

## Demag Universal Cranes

Performance and efficiency at the highest level



## We set crane standards

The high standards introduced by Demag Cranes & Components are synonymous with quality, cost effectiveness and reliability at the highest level. Every crane and every crane component reflects decades of our holistic approach, crane expertise and reliability as a partner for the industry.

### Innovation for greater efficiency

With the new Demag DR rope hoist, for example, we have introduced an extended state of the art for Universal Cranes in applications for loads weighing up to 50 t and have defined an entirely new crane philosophy.



The C shape of the Demag DR rope hoist design is ideally suited to crane applications. Thanks to the many benefits offered by the rope hoist, the entire crane operates much more efficiently.

### These are the benefits of Demag's DR rope hoist:

- Improved handling rates and greater efficiency due to high lifting and cross-travel speeds
- Dependable planning and investment basis thanks to reproducible connection geometry and effective spare parts management
- High design rigidity, optimum travel characteristics and minimum wear due to proven crane geometry incorporating welded crane girders
- Larger hook paths, better utilisation of the available space, reduced construction and follow-up costs thanks to the possibility of using raised crane girders; designs tailored to match the roof structure and travelling hoists with minimum approach dimensions
- Easy and safe handling due to ergonomically designed controls and bi-directional radio control with load range display as standard to provide complete transparency for control of the installation and allow read-out of operating data
- Precise, gentle positioning with virtually no sway, reduced mechanical load on the crane installation as a result of infinitely variable speed control in all motion axes provided by frequency inverter controlled drives.

Crane type	Suspension cranes (EPDE/EKDE)	Single-girder overhead travelling cranes (EPKE/EKKE)	Double-girder overhead travelling cranes (ZKKE)
Max. load capacity * [t]	8	12.5	50
Max. span * [m]	25	30	35
Max. long-travel speed* [m/min]	40		
Max. cross-travel speed* [m/min]	30		25
Max. lifting speed* [m/min]	12.5		
Stepless motions	3 axes		

