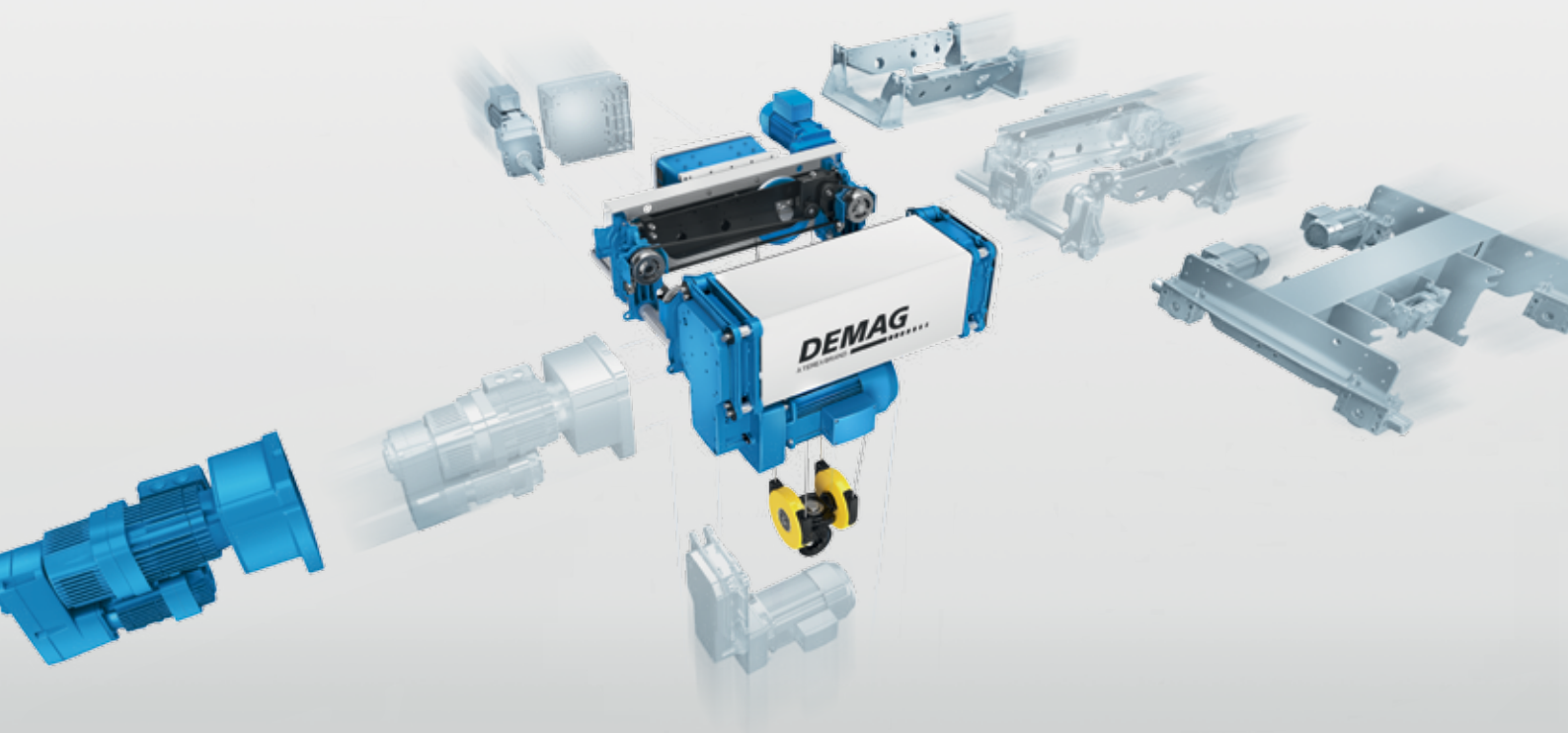


## The Demag DMR modular rope hoist





## Modular and versatile

Benefit from unparalleled versatility: we offer you the perfect solution to meet your individual needs with our new Demag DMR modular rope hoist. Thanks to its modular design, the DMR can be precisely adapted to match your application requirements. With one basic technology, it now covers an even broader range of applications than products available on the market until now.

### ONE ROPE HOIST

Thanks to its modular design, the DMR (Demag DMR modular rope hoist) provides a unique range of possible combinations, enabling you to configure your rope hoist to meet your specific needs for the perfect solution.

