



**DEMAG**

**Innovative.  
Smart.  
Lifting to the next level.**

**The new DHR rope hoist**

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# Innovative. Smart. Lifting to the next level.

Innovative lifting solutions for safe and forward-looking operation: The new DHR rope hoist offers a high level of versatility and productivity. The DHR combines the powerful features of its two predecessor generations: Reliability, productivity and – thanks to numerous options – tailored implementation to meet the requirements of many industries. From simple lifting applications to high-performance rope hoists with smart assistance and convenience features, the DHR meets all demands for highly efficient load handling.

## Compact

DHR rope hoists with compact design and low deadweight stand out due to their small external dimensions and a further reduced C dimension. This makes the best possible use of the working space for crane applications or stationary equipment.

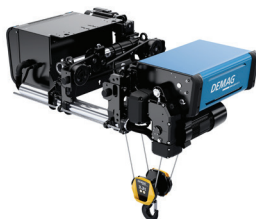
## Innovative

DHR rope hoists offer tailored solutions based on a single platform. Additional hardware options and smart features make a DHR rope hoist a smart hoist that is well equipped to meet future requirements: Lifting to the next level.

## Smart

Demag DHR rope hoists offer smart features that make load handling even safer and more efficient. And transparent at all times thanks to the monitoring and remote monitoring tools.

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**EK-DHR 3**

43038



**EK-DHR 5**

43039



**EK-DHR 10**

# DHR highlights

## DHR rope hoists fulfil almost any requirement:

- EK-DHR: monorail hoist, optimised for use on single-girder cranes or monorails
- G-DHR: basic hoist for plant engineering

With the DHR rope hoist, you have the choice for the first time: Proven lifting technology with steel ropes or with innovative synthetic ropes.

Features of the synthetic rope:

- Made of high-modulus polyethylene fibres
- 12-strand non-rotating structure
- Around 85% lighter than steel rope
- Suitable for indoor and outdoor use
- Temperature range: -10°C - +45°C
- No lubrication required
- No wear on rope drum and return sheaves
- One type of rope for all applications

## Dual Drive

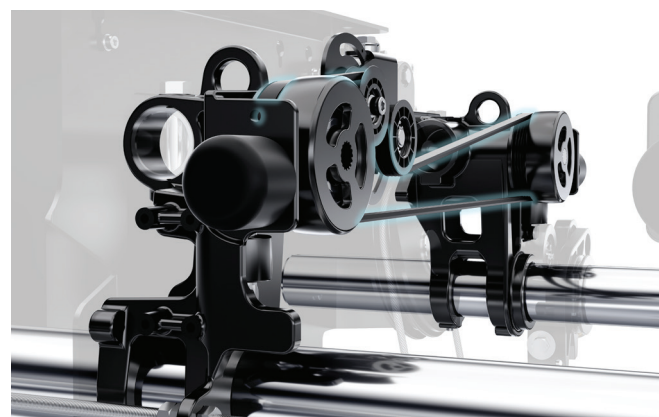
For high traction, the DHR monorail hoist is equipped with a DualDrive two-wheel drive as standard. Two of the four wheels have a synchronised belt drive. The benefits are:

- Reliable cross-travel motion and positioning
- Optionally available: Installation of a second cross-travel motor (DualDrive Plus), for particularly challenging ambient conditions (e.g. outdoor use, dirt accumulation on crane rail)

## Thrust rocker

The DHR rope hoist has compact dimensions. It also impresses with a weight-optimised design of the hoist trolley: No counterweights are required because of the thrust rocker. These are available as an option.