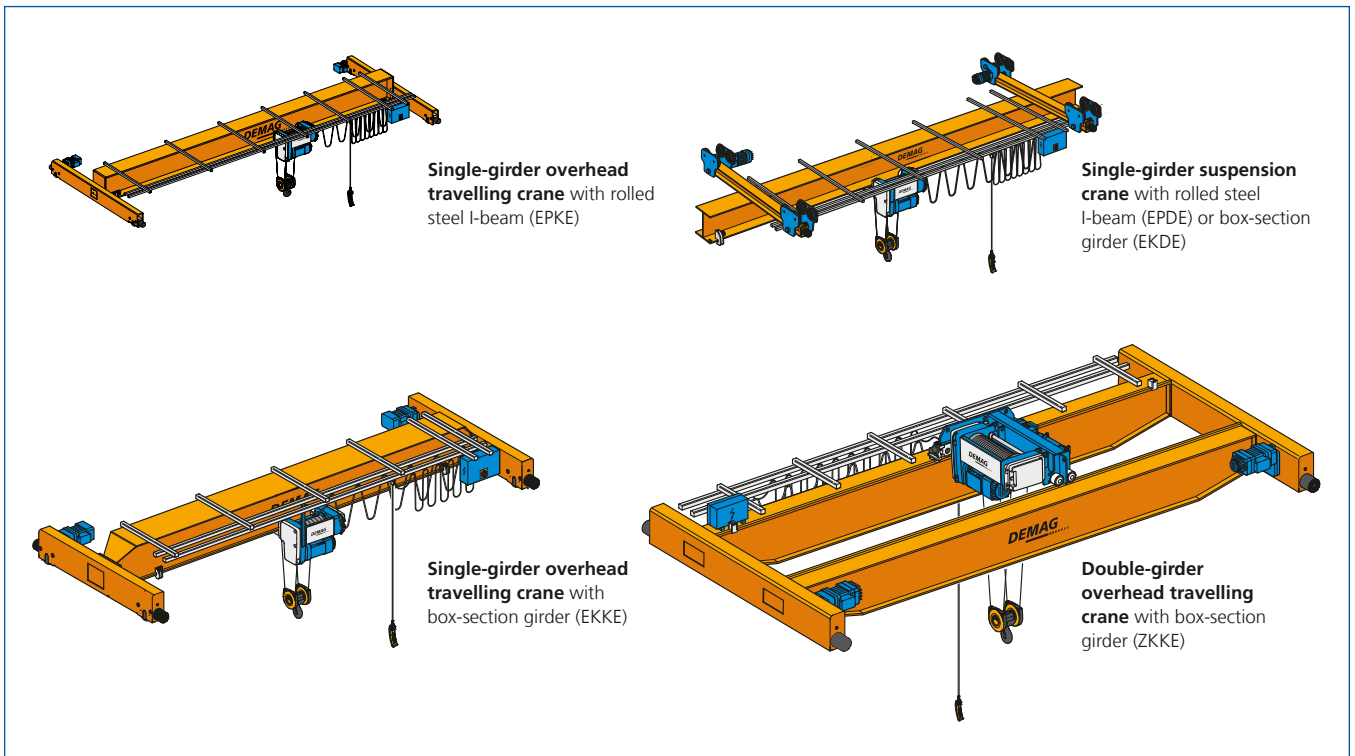
\* Other specifications on request





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Gentle handling and precisely positioned loads thanks to infinitely variable speed control



## Attention to detail for total overall quality



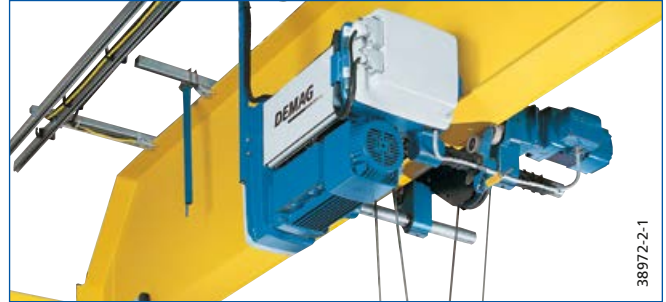
### Crane end carriages

- Maximum stability and high inherent rigidity due to:
  - rigid box-section design with a reinforced connection featuring welded diaphragm plates
  - engineering tolerances in the crane girder connection
  - optimum travel characteristics and minimum crane runway and wheel wear
- Optimum travel characteristics and high adaptability to crane runway tolerances thanks to:
  - precise position of the travel wheel axles
  - exact adaptation to the crane span dimension thanks to interchangeable spacer elements and set screws
- High safety levels due to the design specifications of the end carriages generated in conjunction with our in-house statics programs
- Economical operation including reduction of follow-on costs thanks to easily accessible end carriages.

### Travel units and connection points

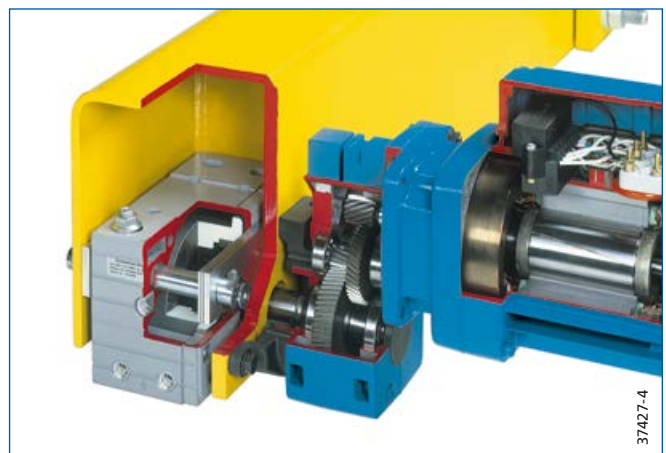
- Favourable travel characteristics and minimum crane runway and wheel wear thanks to maintenance-free drives with:
  - anti-friction bearings lubricated for life
  - generous bearing arrangement to accommodate horizontal forces
  - self-lubricating travel wheels made of spheroidal graphite cast iron.

Low-vibration travel and precise positioning reduce the load on the overall installation due to frequency inverter-driven drives with infinitely variable speeds up to 80 m/min without the need for any additional cabling and wiring.



### Travelling hoists

- DR rope hoist of C-shaped design optimised for crane applications with increased hoist and cross-travel speeds provides improved handling rates for cranes with safe working loads of up to 50 t
- Compact design with minimum approach dimensions and large hook path facilitates optimum utilisation of the available space and height and contributes to reducing construction and follow-on costs
- Infinitely variable hoist and travel motions guarantee low-sway handling. Precise, gentle positioning provides for greater safety and convenient operation
- CAN bus technology to meet tomorrow's demands for high data transmission reliability, to safety class 3 as defined in DIN/EN 954, ensures optimum monitoring for greater efficiency thanks to preventive maintenance.





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### Power supply

- Long-term power supply and minimised unplanned downtimes thanks to the Demag DCL-Pro compact conductor line for 4 to 7 poles and screw-type connections
- Optimum serviceability due to pre-assembled elements for simple assembly or replacement of current collector trolleys or complete straight sections
- Optimum safety through IP 23 or IP 24 and protection against accidental contact with sealing lip and integrated expansion compensation.