### TWO DESIGNS

For the first time, you can specify the design of your rope hoist and still have the choice of all further options with just one system. The DMR modular rope hoist is available in two designs: C-design and co-axial design.

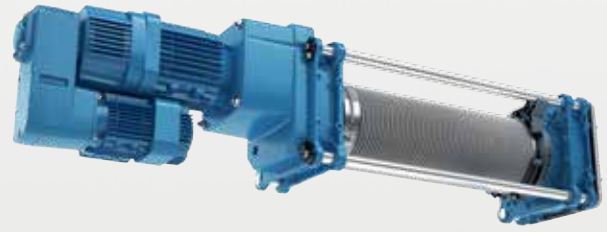
### MANY POSSIBILITIES

Thanks to its smart interfaces, the DMR can be supplemented with a wide choice of fittings and accessories that you can freely select. The various application types, ranging from foot-mounted hoists to double-rail crabs, can be implemented to meet specific customer requirements. With its unmatched level of modularity, the DMR makes it much easier to implement more rope hoist variants than ever before.



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**C-design**



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**Co-axial design**



41469

**F-DMR foot-mounted hoist**



41467

**EK-DMR  
low-headroom  
monorail hoist**



41468

**EZ-DMR  
double-rail trolley**

#### **YOU HAVE A CHOICE OF:**

- Designs: C-design, co-axial design
- Five sizes with load capacities up to 50 tons
- Application types: foot-mounted hoist, low-headroom monorail hoist, double-rail crab, standard-headroom monorail hoist
- Controls: smart, conventional or provided by the customer
- Drive concept: stepless or two-stage
- Control concept precisely to meet your needs: wire-connected or by radio
- Many safety and control functions that can be additionally selected



Our modular design also enables us to offer you exactly the control system that you need for your Demag DMR rope hoist. Choose between three control solutions. If required, we can already prepare your equipment for future production and logistics processes: innovative control systems turn your rope hoist into a smart solution for maximum transparency, safety and reliability.

#### **CONVENTIONAL CONTACTOR CONTROL**

DMR modular rope hoists already provide for reliable operation with tried-and-tested contactor control. Contactor control can be easily maintained and is available with various control voltages.

#### **CUSTOMER'S OWN CONTROL SYSTEM**

The DMR rope hoist is also prepared for controls provided by the customer, which you can simply integrate via plug & play. If required, you can also receive the Demag electric enclosure with various cable unions for your solution.

## **Smart solutions for tomorrow's needs**



## SAFECONTROL SMART CONTROL SYSTEM

High operating safety and reliability and efficient production – Demag SafeControl meets all requirements for optimum support of state-of-the-art manufacturing and logistics processes. Thanks to its wide range of applications, it already enables networked production in today's production environment and paves the way by offering many additional safety functions and various

function extensions, which can be activated individually. The integrated Demag SmartCheck sensor system continuously detects all of the rope hoist's operating parameters and reports them to the control system: from information on speed to brake wear. Precise overload protection is, of course, fitted as standard.



### Slack-rope monitoring

The tension of the rope can be continuously monitored. The hoist drive automatically switches off when the load has been lowered to its destination.



### By-pass control

Areas to be blocked for the travelling hoist can be specified. In this way, you can safely by-pass high parts of machinery or zones that are out of bounds.



### Tandem mode

Loads can be safely transported by two DMR rope hoists via a single control unit. Two cranes with up to four rope hoists can also be synchronised.



### Area-specific load reduction

Areas can be defined which the travelling hoist may only enter if the load does not exceed a reference value. This reduces the load on the runway and building structure – especially when two or more cranes operate on one runway.



### Remote diagnosis in real time

Keep an overview of all DMR rope hoists at any time – even if you are away on a business trip. Our innovative Demag StatusControl remote access system supplies all relevant operating data in real time, analyses them and processes them for direct access – also for your mobile device. Using this system, you can schedule maintenance work, as required. Demag StatusControl also enables you to monitor complete crane systems in various production facilities and at different locations – regardless of the brand.



### Target positioning

Loads can be automatically transported to a selected target position as long as the crane operator presses the corresponding button on the radio control.