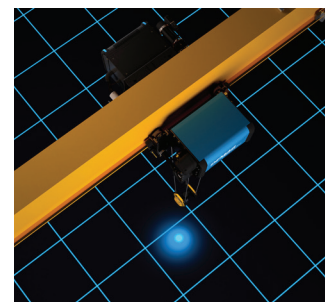
- Reduced deadweight
- Compact dimensions



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## Blue safety light

Added safety: a blue dot of light is projected on the floor to indicate the hook position



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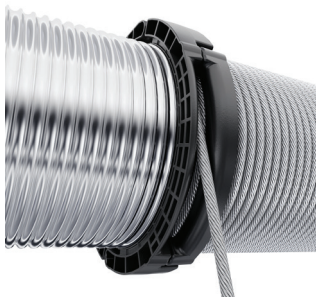


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# DHR rope hoist: Overview

## Lifting capacity according to customer requirements

- Four different types of hoist motor:
  - P-motor: pole-changing, 6:1 ratio
  - Frequency-controlled lifting:
    - B-motor: 30:1
    - W-motor: 20:1
    - S-motor: 10:1
  - Load-dependent speeds (up to factor of 3)
    - B - ProHub ASR
    - W / S - ProHub ESR
  - All:
    - IP 55 protection (IP 66 option)
    - Temperature monitoring (standard)



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## Rope drum/rope drive

- Low wear on ropes and return sheaves
- Common drum for steel and synthetic ropes with specific coating
- Easy access to upper return sheaves and rope anchorages
- Return sheaves with spokes (reduced weight)
- GJS 700 return sheaves (self-lubricating effect)

## Protective rope guide

- Made of tough, acid-resistant plastic in full-circumference design
- Inclined pull of up to 4° without touching the rope guide
- Rope guide identical for both rope types (stock benefit)

## Completely protected

- Two-piece rope drum cover for protection against external factors

## Rope design

- Flexible galvanised steel side with 1960 N/mm<sup>2</sup> tensile strength
- Optionally also with synthetic rope (reduced deadweight)

## Hoist gearbox

- Five different gearbox sizes
- Compact and lightweight design
- Quiet and low-vibration operation thanks to ground spur gears
- Lubricated for life in die-cast aluminium housing (IP 66)



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## Control concept with numerous variants

- DSB: up to 10 buttons (IP 65)
- DST: powerful and robust controllers
- radio controllers with various feature levels:
  - From simple control buttons to hand-held transmitters with infinitely variable speed control and joystick control
  - DRC: new generation of radio remote control



## Hoist brake

- Magnetic disc brake with high brake torque
- Fully enclosed design, IP 55 protection
- Designed for 1 million switching cycles

## High traction with low wear

- DualDrive with two driven wheels
- Minimum drive noise
- Long-lasting drive principle with high traction and reduced wear
- Highly durable travel and guide rollers with long service life

## Tailored drive concept

- Weight-optimised hoist trolley design with pressure rollers
- Alternative: version with counterweight

## Electric equipment

- Universal electric equipment box for hard-wired control or CAN bus control (option for EK-DHR for efficiency-enhancing assistance functions)
- DMU with modem for Demag Equipment App (DEA) and StatusControl 2.0:
  - Monitoring, remote diagnosis and parameter programming
- For 50 or 60 Hz operation
- Service-friendly wiring
- IP 55 enclosure

