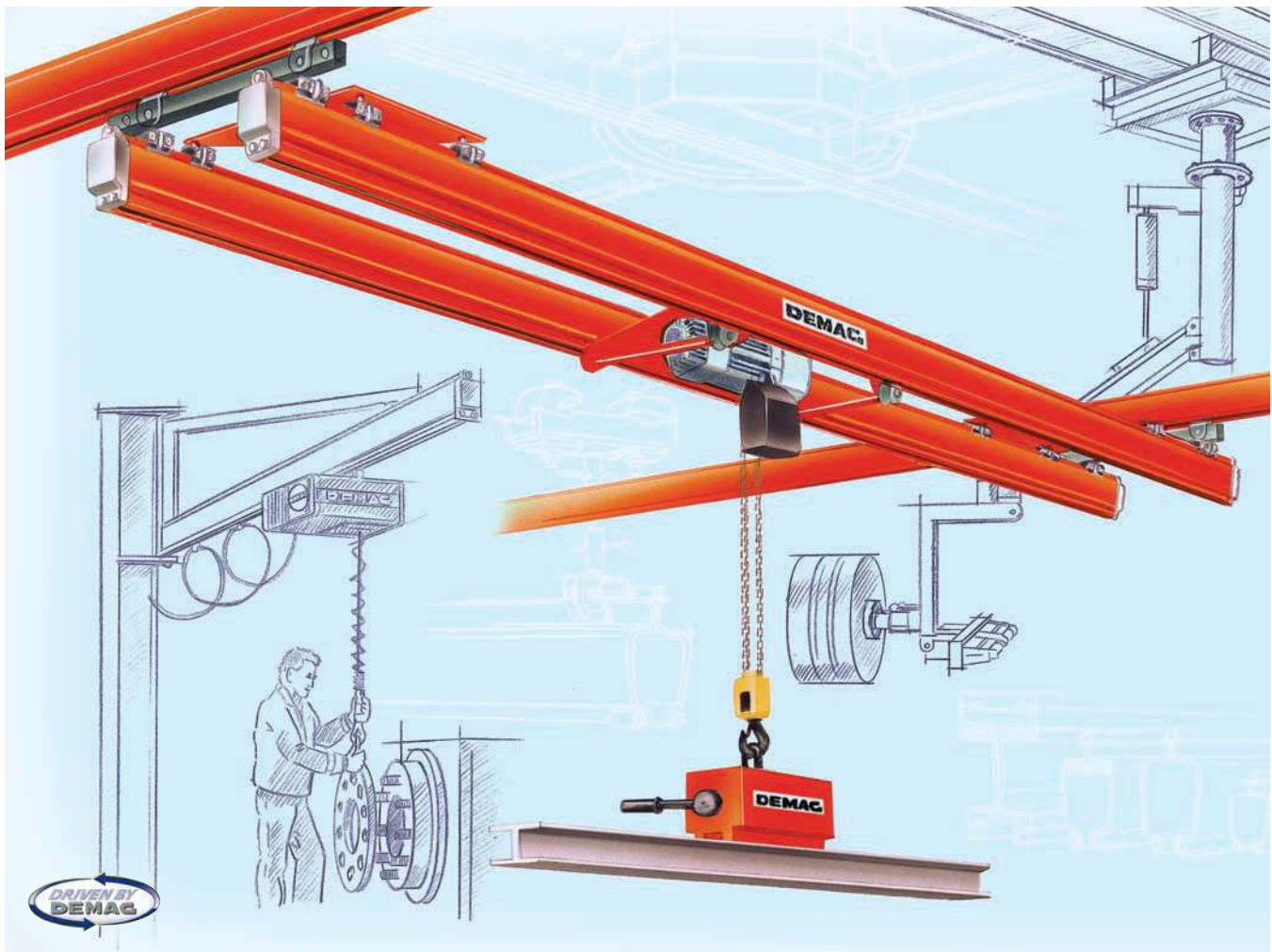


KBK Classic and KBK Ergo Crane Construction Kit

Overhead transport, exact positioning, ergonomic handling



Distributed by Ergonomic Partners
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Nobody has more ways
to move more.