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### Controls

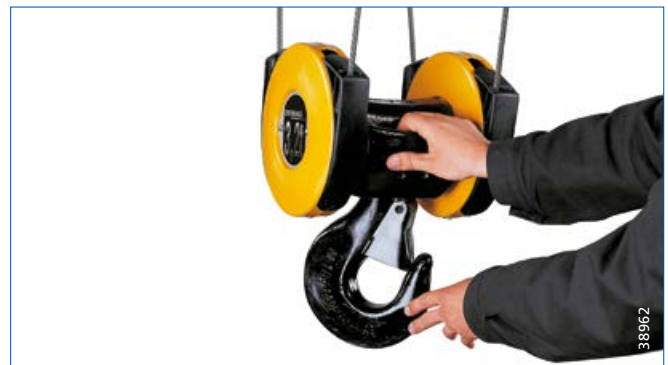
- Ergonomically designed control units for safe, fatigue-free handling
- Display fitted as standard provides complete transparency for control of the installation
- CAN bus control system corresponding to safety category 3 as defined in DIN/EN 954
- Demag DLC line control: height-adjustable control pendant suspended for separate travel on the crane girder
- Demag DRC radio control: radio controls with proportional pushbuttons for wireless control with variable radio frequency operation for unimpeded radio transmission
- Demag DRC-J joystick transmitter: radio control with convenient harness that can be comfortably worn from the shoulder.



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### Energy chain system

- All-round protection for energy and data transmission lines to and from the crab for radio-controlled Universal Cranes
- Increased safety thanks to improved clearance for interference contours
- Enhanced area-serving within the crane installation
- Easy-to-fit cabling and minimum maintenance time for the crane in single and double crab operation.



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### Bottom block

- Sophisticated bottom block design with standard load hook for easy connection of attachments
- Rope lead-in guard eliminates the risk of being caught between the rope and sheave
- Handle recesses on both sides simplify handling of the bottom block and increase operating safety.

# Single-girder overhead travelling cranes with box-section girders

EKKE single-girder overhead travelling cranes provide you with high-quality Demag technology at a particularly attractive price. These cranes have high rigidity and low deadweight, which keeps the load on the crane runway low and means that a cost-effective design can be selected for the building. They also offer the benefits of outstanding crane geometry, resulting in exceptional travel characteristics. The Demag DR rope hoist is of optimum design for crane applications so the entire crane installation meets your demands for greater efficiency.

## Your benefits:

- Crane girder is computer-optimised box section
- End carriages of torsionally rigid, welded box-girder construction
- Travel wheels of highly wear-resistant GGG 70 spheroidal cast iron with self-lubricating properties
- Connections between the main girder and end carriages manufactured to mechanical engineering tolerances for minimum wear
- Crab of low-headroom design with chain hoist or rope hoist, offering particularly favourable hook approach dimensions to serve the largest possible area
- Power supply to the crab by means of highly flexible flat cable with protective earth conductor
- Control pendant suspended for separate travel on the crane girder, with display for installation monitoring
- Optional radio control with display and proportional pushbuttons
- Optimum anti-corrosion protection of all parts thanks to pre-treatment of steel components to industry standard
- Paint finish in RAL 1004 semi-matt golden yellow. Travel drives in azure blue (RAL 5009). Crab powder-coated in azure blue and silver grey (RAL 7001)

## EKKE single-girder overhead travelling crane

Technical data	
Load capacity	up to 12.5 t
Crane span	up to 30 m
Long-travel speed	up to 40 m/min
Cross-travel speed	up to 30 m/min
Lifting speed	up to 12.5 m/min

