and reliability and to maintain the value of your installation, including compliance with all accident prevention regulations and guidelines



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Suspension monorails

For overhead material handling over long distances

Suspension monorails

For linear handling and providing a direct link between pick-up and deposit points in reversing operation or a closed circuit.

Many designs from simple, manually operated straight sections to complex, semi or fully automated circuits; flexible routing using straight and curved track sections, track switches and turntables.



Suspension cranes

To link production processes

Single-girder suspension cranes

For area-serving transportation; minimum approach dimensions, low deadweight; easily moved by hand.

Ball and socket connections between the crane girder and end carriages for smooth operation; cranes can even operate on tracks that are not parallel.



Double-girder suspension cranes

For handling heavier loads and bridging greater spans; favourable installation dimensions; also as **manipulator cranes**, optimum design for use in state-of-the-art handling systems.

Maximum possible hook paths by arranging the hoist between the crane girders; large spans can be bridged by cranes running on several runways.



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Overhung and extending cranes

With large overhang, for extended overhead handling

Overhung cranes

Crane girder with overhang extending up to 2.5 m beyond the runway span.

Extending cranes

Crane girder with intermediate girder that can be extended by up to 2.5 m to one or both sides. Optimum design for serving areas added at a later date or featuring ventilation pipes, radiant heaters, cables and similar items, or areas otherwise inaccessible due to columns or supports.



Jib cranes

Workplace cranes – integrated into the

Pillar-mounted jib cranes

Free standing workplace cranes at almost any location; with wide operating radius. Simple traversing of the jib at any load position due to low deadweight; jib length up to 7 m.

Wall-mounted jib cranes

Workplace cranes mounted on walls, columns or machinery; no additional floor space required. Also as tool tracks for improved handling of testing devices, tools, etc. as well as cable or hose suspension racks.



Stacker cranes, portal cranes

Ideal workplace units

Stacker cranes

Double-girder suspension cranes with special rotating stacker trolleys; simply moved and rotated by hand. Ideal for storing and retrieving unit loads, containers and pallets.

Portal cranes

Floor travelling, not rail-bound; ideal for repair and erection work. Good manoeuvrability; easily dismantled and re-erected.





KBK classic and KBK ergo crane construction kit –
all types and design possibilities at a glance



Suspension monorails

Ideal for linear handling

Suspension monorails from the KBK classic crane construction kit are the optimum solution for linear, overhead handling.

Outstanding versatility

A wide range of components makes it possible to adapt the route precisely to meet the structural requirements of your workshop. At the same time, the system ensures that all specific product and workplace requirements of your production facility are met.

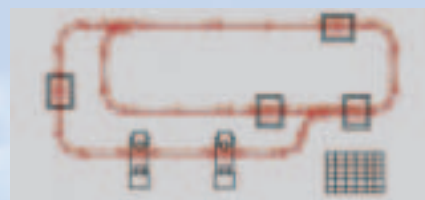
Transfer between suspension monorails and single-girder suspension cranes is also possible using latching devices.

Ideal equipment carriers

The special profiles of the KBK crane construction kit are particularly suitable for applications such as tracks for load balancers fitted with testing devices and electric and pneumatic tools, etc. and power supply lines for cranes and other mobile equipment.

Cable trolleys can also be used for suspending hoses for transporting fluids or gases.

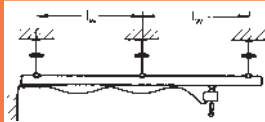




KBK classic suspension monorails can be built to almost any design: from simple, manually controlled straight sections to complex, semi or fully automated closed-circuit monorail systems.



Profile selection: max. distances between supports, headroom dimensions



KBK profile	Adjustable headroom dim. (mm)	Distance between supports for suspension monorail l_w (m)	Load capacity (kg)							
			80	125	250	500	1000	1600	2000	
100	220		3.0	2.4						
I	250		5.0	4.1	2.5					
II-L	370			7.0	5.8	3.5				
II	400				8.0	5.4	3.2			
III	446					8.0	5.7	4.1	3.4	

Single-girder suspension cranes

Favourable dimensions, low deadweight

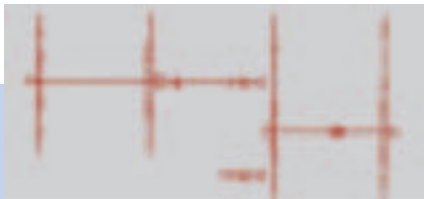
Single-girder suspension cranes from the KBK crane construction kit are used for fast and safe area-serving overhead handling and exact positioning of a wide variety of goods.

Easy and cost-effective

KBK classic single-girder suspension cranes can be simply suspended from the building roof or superstructure. Additional supports for the crane runway are not necessary. Even partial areas of a workshop may be easily fitted with suspension cranes at low cost.

Smooth and reliable handling

Thanks to their low deadweight and free-running trolleys, the cranes allow heavy and awkward components to be moved quickly and easily by hand.

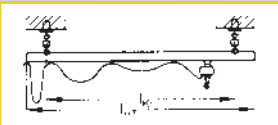


The benefits of KBK classic single-girder suspension cranes include latching devices that allow direct transfer of the hoist trolley between the crane and a suspension monorail.