DEMAG

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

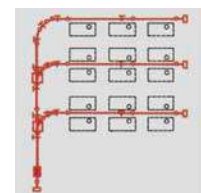
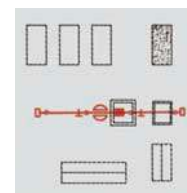
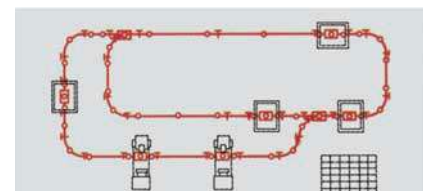
A wide range of components makes it possible to adapt the route precisely to meet the structural requirements of your workshop. At the same time, the system ensures that all specific product and workplace requirements of your production facility are met.

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

Ideal equipment carriers

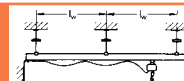
The special profiles of the KBK crane construction kit are particularly suitable for applications such as tracks for load balancers fitted with testing devices and electric and pneumatic tools, etc. and power supply lines for cranes and other mobile equipment.

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 Track Profile	Monorail Hanger Spacing							
	Capacity	175 lb	275 lb	550 lb	1100 lb	2200 lb	3530 lb	4400 lb
100 I	Maximum	9.8 ft.	7.9 ft.					
	Hanger Spacing (ft.)	16.4 ft.	13.5 ft.	8.2 ft.				
II-L			23.0 ft.	19.0 ft.	11.5 ft.			
II				26.2 ft.	17.7 ft.	10.5 ft.		
III					26.2 ft.	18.7 ft.	13.5 ft.	11.2 ft.

Single-girder suspension cranes

Favourable dimensions, low deadweight

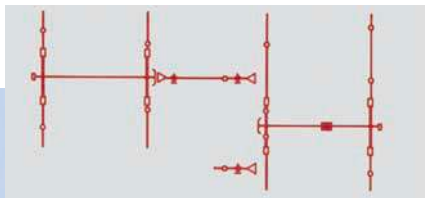
Single-girder suspension cranes from the KBK crane construction kit are used for fast and safe area-serving overhead handling and exact positioning of a wide variety of goods.

Easy and cost-effective

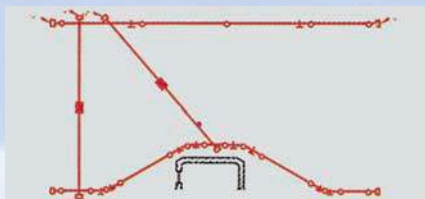
KBK classic single-girder suspension cranes can be simply suspended from the building roof or superstructure. Additional supports for the crane runway are not necessary. Even partial areas of a workshop may be easily fitted with suspension cranes at low cost.

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.

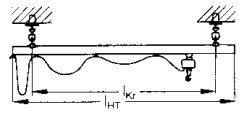


The benefits of KBK classic single-girder suspension cranes include latching devices that allow direct transfer of the hoist trolley between the crane and a suspension monorail.



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						
		175 lb	275 lb	550 lb	1100 lb	2200 lb	3530 lb	4400 lb
100	Crane span l_{kr}	9.4 ft.	8.5 ft.					
	Girder length l_{HT}	9.8 ft.	9.8 ft.					
I	Crane span l_{kr}	15.3 ft.	15.1 ft.	9.0 ft.				
	Girder length l_{HT}	19.7 ft.	16.4 ft.	9.8 ft.				
II-L	Crane span l_{kr}		23.0 ft.	20.0 ft.	12.1 ft.			
	Girder length l_{HT}		26.2 ft.	23.0 ft.	13.1 ft.			
II	Crane span l_{kr}			24.4 ft.	19.4 ft.	11.5 ft.		
	Girder length l_{HT}			26.2 ft.	23.0 ft.	13.1 ft.		
III	Crane span l_{kr}				27.6 ft.	20.7 ft.	14.1 ft.	11.8 ft.
	Girder length l_{HT}				29.5 ft.	23.0 ft.	16.4 ft.	13.1 ft.