**Examples of smart solutions with Demag SafeControl. Further options are available.**



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### Two basic designs

- C-design and co-axial design
- Same connection dimensions and interfaces
- Identical rope reeving system (rope drum, ropes, reeving components and bottom blocks)
- Identical electric components

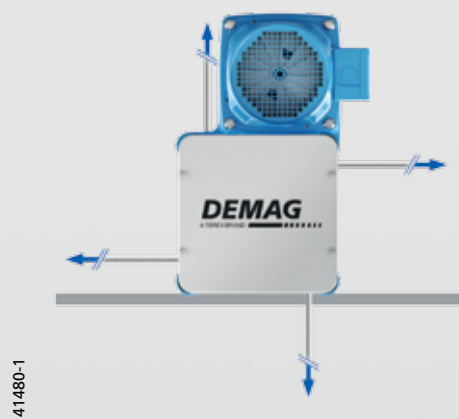
### F-DMR foot-mounted hoist

- Ideal for stationary applications or for special crabs
- Reeving parts for all common reeving arrangements are fitted to the hoist unit – enabling foot hoists to be integrated direct into prepared steel structures or special crabs
- Can be used in 4 mounting positions, each with one rope lead-off direction
- Can be attached on 4 sides

## Variable and specific

The modular design of the Demag DMR modular rope hoist enables it to be used for a wide range of applications – either as a simple hoist unit or as part of a crane. Select the right model for your needs from five application types – regardless of the specific design. Other application types are also possible in C-design and co-axial design – please contact us to discuss your requirements.

## Mounting variants and rope lead-offs



## Load bar operation







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#### **EK-DMR low-headroom monorail hoist**

- C-design for compact overall dimensions and reduced approach dimensions for crane applications
- Infinitely variable cross-travel speeds for low sway and gentle positioning (optional two-stage travel speeds)
- Cross-travel inverter and braking resistor integrated in the electric enclosure to save space
- Infinitely variable flange width adjustment from 120 – 420mm
- Best possible traction with DualDrive and DualDrive Plus (optional)