Flexible ball and socket connections between the crane girder and end carriages enable single-girder cranes to operate on tracks that are not parallel.

Profile selection: Max. distances between supports, crane spans, girder lengths



KBK section		Load capacity (kg)						
		80	125	250	500	1000	1600	2000
100	Crane span I_{kr}	2.85	2.6					
	Girder length l_{HT}	3.0	3.0					
I	Crane span I_{kr}	4.65	4.6	2.75				
	Girder length l_{HT}	6.0	5.0	3.0				
II-L	Crane span I_{kr}		7.0	6.1	3.7			
	Girder length l_{HT}		8.0	7.0	4.0			
II	Crane span I_{kr}			7.45	5.9	3.5		
	Girder length l_{HT}			8.0	7.0	4.0		
III	Crane span I_{kr}				8.4	6.3	4.3	3.6
	Girder length l_{HT}				9.0	7.0	5.0	4.0

Double-girder suspension cranes

Large lifting heights, spans and high load capacities

Double-girder suspension cranes from the KBK classic crane construction kit feature a low deadweight and favourable structural dimensions. In addition, the pendulating suspension largely absorbs the horizontal forces caused by starting, braking and stopping.

Double-girder suspension cranes can even be installed in buildings of light steel construction.

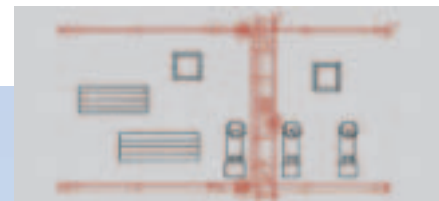
Large lifting heights

Arrangement of the hoist unit between the two crane girders provides KBK classic double-girder cranes with a greater useful lifting height.

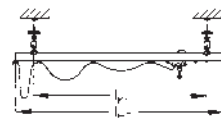
Large spans

KBK classic double-girder cranes can also operate on several runways, thus providing large spans to cover extensive storage and production areas.

The cranes can be easily moved by hand. However, electric friction wheel travel drives from the KBK crane construction kit are recommended for spans greater than 6 m and load capacities exceeding 500 kg.

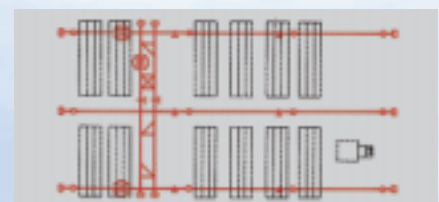


Profile selection: Max. distances between supports, crane spans, girder lengths



KBK section		Load capacity (kg)							
		80	125	250	500	1000	1600	2000	3200
100	Crane span l_{kr}	4.4	3.8						
	Girder length l_{HT}	5.0	5.0						
I	Crane span l_{kr}		6.2	5.0	3.1				
	Girder length l_{HT}		9.0	6.0	4.0				
II-L	Crane span l_{kr}			7.6	6.5	4.3			
	Girder length l_{HT}			10.0	7.0	5.0			
II	Crane span l_{kr}				8.8	6.1	4.6	3.6	
	Girder length l_{HT}				11.0	7.0	5.0	4.0	
III	Crane span l_{kr}					9.1	7.4	6.3	4.2
	Girder length l_{HT}					14.0	9.0	7.0	5.0

Power supply cable trolleys travel in the KBK runway or crane girder sections. The control pendant can also travel independently of the hoist when fitted to a separate travel rail.



Cranes operating on several runways provide larger spans to cover extensive storage and production areas.

Manipulator cranes

Optimum ergonomic load handling

With the KBK ergo modular system, double-girder suspension cranes can also be designed as manipulator cranes. They can be designed to meet the exact needs of the relevant loads, processes and production conditions.

They make it possible to

- Move workpieces and subassemblies into the most favourable positions for the relevant process,
- Serve workplaces, machinery and installations from any direction,
- perform operations outside the suspension area, thus increasing the operating range.

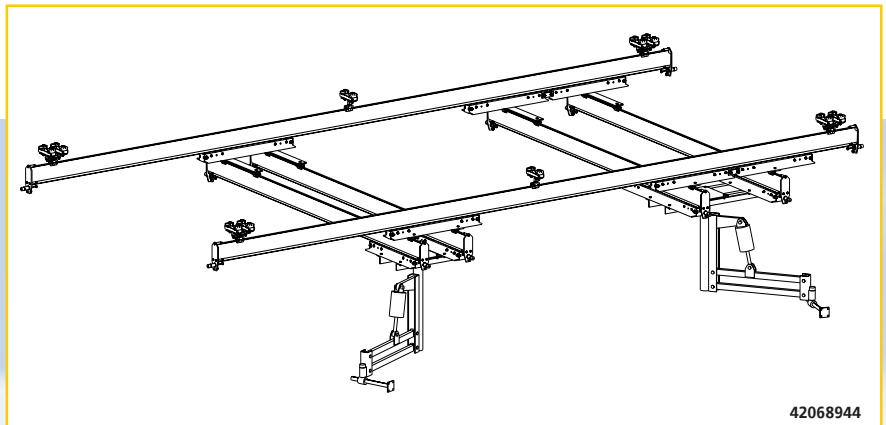
Innovative and ready to meet tomorrow's needs

Based on KBK-I, KBK-II-L or KBK-II rails, manipulator cranes are built using

selected KBK ergo components to meet the operating requirements. They feature the ability to accommodate kick-up forces. In addition, they offer outstanding positioning accuracy, together with a high working speed. In this way, handling operations can be optimised in line with ergonomic requirements for maximum efficiency.