## Ergonomics and safety

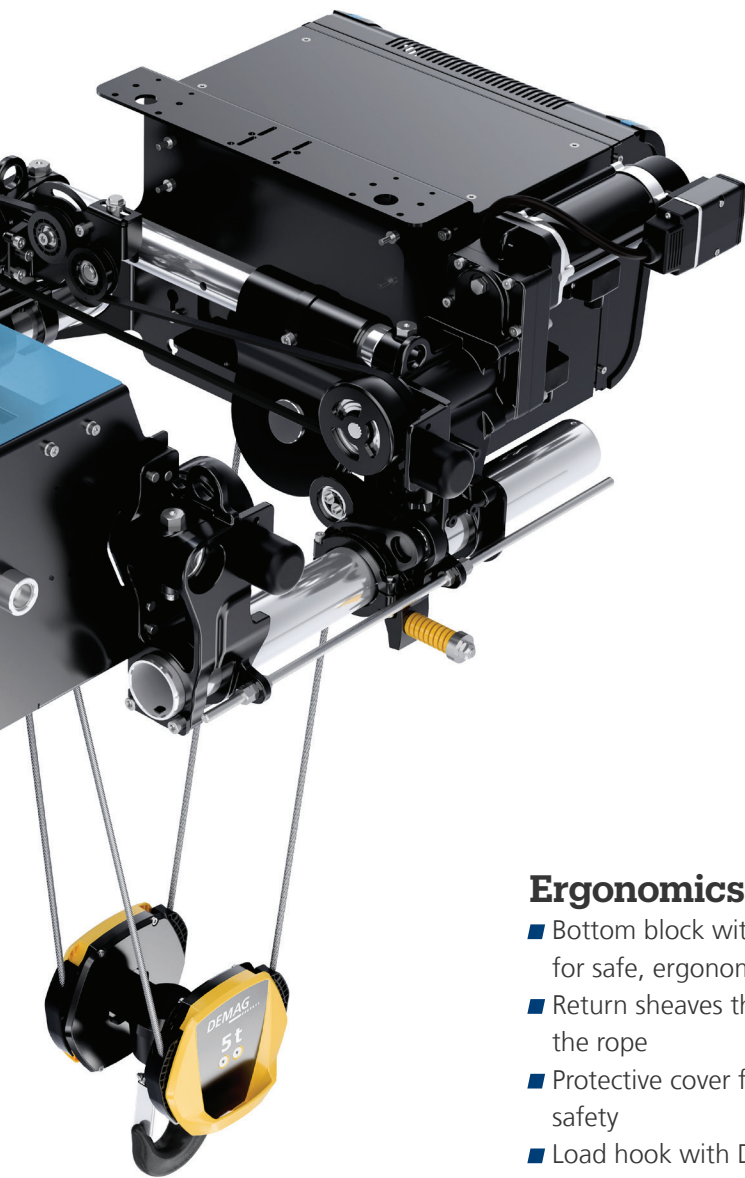
- Bottom block with guide handle for safe, ergonomic handling
- Return sheaves that protect the rope
- Protective cover for increased safety
- Load hook with DIN dimensions can be rotated 360°

## Travel unit structure

- Weight-optimised design based on tube design for all sizes

## Travel motors

- Infinitely variable cross-travel speeds with inverter (10/32 m/min)
- Further speeds possible
- Thermal overload protection
- Frequency inverters can be programmed via app



DRC-Com/  
DRC-Pro

DRC-J



# Configured for custom applications

## These options are available for DHR rope hoists:

DHR units offer variable-speed drive solutions for lifting and travel motions at different technology levels.

The advantages of the inverters are obvious:

- Variable speeds: 1:10, 1:25, ESR 1:37
- Less wear: gentle lifting/travel motions relieve the load on the crane installation
- Longer motor/brake service life
- Significant energy savings of up to 50%
- Smooth start-up, less load sway

Load-dependent lifting speed for higher productivity:

- High speed without load (up to 300%)
- Medium speed with partial load
- Precise speed at full load



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### OWL

Compact unit for overload cut-off and status display for increased safety and predictive maintenance (Electric Load Management/ELM).

- |   |                                |                                   |
|---|--------------------------------|-----------------------------------|
| ■ Overload protection for individual hoists | ■ Operating time               | ■ Temperature index               |
| ■ Simple condition monitoring               | ■ Number of braking operations | ■ Number of events with overload  |
| ■ Number of switching operations            | ■ Number of control operations | ■ Can be used for SWP calculation |

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### DMU

Monitoring unit with CAN bus functions for improved safety, longer brake service life and optimised maintenance intervals (ELM II).