Other specifications on request

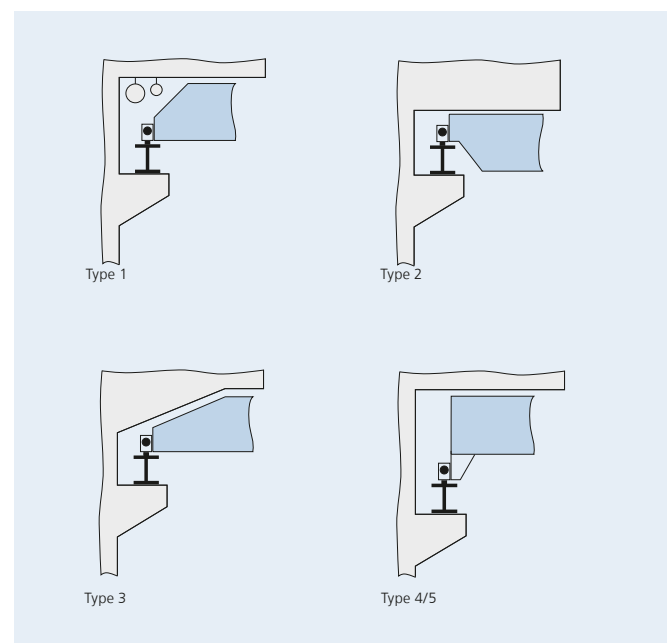
## Options

See accessories, page 14

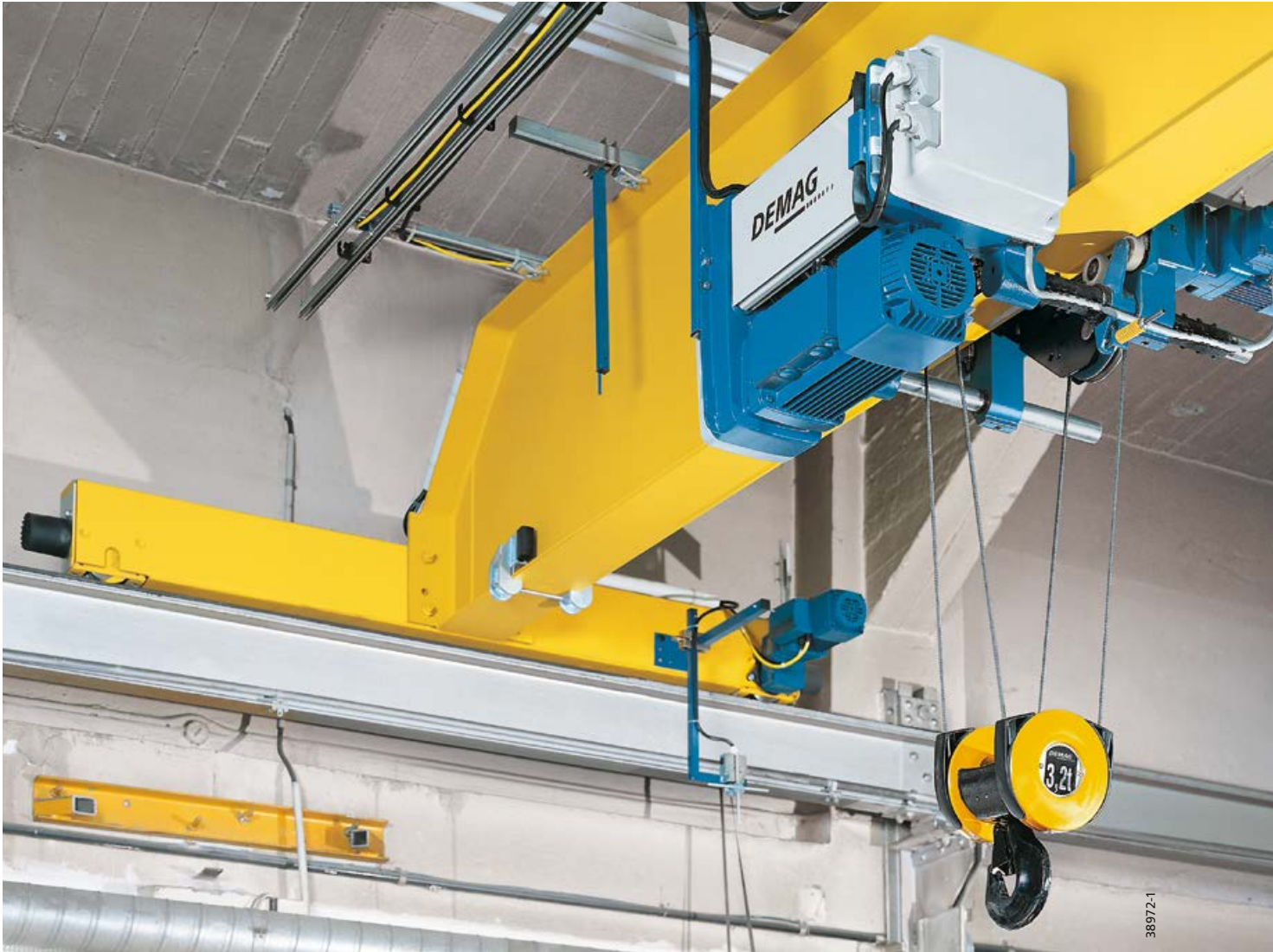
## Technical data sheet

Ident. no. 203 529 44, EKKE with EKDR rope hoist

## Optimum adaptation to the building design







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### Your benefits with the Demag DR rope hoist optimised for crane applications

- Increased efficiency thanks to extended service life by Demag **211**<sup>®</sup> (1,900-hour full load service life)
- Improved load handling thanks to increased lifting and cross-travel speeds
- Low-sway load motions thanks to infinitely variable cross-travel speeds
- Monitoring for improved installation transparency
- Best possible utilisation of your production area thanks to minimum approach dimensions

# Single-girder overhead travelling cranes with rolled I-beam girder

EPKE single-girder overhead travelling cranes with a rolled steel I-beam as the load bearing structure offer outstanding value for money. The use of rolled steel sections for the crane girder and specially designed travelling rope hoists or chain hoists make these cranes the optimum solution for light loads and relatively small spans.