Fast upgrade

If you already have double-girder suspension cranes from the KBK classic crane construction kit, they can be easily and quickly extended with KBK ergo components to become manipulator cranes.



Overhung and extending cranes

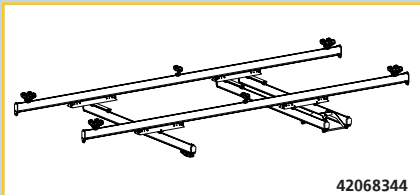
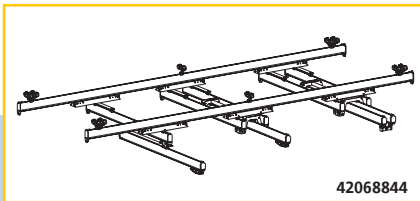
Large overhang – constant or variable

If you also want to move loads beyond the limits of the crane suspension – we can make this possible with KBK.

Overhung cranes

KBK-ergo overhung cranes are fitted with crane girders that extend up to 2.5 m beyond the width of the crane runway. This enables you to reach bays

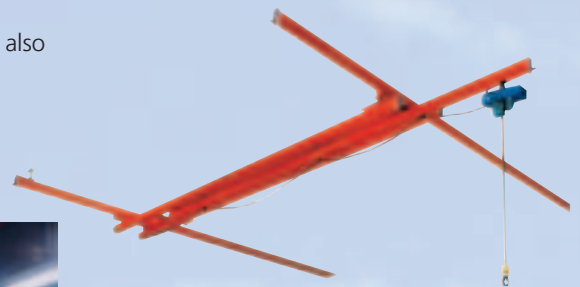
added at a later date, for example. Or you can handle loads below ducts, radiant heaters, pipes or similar obstacles between the wall and roof which result in the crane runway having to be positioned at a distance to the wall.



	l_{A1}		
	KBK I	KBK II-L	KBK II
Single-girder crane	–	1.5 m	1.8 m
Double-girder crane	1.6 m	2.3 m	2.5 m

Max. permissible overhang dimensions

according to profile and crane type; also dependent on the load.



Extending cranes

KBK classic and KBK ergo extending cranes feature additional girders that are arranged between or beneath the crane girders. Depending on the design, they can be extended to one or both sides beyond the crane runway width. These cranes can also be used for lifting and positioning loads in almost inaccessible areas, e.g. between pillars and columns.

Depending on the required extension length, extending cranes may be completed with KBK classic or also with KBK ergo elements.

	l_{A1max}	
	KBK II-L	KBK II
A1/1	1.5 m	1.8 m
B2/1	1.5 m	2.0 m
B2/2	2.3 m	2.5 m

Max. permissible overhang dimensions depending on profile and extension type, also dependent on the load.

Pillar and wall-mounted slewing jib cranes

High load capacity, large outreach

Pillar and wall-mounted jib cranes help to cut setting up and idle times and reduce unnecessary waiting times. With a wide range of sizes and designs, these cranes can be adapted to provide the optimum solution for the most varied requirements in terms of load capacity, slewing range, outreach and features – even including cranes with two jibs.

The main characteristic of all variants is the low jib deadweight and correspondingly large outreach and high load capacity.

Our jib cranes are normally supplied complete with the electrical equipment and hoist including the corresponding trolley, however, also without these

components if required. Further optional accessories include anchor bolts, template and pedestal for extending the mast.

Pillar-mounted slewing jib cranes

Pillar-mounted jib cranes with a slewing angle of $n \times 360^\circ$ can be installed almost anywhere. They are completely free standing and are ideal as workplace cranes as well as for outdoor storage areas, for loading ramps and for workshops in which other handling equipment cannot be used for structural reasons.

The mast requires only a minimum footprint. Even where only little head-room is available, pillar-mounted jib cranes provide maximum hook paths.

Wall-mounted jib cranes

Wall-mounted jib cranes require no floor space as they are mounted on load-bearing concrete walls or pillars or machinery and installations.

Thanks to the braced design, the jibs of KBK wall-mounted slewing cranes have a low deadweight and can be easily moved with the load by hand.