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.

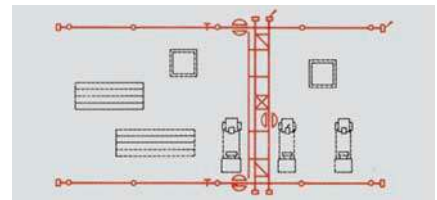
Large lifting heights

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

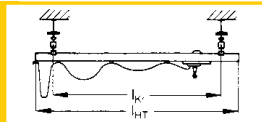
Large spans

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.

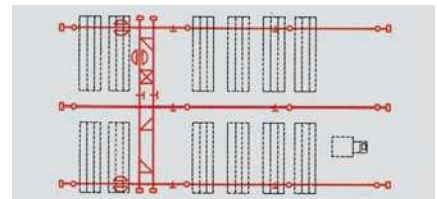


Profile selection:
Max. distances between supports,
crane spans, girder lengths



KBK section		Load capacity							
		175 lb	275 lb	550 lb	1100 lb	2200 lb	3530 lb	4400 lb	7000 lb
100	Crane span l_{kr}	14.4 ft.	12.5 ft.						
	Girder length l_{HT}	16.4 ft.	16.4 ft.						
I	Crane span l_{kr}		20.3 ft.	16.4 ft.	10.2 ft.				
	Girder length l_{HT}		29.5 ft.	19.7 ft.	13.1 ft.				
II-L	Crane span l_{kr}			24.9 ft.	21.3 ft.	14.1 ft.			
	Girder length l_{HT}			32.8 ft.	23.0 ft.	16.4 ft.			
II	Crane span l_{kr}				28.9 ft.	20.0 ft.	15.1 ft.	11.8 ft.	
	Girder length l_{HT}				36.1 ft.	23.0 ft.	16.4 ft.	13.1 ft.	
III	Crane span l_{kr}					29.9 ft.	24.3 ft.	20.7 ft.	13.8 ft.
	Girder length l_{HT}					45.9 ft.	29.5 ft.	23.0 ft.	16.4 ft.

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.

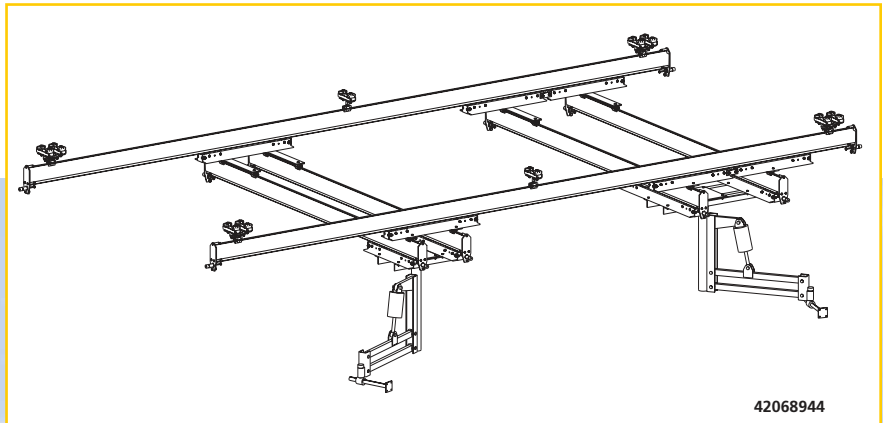
Innovative and ready to meet tomorrow's needs

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.