As a particularly inexpensive entry-level model offering the usual high level of Demag quality, single-girder overhead travelling cranes can be integrated into existing workshops or new buildings as workshop cranes, for example. EPKE universal cranes ensure efficient and fatigue-free load handling thanks to the higher cross-

travel speed and optimised ergonomic control pendants. Fitted with such features as infinitely variable-speed cross-travel drives as standard, they also make it possible to achieve low-sway travel motions for gentle handling and precise positioning of loads. The crane components have been designed for a long service life and are known for their high levels of reliability and safety.

## Benefits and features

- They can be used as needed with the Demag DR rope hoist or DC chain hoist
- You also profit from the proven benefits of single-girder overhead travelling cranes.

## EPKE single-girder overhead travelling crane

Technical data	
Load capacity	up to 12.5 t
Crane span	up to 18 m
Long-travel speed	up to 40 m/min
Cross-travel speed	up to 30 m/min
Lifting speed	up to 12.5 m/min

Other specifications on request

## Options

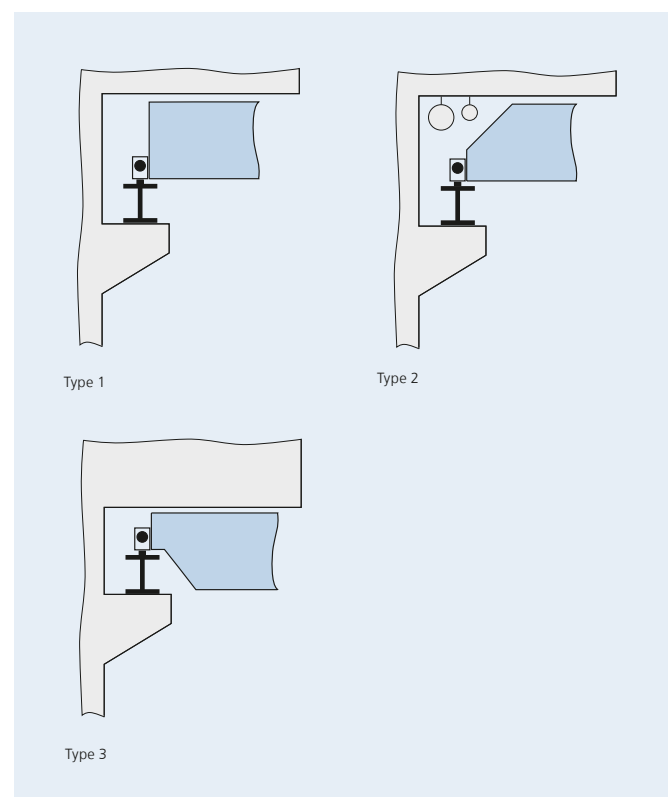
See accessories, page 14

## Technical data sheet

Ident. no. 203 728 44 (EPKE with DR rope hoist)

Ident. no. 203 729 44 (EPKE with DC chain hoist)

## Optimum adaptation to the building design







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Single-girder EPKE overhead travelling cranes can be fitted to order with either DR rope hoists or DC chain hoists

# Suspension cranes – the column-free alternative

Demag suspension cranes travel on crane runways attached to existing roof structures, which saves you the cost of installing additional crane runway supports. In this way, the entire workshop area is available for production. It is also possible to employ a bypass control system to enable only certain parts of the factory space to be accessed. The lateral overhangs can be used to extend the travel path of the travelling hoist beyond the span dimension. Optional latching devices make it possible to transfer the travelling hoist from the crane girder to a branch track and back without having to deposit the load.