Pillar-mounted jib cranes

For operation with chain hoists
Slewing range 270°/300°

Load capacity (kg)	Outreach (m)*									
	2	3	4	5	6	7	8	9	10	
80	█	█								
125	█	█	█	█	█	█				
160	█	█	█	█	█	█				
200	█	█	█	█	█	█				
250	█	█	█	█	█	█				
315	█	█	█	█	█	█				
400	█	█	█	█	█	█	█			
500	█	█	█	█	█	█	█	█		
630	█	█	█	█	█	█	█	█		
800	█	█	█	█	█	█	█	█		
1.000	█	█	█	█	█	█	█	█		
1.600	█	█	█	█	█	█	█	█		
2.000	█	█	█	█	█	█	█	█		
2.500	█	█	█	█	█	█	█	█		

* Intermediate lengths possible

- █ Type KBK 100 – slewing range = 270°. Specification to H2B3. See technical data sheet 201 936 44.
- █ Type KBK III – slewing range = 300°. Specification to H2B3. See technical data sheet 201 936 44.
- █ Type GSX – slewing range = 270°. Specification to H2B2. See technical data sheet 201 958 44.

Pillar-mounted jib cranes

Slewing range $n \times 360^\circ$

Load capacity (kg)	Outreach (m)*									
	2	3	4	5	6	7	8	9	10	
80	█	█	█	█	█	█				
125	█	█	█	█	█	█				
200	█	█	█	█	█	█				
250	█	█	█	█	█	█	█			
400	█	█	█	█	█	█	█	█		
500	█	█	█	█	█	█	█	█	█	
800	█	█	█	█	█	█	█	█	█	
1.000	█	█	█	█	█	█	█	█	█	
1.600	█	█	█	█	█	█	█	█	█	
2.000	█	█	█	█	█	█	█	█	█	
2.500	█	█	█	█	█	█	█	█	█	
3.200	█	█	█	█	█	█	█	█	█	
4.000	█	█	█	█	█	█	█	█	█	
5.000	█	█	█	█	█	█	█	█	█	
6.300	█	█	█	█	█	█	█	█	█	
8.000	█	█	█	█	█	█	█	█	█	
10.000	█	█	█	█	█	█	█	█	█	

* Intermediate lengths possible

- █ Type GSL – Manual slewing. Specification to H2B2. See technical data sheet 201 962 44.
- █ Type ZSL – Manual slewing or with electric slewing drive. Specification to H2B2. For operation with chain hoist. See technical data sheet 201 966 44.
- █ Type ZSD – Manual slewing or with electric slewing drive. Specification to H2B3. For operation with chain hoist. See technical data sheet 201 970 44.
- █ Type ZSDS – Slewing with electric slewing drive. Specification to H2B3. For operation with rope hoists. See technical data sheet 201 974 44.

Wall-mounted jib cranes

For operation with chain hoists
Slewing range 180°/270°

Load capacity (kg)	Outreach (m)*									
	2	3	4	5	6	7	8	9	10	
80	█	█								
125	█	█	█	█	█	█				
160	█	█	█	█	█	█				
200	█	█	█	█	█	█				
250	█	█	█	█	█	█				
315	█	█	█	█	█	█				
400	█	█	█	█	█	█	█			
500	█	█	█	█	█	█	█	█		
630	█	█	█	█	█	█	█	█		
800	█	█	█	█	█	█	█	█		
1.000	█	█	█	█	█	█	█	█		
1.600	█	█	█	█	█	█	█	█		
2.000	█	█	█	█	█	█	█	█		
2.500	█	█	█	█	█	█	█	█		
3.200	█	█	█	█	█	█	█	█		
4.000	█	█	█	█	█	█	█	█		
5.000	█	█	█	█	█	█	█	█		

* Intermediate lengths possible

- █ Type KBK 100 – Manual slewing. Slewing range = 270°. Specification to H2B3. See technical data sheet 201 937 44.
- █ Type KBK III – Manual slewing. Slewing range = 270°. Specification to H2B3. See technical data sheet 201 937 44.
- █ Type GWL – Manual slewing. Slewing range = 180°. Specification to H2B2. See technical data sheet 201 978 44.
- █ Type ZWL – Manual slewing or with electric slewing drive. Slewing range = 180°. Specification to H2B2. See technical data sheet 201 982 44.



Stacker cranes, portal cranes

Specialised handling equipment for warehouse and factory

Stacker cranes

Stacker cranes from the KBK classic crane construction kit consist mainly of a KBK classic double-girder suspension crane and a special stacker trolley. They are used wherever unit loads, containers or pallets weighing up to 500 kg have to be transported, sorted and stored. They make it possible to complete all tasks in one work cycle without the need for ladders, order picking trolleys or similar equipment.

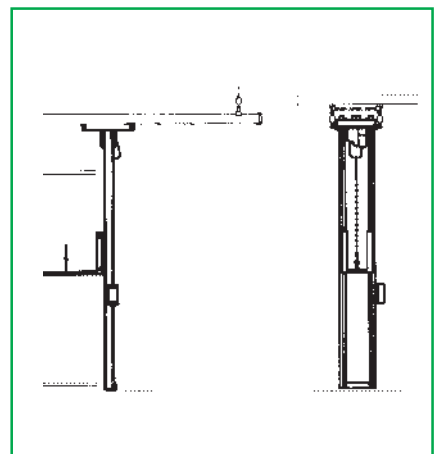
The lifting carriage can be fitted with forks, prongs, gripper tongs or other load handling attachments in accordance with the specific load handling requirements. The mast with its trolley is easily moved by hand and can rotate through 360°.