- |                                       |  |                                    |
|---------------------------------------|--|------------------------------------|
| ■ Overload protection                 | ■ Monitoring of motor function                   | ■ Design limits (warnings)         |
| ■ Monitoring for sudden load increase | ■ Monitoring of the supply voltage               | ■ Optional remote monitoring modem |
| ■ Temperature monitoring for motors   | ■ Motor start/stop due to slow speed             | ■ Smart features                   |
| ■ SWP elapsed operating time counter  | ■ Tandem with multiple hoists (up to five units) | ■ CAN bus functionalities          |

## Further options for customised configuration:

- |                                       |                             |
|---------------------------------------|-----------------------------|
| ■ Radio control                       | ■ Large load display        |
| ■ Second hoist brake for DHR 3, 5, 10 | ■ Rain canopy               |
| ■ Cable drum                          | ■ Limit switches            |
| ■ Double load hook                    | ■ Anti-collision protection |
| ■ IP 66 protection                    | ■ Rail sweepers             |
| ■ Stand-by heating                    | ■ and many more             |
| ■ Thermal contacts for all motors     |                             |

# Smart features

Shorter cycle times

More cost-effective

Improved workplace safety



## Load-sway reduction

Prevents increased load sway by active counter-movements of the crane. Active system based on rope angle measurement.



## Slack rope protection

Continuous monitoring of rope tension: Automatic cut-off of the hoist motor when slack rope is detected.



## Area-dependent load reduction

Defined areas that the trolley may only enter when the load does not exceed a reference value.



## By-pass control

Defined restricted areas (e.g. structures, machines) that must not be approached by the trolley.



## Tandem control

Loads can be transported safely with two DHR rope hoists – all from a single control unit.

## Full control – from anywhere: StatusControl 2.0

With Demag StatusControl 2.0, smart system management, you have full control of your rope hoist at all times and from anywhere. Our remote monitoring system provides you with up-to-date operating data and evaluations for the DHR – as a solo component as well as in crane applications. Full transparency on utilisation, usage, risk of downtimes and service life. Simply, reliably and at a glance.

## With Demag Modular Control:



## Follow-me

Crane can be moved over the load by simply guiding the hook by hand. (Recommended for cranes up to 10 t).



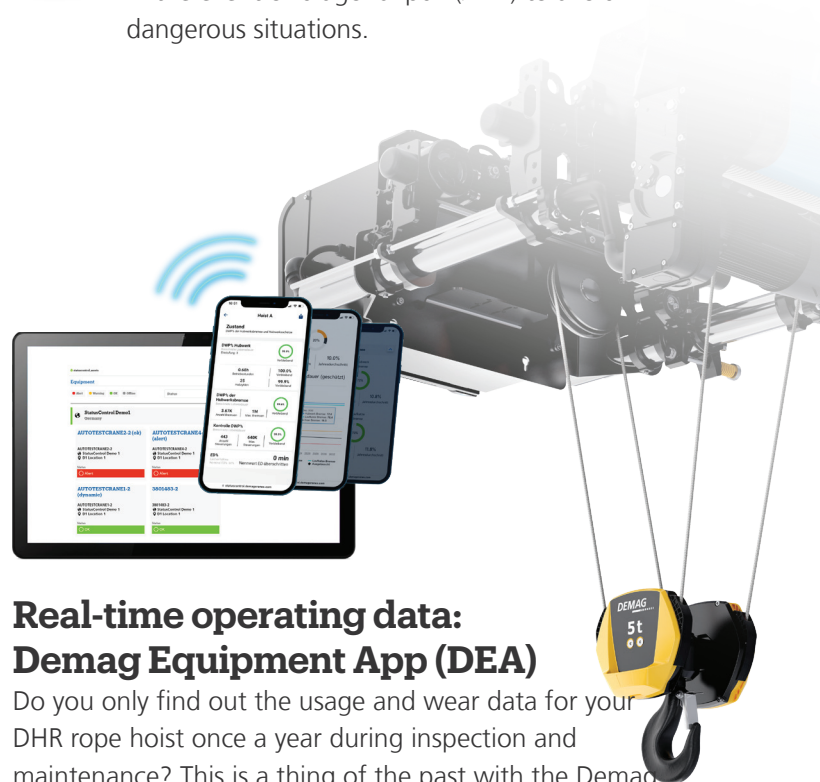
## Hook centring

Automatically positions the crane hook directly above the load. The advantages: faster load cycles and improved ease of operation.