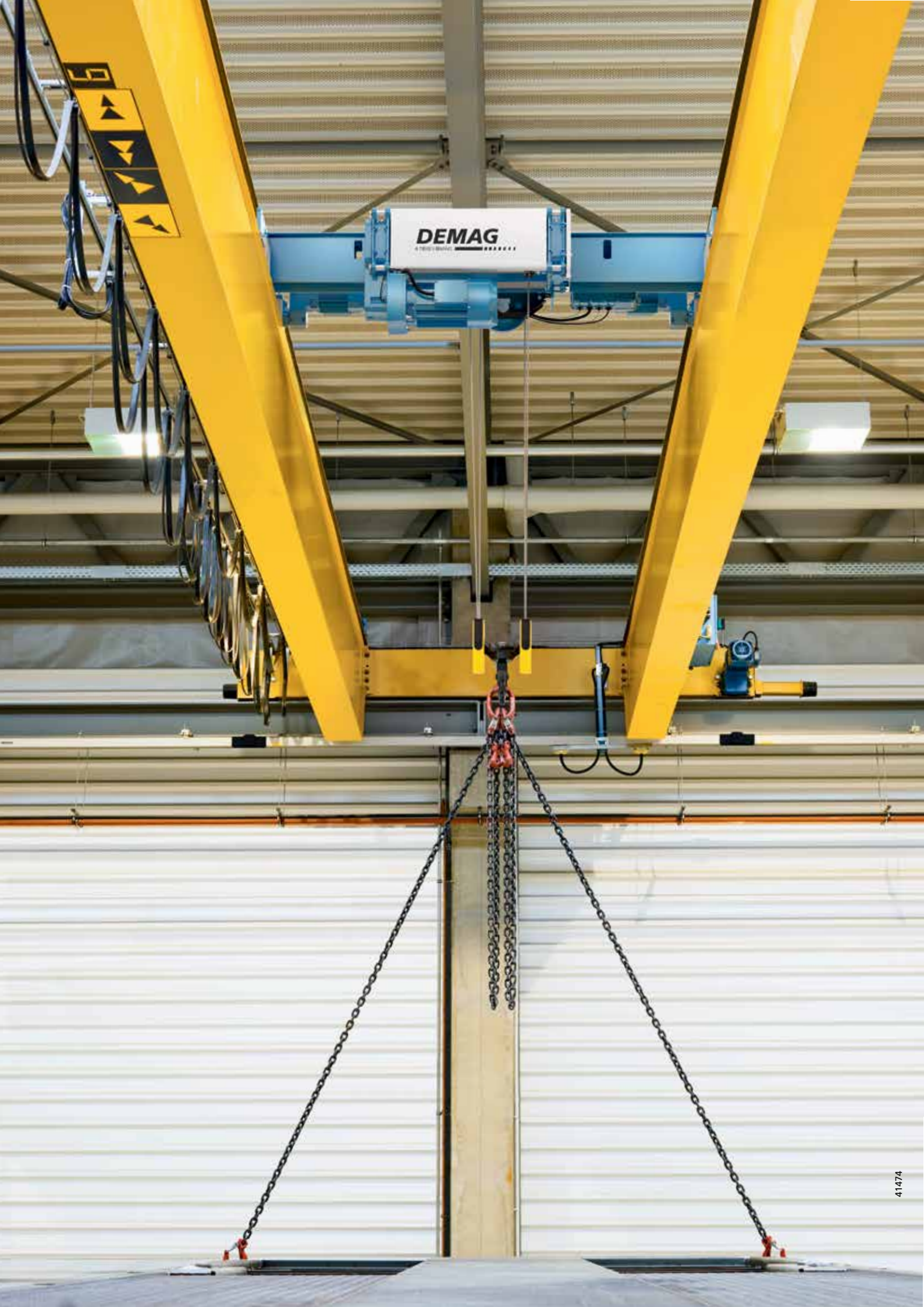


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#### **EZ-DMR double-rail crab**

- Standard track gauges up to 3,550 mm, special track gauges possible
- Anti-derailment protection for improved safety as standard
- Design featuring optimised headroom dimensions
- Small approach dimensions
- Four-wheel trolley fitted with proven Demag travel units (DRS wheel block system with 2 offset geared motors)
- Very good accessibility for service work





# Innovative and cost-effective

The Demag DMR modular rope hoist not only demonstrates its versatility in a wide variety of applications, but also boasts impressive technical details: many innovative features provide for reliability, rugged design and cost-effective operation.

## Efficient oil lubrication

- Gearbox has efficient oil lubrication for 10 years
- Protection against external factors thanks to enclosed design
- Eco-friendly since 30 per cent less oil is needed

## All-round protection

- Two-piece cover for rope drum
- Vertical for all rope hoists
- Horizontal cover as an option

## Protective rope guide

- Made of tough, acid-resistant plastic
- Inclined pull up to 4° without touching the rope guide

## Shock-absorbing coupling

- Coupling between gearbox and motor
- Motor impacts cushioned for longer service life
- Simple rotary encoder retrofit

## Variable arrangement

- Two possible mounting positions for the hoist control box

## Low-vibration and quiet operation

- High-performance hoist motor with optimised motor design
- Precise lifting and lowering
- Cylindrical-rotor motor or F10 creep lifting motor (for co-axial design)
- Also available with frequency inverter
- Plug-and-socket connections for all cables (plug and play)





### Controls to meet your needs

- High-performance DRC D3 radio control (depending on the control type)
- Ergonomic DSE-10R control pendant (for SafeControl)
- Proven DST control pendant (for contactor control)



### Precise cross-travel positioning

- Frequency inverter-controlled cross-travel motors as standard (for SafeControl)
- Variable speeds from 3 to 30 m/min (with frequency inverter)

### High traction with low wear

- Choose between single-wheel drive or DualDrive with two driven wheels
- Minimum drive noise
- Prepared for second travel drive (DualDrive Plus)
- Reduced wear and drive concept for long service life

### Quiet operation that is gentle to the runway

- High-strength travel wheels and guide rollers for long service life

### Travel concept to meet your needs

- Light-weight trolley with pressure rollers
- Alternatively: with counterweights

### Optimised rope sheaves

- Larger rope sheaves – in the top and bottom blocks – minimise rope wear also over longer periods at standstill

### Light-weight housing

- Deadweight reduced by 50 per cent for sizes 3, 5, 10 and 16
- High-quality corrosion protection (powder coating) also for applications in aggressive environments

### High safety and reliability

- Ergonomic bottom block with hand guard made of two moving plastic elements
- Two-piece rope lead-in guard facilitates rapid replacement without the need to remove the rope
- Two handle recesses make it easier to handle and guide the bottom block



**Options tailored to your needs**



Not only the basic version of the Demag DMR modular rope hoist can be precisely tailored to meet the customer's needs. Thanks to many additional options, the DMR offers an impressive range of EVEN MORE additional functions.