Portal cranes

Portal cranes from the KBK classic crane construction kit with a load capacity up to 1,000 kg can be used wherever a suspension crane is not cost-effective

or cannot be installed. They run on solid even surfaces and can be manoeuvred easily in all directions, making them ideal for repair and assembly work.

A particular advantage in many applications is that KBK classic portal cranes can be easily dismantled, transported and quickly re-erected elsewhere. The crane girder span can also be adjusted.



Crane runway supports

Individual solutions

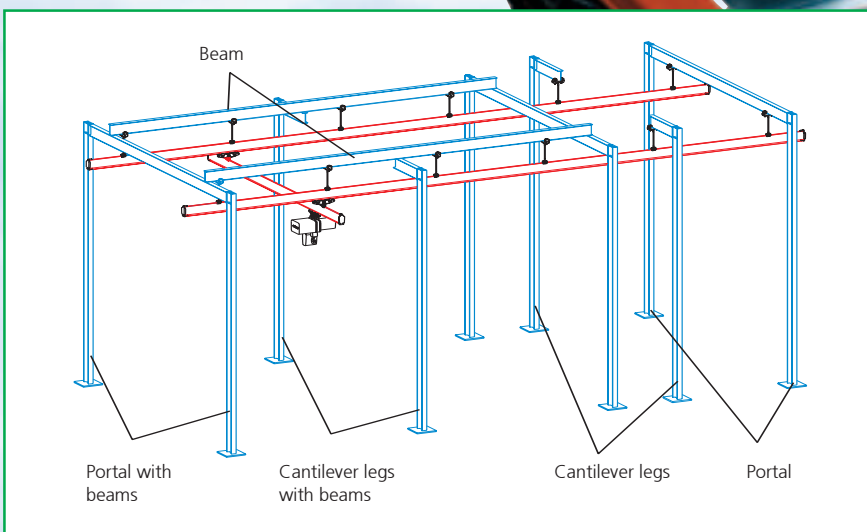


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KBK installations can be built even in facilities where the workshop ceiling and roof structures cannot bear loads. Various support structures can be built quickly and safely using a range of steel superstructure components that we have developed on the modular principle. The required crane runways or even suspension monorails can be attached directly to the supports or beams. Every component is designed without the need for special design verification.

All supports are attached to the floor using foot plates that are dimensioned according to the design.

Design	KBK suspension	Profile section
Cantilever support	direct	HE-A (leg), IPE (cantilever arm)
Cantilever support with beam	on the beam	HE-A (leg), HE-A (cantilever arm), IPE (beam)
Portal	direct	HE-A (leg), IPE (crossbar)
Portal with beam	on the beam	IPE (leg), IPE/HE-A (crossbar), IPE (cantilever arm)



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KBK classic crane construction kit components

Profile sections

The basic elements are special cold-rolled track sections available in six sizes:

- KBK 100 Load capacity up to 125 kg
- KBK I Load capacity up to 500 kg
- KBK II-L Load capacity up to 1,000 kg
- KBK II Load capacity up to 2,000 kg
- KBK II-R Load capacity up to 2,000 kg, with 4 or 5-pole power supply arranged inside
- KBK II-T strengthened section for single and double-girder cranes
- KBK III Load capacity up to 3,200 kg

For each size, all standardised components and assemblies, such as straight and curved track sections, track switches, turntables, drop sections, etc., have the same uniform joint dimensions. Self-centring plug-in and bolted connections allow them to be easily assembled in any combinations.



Different profile section sizes can be used for single and double-girder suspension crane runways and girders.

All components are either galvanised, finished with a coat of synthetic resin-based paint or powder-coated.

Straight and curved sections

Straight and curved sections are made of special cold-rolled profiles which feature high rigidity and stability for a low deadweight. The profile sections for loads up to 2,000 kg are hollow track sections with protected inside-running surfaces. The KBK III profile of outside-running section design is available for loads up to 3,200 kg. KBK II and KBK III profile sections can also be supplied with integrated conductor lines.

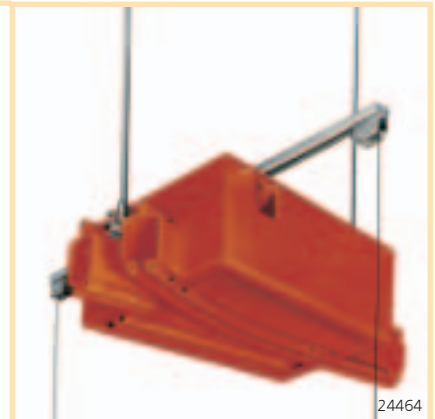
Suspensions

To prevent bending stresses and to minimise horizontal forces in the superstructure, KBK track sections are suspended so as to allow pendulation. Plastic shells in the upper and lower ball joints reduce maintenance, surge loading and noise to a minimum. The track height can be easily and precisely adjusted by means of the threaded suspension rods that connect the ball joint heads.