## Type EPDE/EKDE single-girder suspension cranes

Technical data	
Load capacity	up to 8 t
Span	up to 25 m
Long-travel speed	up to 40 m/min
Cross-travel speed	up to 30 m/min
Lifting speed	up to 12.5 m/min

Other specifications on request

## Options

See accessories, page 14

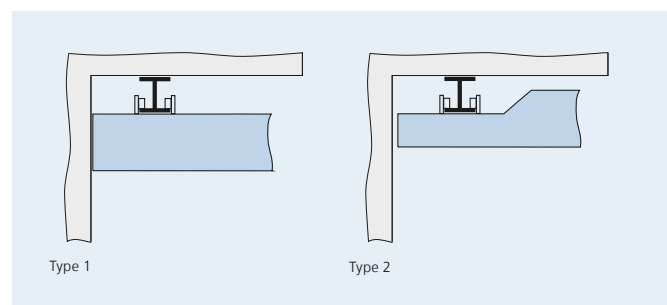
## Technical data sheet

Ident. no. 203 719 44, EKDE with EKDR wire rope hoist  
203 722 44, EKDE with EUDC chain hoist  
203 725 44, EPDE with EKDR wire rope hoist

## Your benefits

- Consistent quality thanks to all the benefits of single-girder overhead travelling cranes (pages 6/7)
- Optimised end carriage design
- Rigid I-beam girders or welded box-section girders for optimum load distribution
- Loads can be handled immediately adjacent to the building wall by means of girder ends tailored to the application requirements.

## Optimum adaptation to the building design







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A radio control unit can be used as a mobile controller to operate the cranes quickly and in absolute safety



# Double-girder overhead travelling cranes

## – high load capacity, wide span

Demag double-girder overhead travelling cranes offer you a virtually unmatched deadweight/load capacity ratio. They are characterised by their outstanding crane geometry, ensuring extremely favourable travel characteristics and therefore minimising wear. The particularly large lifting height is derived from the fact that the load hook can be raised between the two crane girders.

Depending on requirements, our double-girder overhead travelling cranes can also be fitted with radio or operator cab controls. Optional maintenance platforms and accessible crabs not only make it easier for you to maintain the crane, but also ensure that your hall fittings such as lamps, heating elements and supply lines can be quickly and easily reached.

### ZKKE double-girder overhead travelling cranes

Technical data	
Load capacity	up to 50 t
Crane span	up to 35 m
Long-travel speed	up to 40 m/min
Cross-travel speed	up to 25 m/min
Lifting speed	up to 12.5 m/min

Other specifications on request

### Options

See accessories, page 14

### Technical data sheet

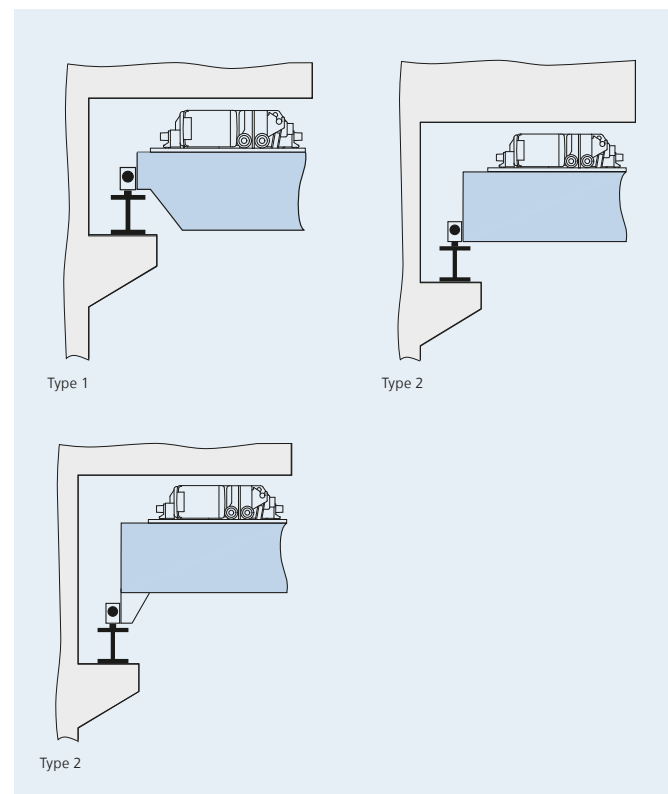
Ident. no. 203 561 44 ZKKE with EZDR 5, 10 rope hoist  
(up to 16 t)

Ident. no. 203 660 44 ZKKE with EZDR 20 rope hoist  
(from 16 t to 50 t)

### Your benefits

- Consistent quality thanks to all the benefits of single-girder overhead travelling cranes (pages 6/7)
- Particularly high performance thanks to the double-girder design which enables high long and cross-travel speeds to be achieved
- Low deadweight reduces investment layout
- Possible mounting arrangements
  - Optional maintenance platform for building repairs
  - Operator cab control as a crane control variant.