## Diagonal pull prevention

Rope angle monitoring, automatic cut-off in the event of diagonal pull ( $> 4^\circ$ ) to avoid dangerous situations.



## Real-time operating data: Demag Equipment App (DEA)

Do you only find out the usage and wear data for your DHR rope hoist once a year during inspection and maintenance? This is a thing of the past with the Demag Equipment App. Within the radio range of the hoist, you receive the current data in real time and visually displayed on your end device. Trained users can also adjust DHR parameters.

# Demag DHR: Overview

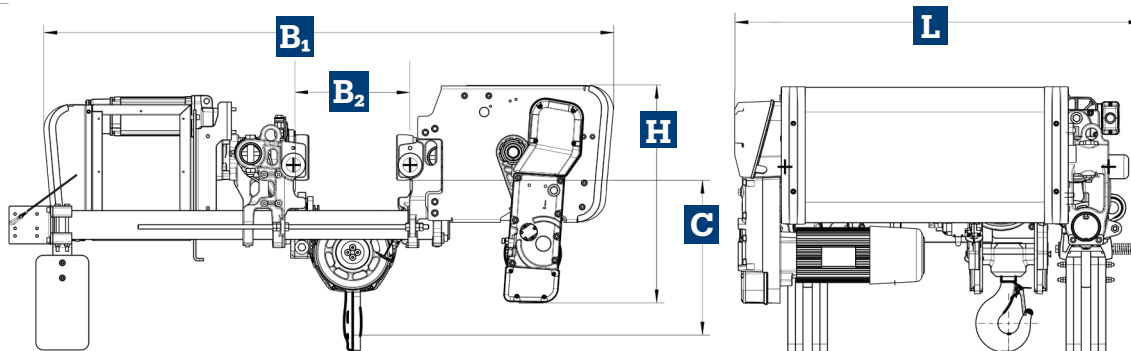
Size	Reeving	Load capacity [t]											Lifting height [m]	P	Lifting speeds [m/min, 50 Hz]				
		1.0	1.25	1.4	1.6	2.0	2.5	2.8	3.2	4.0	5.0	6.3			8.0	10	B	W	S
EK-DHR 3	2/1		M6	M6	M5										13; 18	1.6/10	0.6/10.8 1-22*	0.8-20	
	4/1						M6	M6	M5						6.5; 9	0.8/5	0.3-5.4 0.5-11*	0.4-10	
EK-DHR 5	2/1					M6	M5								12; 18; 24	1.6/10	0.8-15	0.8-20	0.1-15
	4/1									M6	M5				6; 9; 12	0.8/5	0.7-7.5	0.4-10	0.3-24
EK-DHR 10	2/1									M6	M5				18; 24; 30	1.6/10	0.8-15	0.8-20	0.2-15 0.3-24
	4/1												M6	M5	9; 12; 15	0.8/5	0.4-7.5	0.4-10	0.1-7.5 0.2-12

\* only 1.25 and 2.5 t

G-DHR 5	1/1	M6	M5												24; 36; 48	3.2/20			
	2/2	M6	M5												18; 24; 30				
G-DHR 10	1/1				M6	M6	M5								36; 48; 72				
	2/2				M6	M6	M5								24; 36; 48				

Steel rope only; pole-changing hoist motors

Size	Lifting height [m]	Dimensions [mm]					
		C (Steel rope)	C (Synth.)	L	H	B <sub>1</sub> (incl. min. flange dimension)	B <sub>2</sub> (flange)
DHR 3	6.5						
	9	380-660	450-660	957	439.5	837	100-610
DHR 5	6						
	9	410-750	470-750	1024	575	1349	100-610
	12						
DHR 10	9						
	12	500-1090	585-1105	463.5	1375	1495	120-610
	15						



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