Track switches

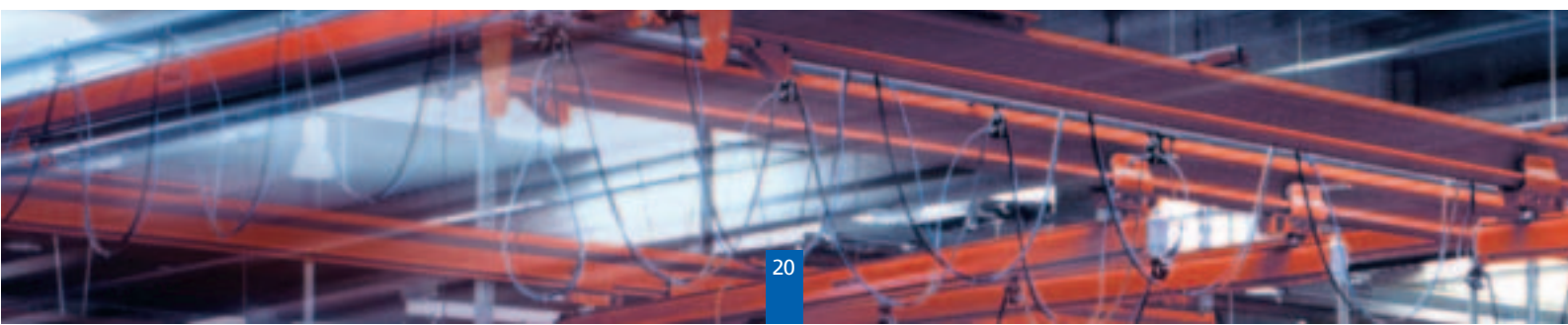
Of compact, enclosed design, track switches are branching or converging components in the material flow. Options allow manual, electric or pneumatic switching for semi- or fully automatic control.



Drop sections

Drop sections are mainly used in closed-circuit tracks for picking up and depositing loads at predetermined positions. This eliminates the need for hoist units.

When lowered in the drop section, the trolley is mechanically locked in place. Mechanical locks in the track stop other trolleys on either side of the drop section.





Turntables

Turntables make it possible to change direction in a minimum of space. Integrated mechanical locking devices prevent trolleys from leaving or entering the turntable section during the slewing operation. Turntables can be manually or electrically operated.



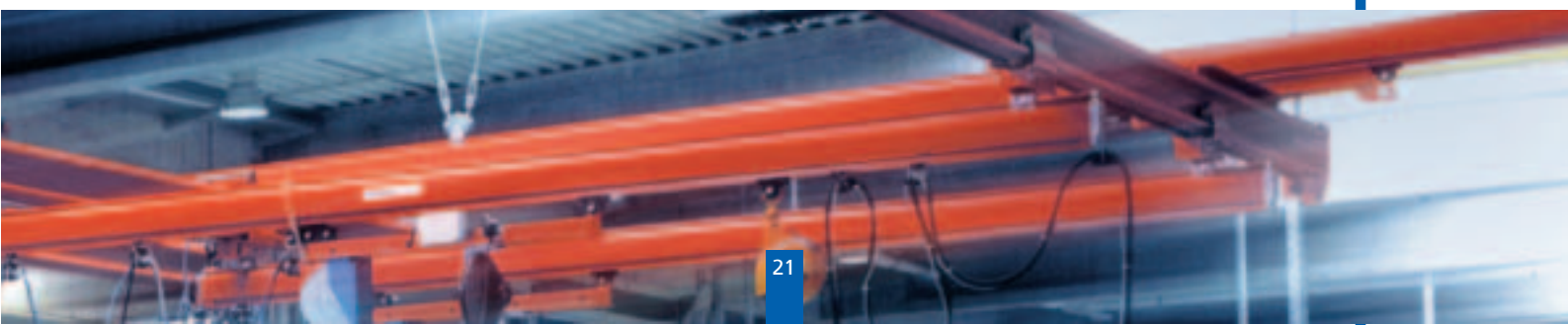
Push travel trolleys

Fitted with bearing-mounted plastic wheels, push travel trolleys are easy to move. The maintenance-free, low-wearing wheels absorb vibration and are silent-running.



Latching devices

Latching devices make it possible to connect single-girder suspension cranes and suspension monorails so that the hoist trolley can transfer between them. When disengaged, the crane travels past the end of the monorail without mechanical contact.



Power supply

Power supply is preferably by means of flat festoon cables which are simple and inexpensive. With more than two cranes on a runway or more than two travelling hoists on a suspension monorail and in the case of track systems with switches, turntables, latching devices or drop sections, power supply is via conductor lines: for KBK II-R track sections with 4 or 5 internal conductors, for KBK III track sections with up to 8 individual conductor lines.

All power supplies are designed to DIN specifications and protected against accidental contact in accordance with relevant regulations.

Friction wheel travel drives

Large friction wheels fitted with high frictional rubber tyres ensure that the drive forces are transmitted efficiently. Dished washers provide constant pressure between the driving wheel and running surface of the KBK track sections. Friction wheel travel drives are quiet-running.



KBK ergo crane construction kit components

Demag Cranes & Components has extended the crane construction kit to include additional applications with KBK ergo components.

They can be used to build cranes that have to accommodate kick-up forces. This may be the case for overhung, extending and manipulator cranes.



37061

Suspensions

Fitted with integrated damping elements, KBK ergo suspensions absorb energy from various directions, thus preventing unnecessary loads being transmitted to the roof or supporting structure.