#### **EVEN BETTER efficiency:**

##### **Hoist inverter and ProHub**

A hoist inverter offers optimum utilisation of the motor's output and enables you to position loads even more accurately thanks to variable speed control. An absolute boost for handling: the Pro-Hub function with inverter control regulates the lifting speed depending on the current load. In this way, the lifting speed can be increased by 50 per cent for loads that weigh up to 30 per cent of the rated load capacity.

#### **EVEN BETTER traction:**

##### **DualDrive / DualDrive Plus**

Achieve even better traction for travelling hoist units – for example for outdoor applications. Our DualDrive unit drives two wheels at the same time. The additional “plus” offered by the system: thanks to its predefined mounting position, a second travel drive can be installed quickly and easily.

#### **EVEN MORE flexibility:**

##### **DRC D3 radio control**

The high-performance DRC D3 radio control system has a long transmitter range and allows up to 40 radio systems to be operated in close proximity to each other. Up to 3 transmitters can be paired with the system as a precautionary measure – and control can be transferred at the press of a button. Integrated power management and rechargeable batteries enable uninterrupted operation for up to five days.

#### **EVEN BETTER overview:**

##### **Demag StatusBoard**

The entire lifting operation at a glance: Demag StatusBoard not only informs you about the weight of the current load, but also shows the system status and other operating data. The colour display shows information on multiple lines and can also be easily read at a longer distance.

#### **EVEN BETTER accuracy:**

##### **F10 mechanical microspeed unit**

You can position loads even more accurately with the mechanical creep lifting motion of the F10 drive that is used in the co-axial design. The drive consists of two separate conical-rotor motors for the main and creep lifting motions. The motors offer outstanding braking capacity as well as automatic braking if the power drops or the motor is switched off.





## Simple and online

It could not be easier to find the Demag modular rope hoist to meet your specific needs: configure a rope hoist that matches your requirements simply and easily online with the Demag Designer-Portal at [www.demag-designer.com](http://www.demag-designer.com).



Configuration start page



Product selection



Product result

## FLEXIBLE CONFIGURATION

Our DMR configurator includes all of the versatility of our product. You have all the choices – regardless of whether you have already decided for the co-axial or C-design. Our web-based configuration tool guides you through selection of the individual parameters and then presents you with a DMR modular rope hoist that is tailored to your needs.

## INTUITIVE INTERFACE

A practical and intuitive user interface ensures that you find the right solution to meet your needs quickly and easily. The DMR configurator also supports you with default basic equipment that is based on many years of Demag expertise in the rope hoist sector. All default settings can, of course, be adjusted to match your preferences throughout the further configuration.

## ORDER DIRECT

When you have configured your DMR rope hoist, you can also conveniently order it straight away via Demag Shop at [www.demag-shop.com](http://www.demag-shop.com).

## YOUR BENEFITS:

- Select your DMR modular rope hoist step by step at [www.demag-designer.com](http://www.demag-designer.com)
- Individual selection of all variants
- Save your configuration
- **Immediate results:**
  - Product description and technical data
  - CAD geometry data configured in 2D or 3D
  - Circuit diagrams
  - Documentation
  - Delivery time details
- Simply order at [www.demag-shop.com](http://www.demag-shop.com)



## Reliable engineering

We focus on our customers' individual requirements and have been a leading supplier of rope hoists for the crane sector and engineering applications for many years. The Demag brand stands for innovation, absolute reliability, many years of expertise and first-class service.

### INNOVATION

As a leader in innovation, our primary objective is to satisfy our customers' requirements even better. For this reason, we continuously work on improving our rope hoists and developing outstanding products for you. With our new Demag DMR modular rope hoist, we have raised our customer focus to a new level.

### RELIABILITY

Our customers can concentrate fully on their core business – since they have the certainty that their rope hoists operate reliably. Demag rope hoists are renowned for their high handling rates, cost-effective operation and high levels of safety all over the world.





## **EXPERIENCE**

You can rely on us as your partner with many years of experience in rope hoist manufacturing. Thanks to our innovative ideas and pioneering approach, we already paved the way for an increasingly digitalised industry many years ago and continue to drive this technology to meet the needs of the future.

## **SERVICE**

We offer our customers a wide range of valuable services to cover the entire life cycle of their rope hoists. Everything from a single source. Thanks to our global service network, our highly trained service teams can look after our customers' needs direct at their premises and without delay. Our highly efficient spare parts logistics system ensures quick deliveries if service work is necessary and prevents lengthy downtimes.