### Optimum adaptation to the building design

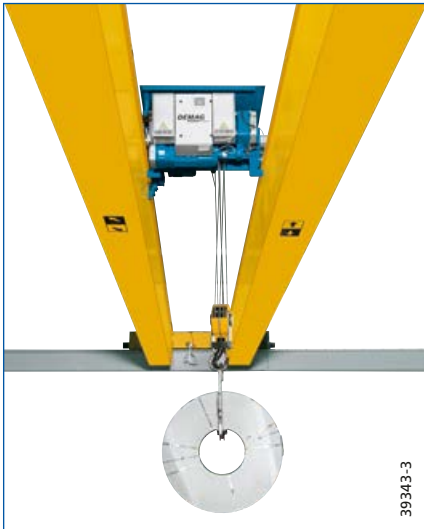




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The double-girder design provides for particularly high load capacities and sensitive load handling thanks to infinitely variable speed control in three axes, including tandem operation

## Demag crane accessories and ancillary equipment – to give your crane the versatility you need



With our wide range of accessories and ancillary equipment, we are able to adapt our Universal Cranes to the individual requirements of your application.

- Height-adjustable control pendant for maximum operating convenience
- Control by means of a pendant switch or, if required, bi-directional radio control with proportional pushbuttons
- Variable-speed motors with frequency inverters help to avoid load sway
- Installation of two crabs for handling long or bulky loads
- A comprehensive range of load handling attachments satisfies the most varied requirements
- Cranes or crabs operating in tandem increase cost effectiveness

A full range of technical documentation is available for each crane type, either as a conventional document or in electronic form on CD-ROM (Ident. no. 227 049 44) to assist in planning your crane installations.

Order by email: [industrialcranes@demagcranes.com](mailto:industrialcranes@demagcranes.com), quoting "TIP-CD".

This means that you are able to incorporate your Demag Universal Crane solution within your overall plant design right from the start, which saves time and money and facilitates accurate planning.





Double-girder overhead travelling crane with tandem end carriages for transporting and turning engine blocks

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# Demag Service – always ready to help

We offer you comprehensive and reliable service with a world-wide network of Demag expert service teams and Demag partners. They ensure the maximum possible availability and safety for your installation.

## **Rapid and reliable spare part supply**

Customers all over the world are supplied with the required spare parts quickly and flexibly by our service network.

## **Efficient training of your employees**

Your employees learn all they need to know about hoists and crane installations in Demag training courses lasting one or more days. Operator training and product presentations contribute to increased working efficiency while instruction in safety regulations prevents accidents. Training courses can be held at our training centres and at your company.

## **Comprehensive monitoring reduces downtime**

The performance and safety status of your installation are kept under surveillance by our monitoring system. A diagnostics tool constantly shows the operator or maintenance engineer the relevant status information and any unusual operating status, if applicable. This enables any necessary maintenance and repair work to be identified and carried out in good time. Regular monitoring cuts downtimes and reduces maintenance and operating costs in the long term.

## **Your individual service package**

Demag Service offers a comprehensive portfolio of services to ensure the lasting availability of your installation throughout its entire lifecycle:

- Recurring inspections according to relevant accident prevention regulations and general overhauls
- Inspection and maintenance according to contract schedules
- Fault elimination both with and without an on-call standby agreement
- Crane and crane runway surveys
- Service training for operators and maintenance engineers.

On this basis, we can assemble a package tailored to meet your individual production and operating needs.







Crane system data can be read out to facilitate scheduled maintenance and service

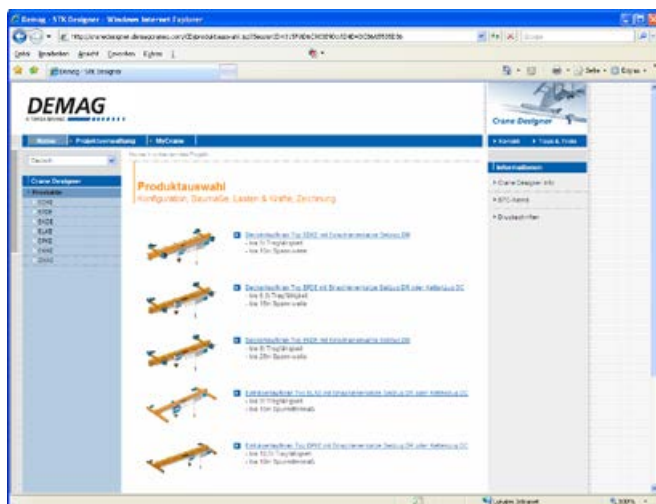


# Crane Designer – precise planning saves time, space and money

We are not only a strong partner for perfect technical solutions to meet your in-house logistics requirements, we also provide you with support during the planning phase for overhead transport logistics.