37067

Crab frame

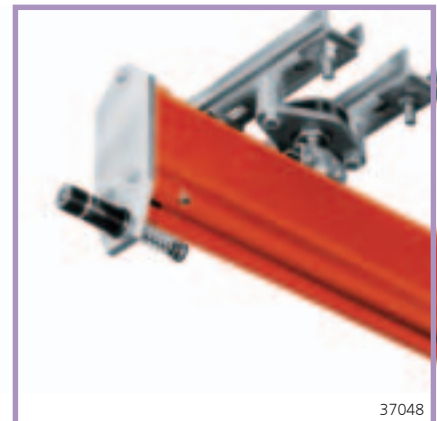
The specially developed crab frame is a rugged, high load bearing system for mounting specially equipped hoists and manipulators.



37052

End carriages

End carriages provide improved rigidity and increased positioning accuracy. Firmly connected to the crane trolleys, they precisely transfer all forces reliably to the crane or trolley runways.



37048

End caps

Special shock absorbers are required on KBK ergo cranes if the limit positions are frequently approached in normal operation. Shock absorbers integrated in the end caps dissipate the energy transmitted by the loads to all components and assemblies as well as the support superstructure.



37714

34074-14

Trolleys

The KBK ergo crane construction kit includes trolleys in two sizes.

KBK-I ergo trolleys are made of steel and feature axles mounted in articulated bearings.

A horizontal wheel provides lateral guidance in the runway.

KBK-II ergo trolleys of aluminium alloy feature articulated axles, adjustable counter-pressure rollers and a pair of guide rollers.

They reliably accommodate the additional kick-up and lateral forces exerted by offset loads.

The floating axle arrangement ensures uniform distribution of forces to all four travel wheels.

Components for manual and automatic controls

Installations built using the KBK classic and KBK ergo crane construction kits can be designed for manual, semi- or fully automatic control.

All components correspond to the latest design and accident prevention regulations and meet the requirements of most international rules and regulations.

Load detectors

Load detectors on hoist units provide overload protection for maximum safety and efficient utilisation. Additional load summation and digital load displays can be added.

PLC programmable logic control automation systems

These systems make it possible to implement optimum solutions with maximum efficiency for any materials handling automation requirements. Based on compact modules, existing control systems can be extended at any time. Operating sequences can also be visualised.

Infinitely variable speed control

DKES chain hoists and DKMES Manulift units feature infinitely variable speed control with integrated electronics for

- variable lifting and lowering motions,
- gentle lifting and positioning,
- vibration-free, smooth operation.

DZW position measuring system

This system can be used for position control systems along straight sections. The system trolleys are fitted with integrated pulse generators or angle encoders as required.

Pulse generators

Pulse generators integrated into electric motors provide countable signals for measuring speed and rotation in both directions. The units can be automated.



Frequency inverters

Frequency inverters that can be adapted to specific operating sequences make it possible to implement infinitely variable speed control of drives.



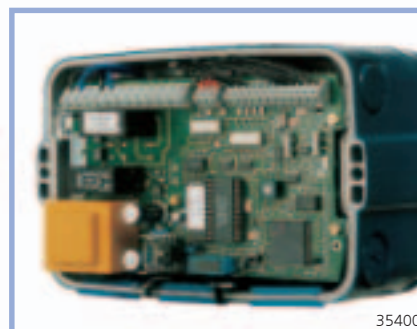
Dematik IR infrared remote control

KBK installations and other equipment and machinery can be operated safely and efficiently from a remote position using this control system.



Control system production

Control system production guarantees a maximum of reliability thanks to comprehensive quality assurance and function checks using simulated function sequences before systems leave the factory.



Integrated electrics

Arranged directly on the units to be controlled and featuring plug-and-socket connectors, integrated electrics guarantee fast and easy connection of control units and cables. Integrated electrics are also subjected to punishing long-term shock and vibration resistance tests as well as function tests at varying temperatures and under various climatic conditions.



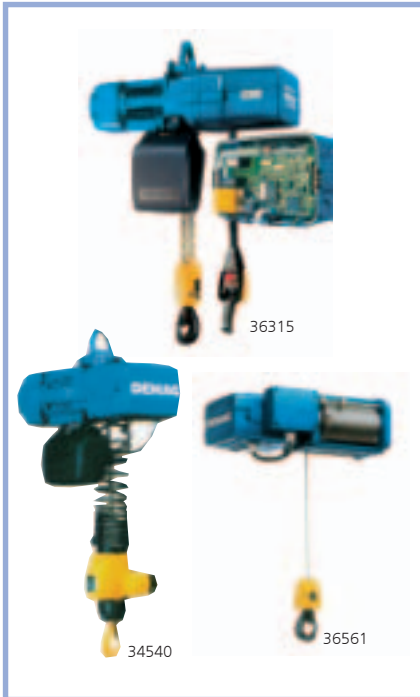
DSK, DST and DSE control pendants

The ergonomic design and sloping housing facilitate fatigue-free operation and permit operators to work in a natural comfortable position.

DST and DSE control pendants offer a wide variety of switch combinations for hoists, crabs and cranes and can also be used to control machinery and installations.