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Overhung and extending cranes

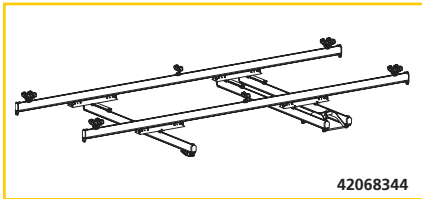
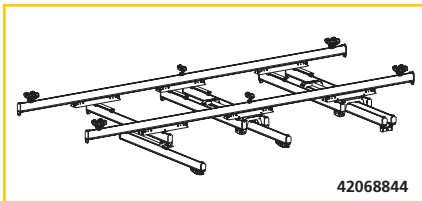
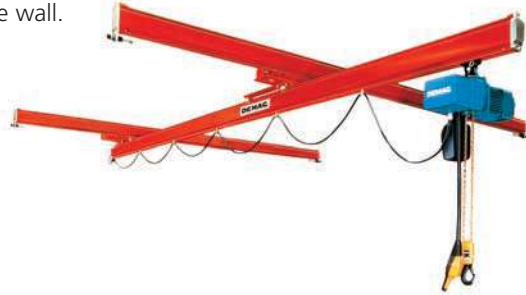
Large overhang – constant or variable

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.



	Maximum Overhang (ft)		
	KBK I	KBK II-L	KBK II
Single-girder crane	NA	4.9 ft.	5.9 ft.
Double-girder crane	5.2 ft.	7.5 ft.	8.2 ft.

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.

	Maximum Extending Length (ft)	
	KBK II-L	KBK II
A1/1	4.9 ft.	5.9 ft.
B2/1	4.9 ft.	6.6 ft.
B2/2	7.5 ft.	8.2 ft.

Max. permissible overhang dimensions

depending on profile and extension type, also dependent on the load.

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°.

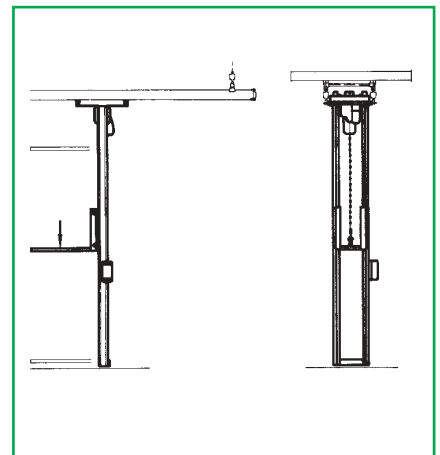
Portal cranes

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.



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 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-centering plug-in, bolted connections allow them to be easily assembled in any combination. Different profile section sizes can be used for single and double-girder suspension crane runways and girders.

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



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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

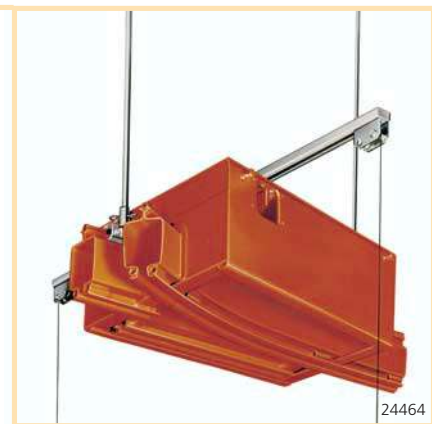
To prevent bending stresses and to minimise horizontal forces in the superstructure, KBK track sections are suspended so as to allow pendulation. Plastic shells in the upper and lower ball joints reduce maintenance, surge loading and noise to a minimum. The track height can be easily and precisely adjusted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



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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.



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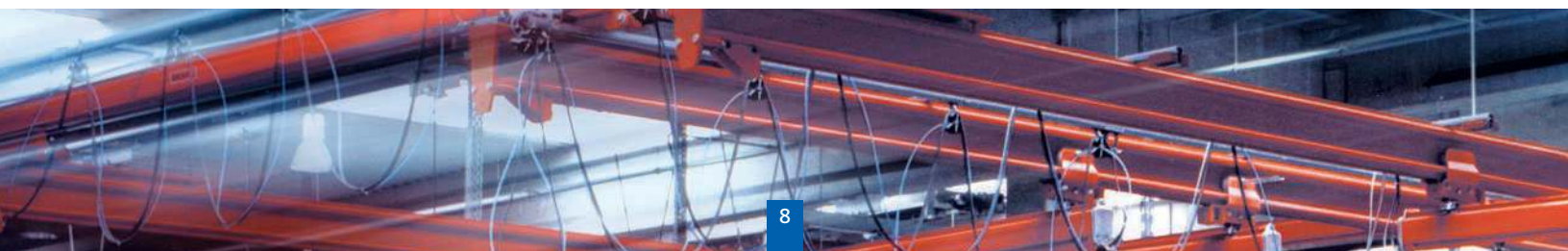
Drop sections