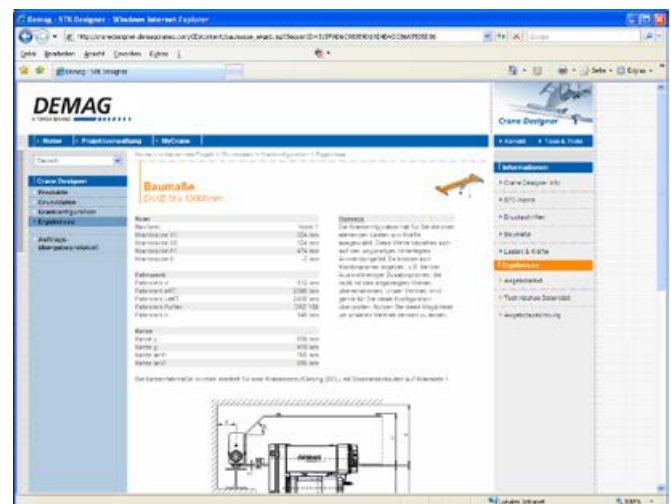
One of the first steps towards efficient planning is selection of a crane tailored to meet your needs at the click of a mouse. With the web-based Demag Crane Designer, you can configure a crane installation tailored to your specific needs within just a few minutes. Take advantage of our virtual planning wizard by going to: [www.demag-cranedesigner.com](http://www.demag-cranedesigner.com)

Only a few parameters have to be entered – the rest is done by the Crane Designer tool. From the comprehensive Demag product range, it selects a crane with the performance and technical equipment to suit your requirements precisely. Whether it is an overhead travelling crane or a suspension crane, single or double-girder design, Crane Designer completes planning tasks in a minimum of time.



## Product selection

Online planning tool on the Internet – configure your new crane installations exactly in line with your needs

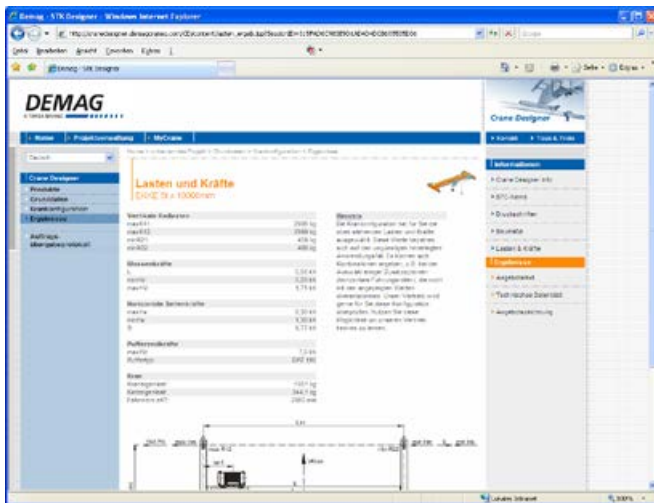


## Dimensions

Crane Designer calculates all the relevant dimensions for your specific application – and supplies the ideal solution in the shortest possible time

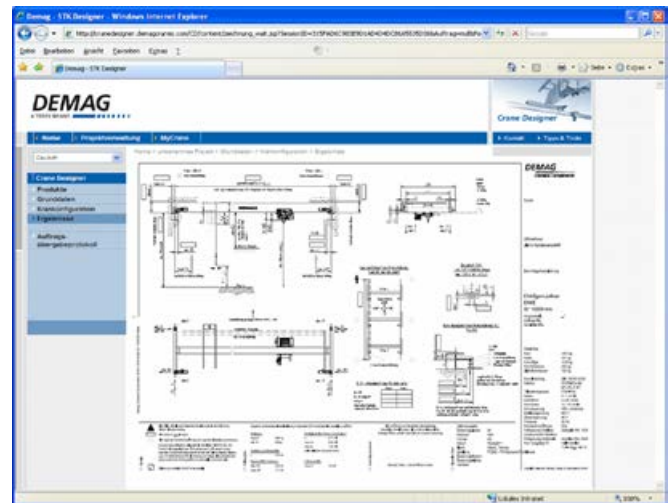
## Your benefits

- Requires no installation and no hard disk space
- Fast, individual selection
- Latest technical data and dimensions for your specified online crane configuration
- Latest documentation in many foreign languages
- All information available round the clock worldwide
- Reliable, fast transmission of your enquiry
- Possible link to our online order system (www.demag-shop.com)
- Application examples with text and illustration
- "How to speak Demag" crane glossary explains technical terms
- Online configuration of cranes
- Quotation texts
- Technical data
- Statics design information
- Individual CAD file.



## Loads & forces

You are provided with information on loads and forces for further planning, e.g. to calculate your factory building dimensions in accordance with DIN 4132



## Download drawings

You can then download your individually configured drawing and then process the relevant data on your local system (download requires registration)