LHM load lifting modules

Lifting with chains, ropes or rigid guides



DK/DKES chain hoists are available in many load capacity ranges, speeds, lifting heights and equipment combinations. DK chain hoists feature two speed stages. DKES units are provided with an integrated inverter and a specially developed analog control pendant with which the lifting and lowering speed can be infinitely varied by varying the pressure on the switches. DKES chain hoists also enable careful approach and positioning thanks to particularly sensitive control at low speeds.

DKM/DKMES Manulift units operate on the same principle as DK/DKES chain hoists. Connected via a helical cable, they feature a control unit with an integrated quick-change connector for load handling modules. The control unit with its "spade handle" can also be used to guide the load. The Manulift DKMES features an integrated inverter for infinitely variable control of the lifting and lowering speed.

DS rope winches have an electric drive and enable particularly low-vibration lifting and lowering of loads. They are provided with limit switches for the highest and lowest hook positions and are protected against extreme overloads by an integrated slipping clutch.



DBS rope balancers are pneumatically driven hoists. Compressed air applied to the rope drum is used to balance the load suspended from the rope. Depending on the control type, loads with different weights can also be balanced. The load is guided by a handle. Switches do not need to be actuated. The lifting motion is determined by the operator. Owing to their low weight, rope balancers are usually more suitable than load lifting modules with rigid guide arrangements for fast handling operations without pivoting or slewing motions.



HGP lifting devices are pneumatically balanced load lifting modules. The lifting motion is provided by a rope and linear guide arrangement. Provided with various balance controls, they guarantee sensitive and convenient load handling.

TR and TV telescopic lifting devices are lifted and lowered by inside or outside running chains of electrically driven Demag DK/DKES chain hoists. We offer these units as single or double telescoping sections with both round (TR) masts as well as square (TV) masts. They offer all the benefits of chain hoists together with a rigid load guide arrangement.

PGA manipulators

consist of a pneumatically balanced parallelogram arm and a balance control designed for the given application. Manipulators featuring controls with load detectors are particularly convenient

to operate. Handling operations can be carried out particularly easily and safely with manipulators as these load lifting modules combine low moving masses and smooth operation.



LAM load handling modules



Mechanical load handling modules
We mainly employ grippers, load pins, load forks, load hooks and tongs as mechanical load handling modules. They are chiefly combined with versatile load lifting modules, such as Manulift units or rope balancers, for example. Both gripping devices as well as tongs are usually based on a scissor mechanism. Fitted with a variety of jaws, PGS parallel grippers can be used for a wide variety of applications, e.g. for handling shafts or bins.



Pneumatic load handling modules
The basic components of pneumatic load handling modules are grippers and tensioning units that are completed with corresponding fittings to form parallel grippers, tong grippers, articulated grippers, expanding pins, etc. Grippers and tensioning units utilise pneumatic cylinders and linear guides for the parallel tensioning motion. If required, pneumatic load handling modules are provided with safety features that maintain the tensioning energy even in the event of a power failure.



Vacuum load handling modules
Vacuum load handling modules can be operated by compressed air via ejectors and electric vacuum pumps of fans. The latter operate with comparatively low underpressure, however, high volume flows and are particularly suitable for handling air-permeable workpieces such as textiles and cartons, for example. Available options include: devices for supplying compressed air to suction pads for rapid load deposit and safety circuits and underpressure reservoirs to maintain the suction energy in the event of a power failure.



Magnet load handling modules
The range of magnet load handling modules mainly comprises

- round and rectangular magnets as single magnets or mounted on spreader beams for handling small sheet metal, workpieces and tool items,
- contour magnets with movable pole fingers that automatically adapt to the outline of loads with uneven surfaces.

Fax service

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Please send an offer/the information to:

Company _____
P.O. Box/Street _____
Town/post code _____
For attention of _____
Telephone/extension _____
Telefax _____

Project engineering for KBK installations

I am interested in:

- | | | |
|--|--|--|
| <input type="checkbox"/> Suspension monorails | <input type="checkbox"/> Overhung cranes (KBK ergo) | <input type="checkbox"/> Stacker cranes |
| <input type="checkbox"/> Single-girder suspension cranes | <input type="checkbox"/> Extending cranes (KBK ergo) | <input type="checkbox"/> Portal cranes |
| <input type="checkbox"/> Double-girder suspension cranes | <input type="checkbox"/> Pillar-mounted jib cranes | <input type="checkbox"/> Crane runway support structures |
| <input type="checkbox"/> Manipulator cranes (KBK ergo) | <input type="checkbox"/> Wall-mounted jib cranes | |

I require:

- Consultation by telephone Offer Detailed information on _____

Details of the planned installation:

Weight of the load _____ kg Description of the load _____

Workshop dimensions

Width _____ mm	Crane girder length _____ mm	Extending crane intermediate girder length _____ mm
Height _____ mm	Manipulator crane outreach length _____ mm	Pillar-mounted crane jib length _____ mm
Monorail length _____ mm	Overhung crane overhang length _____ mm	Wall-mounted crane jib length _____ mm
Crane runway length _____ mm		Required hook path _____ mm

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