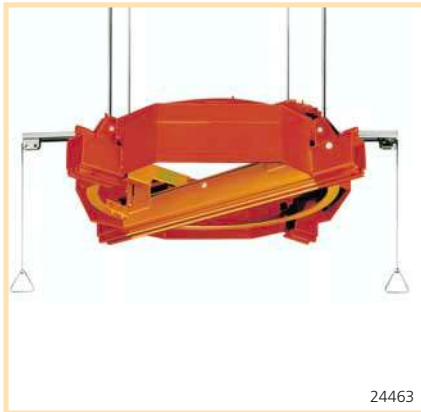
Drop sections are mainly used in closed-circuit tracks for picking up and depositing loads at predetermined positions. This eliminates the need for hoist units.

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.



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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.

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 5 internal conductors, for KBK III track sections with up to 8 individual conductor lines.

KBK II-R power supplies are designed to UL specifications and protected against accidental contact in accordance with relevant regulations.



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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.

Friction wheel travel drives

Large friction wheels fitted with high frictional rubber tires 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.



24205

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.



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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.



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.



Crab frame

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



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.



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.



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.

Chain Hoists and Balancers



DC Chain Hoists

The DC Chain Hoists is designed for performance, safety, reliability, and maintainability. This hoist is standard 2 speed and is available in a wide range of capacities up to 4400 lbs. The hoist is rated for 1900 full load operating hours and 360 starts and stops/per hour. The integrated electronics monitor and control the regenerative braking and slip clutch. An LED display provides maintenance and trouble shooting data. The field adjustable pushbutton allows for simple height adjustments up to 10 ft. The maintenance panel provides easy access to the chain guide and standard quick disconnect for power and push-button. The delivery on most models is 48 hours or less.

DCM Manulift units operate on the same principle as DC 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.

DK Chain Hoists for loads of 5000 to 11000 lbs. are available in many speeds, lifting heights, and equipment combinations. DK Chain Hoists feature two speed stages, slip clutch, 360 starts per hour and 60% duty factor. Variable speed hoist 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 buttons. This allows exceptional control of fragile or precise lifting applications. The hoist is also available in a manulift model.

DKHC High Cycle Chain Hoists

The Demag DKHC features a 100% duty 2-speed Demag Conical Rotor Brake Motor, engineered for high cycling and excessive starts/stops. This design is crucial in areas of production where zero downtime and constant workflow is a must. In addition, the Demag DKHC boasts a specially designed fan cooled motor and insulation thickness that allows the operator to have practically limitless lifting and lowering capability without overheating.



Demag DBS Air Balancers allow loads up to 250 lb to be safely and ergonomically handled. Productivity is increased and the risk of muscle and back injuries are greatly reduced. The design is excellent, allowing for high cycling capability, low operating costs and unparalleled safety. Demag DBS Air Balancers are available in two sizes, DBS 55 (110 lb) and DBS 110 (250lb). Each size is available with the following control options to match your specific material handling requirement.

- Up/Down (Pendant)
- Single Load, Zero G Control
- Dual Load, Zero G Control
- Handforce Control

Other Demag component product literature



Demag KBK Alu Enclosed Track
900 239 49



Demag DBS Air Balancers
900 371 49



Demag KBK Ergo
900 236 49



Demag KBK Freestanding Workstations
900 239 49



Demag KBK Jib Cranes
930 074 49



Demag DKM Manulifts
229 115 49



Demag DK Chain Hoist
229 115 49



Demag DK Variable Speed Chain Hoists
930 242 49



Demag DKHC Chain Hoists
900 389 49

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