# Technical data – selection criteria to FEM/ISO

## The size of the hoist is determined by:

- the load spectrum
- the average operating time
- the load capacity and
- the reeving arrangement

1. What are the operating conditions?
2. What is the specified safe working load?
3. To what height must the load be lifted?
4. What is the required lifting speed?
5. Do loads need to be lifted and lowered with great accuracy?
6. Is horizontal load travel necessary?
7. How is the hoist to be controlled?

The group is determined from the operating time and load spectrum.

Load spectrum				Average operating time per working day/h					
1	Light			1-2	2-4	4-8	8-16	> 16	
2	Medium			0.5-1	1-2	2-4	4-8	8-16	
3	Heavy			0.25-0.5	0.5-1	1-2	2-4	4-8	
4	Very heavy			0.12-0.25	0.25-0.5	0.5-1	1-2	2-4	
Group of mechanisms				1Bm	1Am	2m	3m	4m	
Reeving arrangement									
2/1	4/1	6/1	8/1						
4/2	8/2	12/2							
Load capacity [t]				Size					
1	2	–	–	–	–	–	–	–	
1.25	2.5	–	–	–	–	–	–	–	
1.6	3.2	–	–	–	–	–	–	–	
2	4	–	–	DMR 3	–	–	–	–	
2.5	5	–	–	–	–	–	–	–	
3.2	6.3	–	–	DMR 5	–	–	–	–	
4	8	–	–	–	–	–	–	–	
5	10	–	–	–	–	–	–	–	
6.3	12.5	–	–	DMR 10	–	–	–	–	
–	16	16	20	DMR 16*	–	–	–	–	
–	–	20	25	–	–	–	–	–	
10	20	32	40	–	–	–	–	–	
12.5	25	40	50	DMR 20	–	–	–	–	

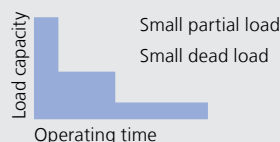
\* 2m / 16 t = 6/1; 1Bm / 16 t = 4/1

## THE LOAD SPECTRUM

(in most cases estimated) can be evaluated according to the definitions below:

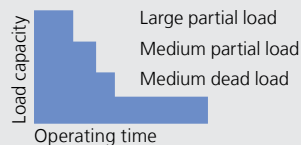
### 1: Light

Hoist units which are usually subject to very small loads and only in exceptional cases to maximum loads.



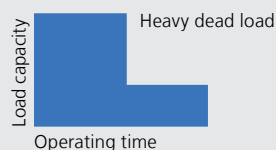
### 2: Medium

Hoist units which are usually subject to small loads but often to maximum loads.



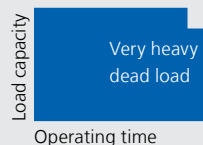
### 3: Heavy

Hoist units which are usually subject to medium loads but frequently to maximum loads.



### 4: Very heavy

Hoist units which are usually subject to maximum or almost maximum loads.



## Example:

Load capacity	5 t
Load spectrum	"Medium" from table
Lifting speed	6 m/min
Lifting speed	1 m/min
Reeving	4/1
Average hook path	3 m
No. of cycles/hour	20
Working time/day	8 hours

## Example for calculation to FEM/ISO

The average operating time per working day is estimated or calculated as follows:

$$\text{Operating time/day} = \frac{2 \times \text{average hook path} \times \text{no. of cycles/h} \times \text{working time/day}}{60 \times \text{lifting speed}}$$

$$\text{Operating time/day} = \frac{2 \times 3 \times 20 \times 8}{60 \times 6} = 2.66 \text{ hours}$$

For the medium load spectrum and an average daily operating time of 2.66 hours, the table shows group 2 m. For a load capacity of 5 t and 4/1 rope reeving, the table indicates hoist size DMR 5–5.

# Selection table

Range	Load capacity	Hook path	Lifting speed			Group of mechanisms	Range	Load capacity	Hook path	Lifting speed			Group of mechanisms	
			[m/min]							[m/min]				
			2-stage	Stepless	ProHub*					[FEM / ISO]	2-stage	Stepless		ProHub*
DMR 3	2/1						DMR 20	2/1						
	1	12 20 30	1.4/8	0.32 - 6.4	9.6	4m/M7		6.3	20 30 40 54	1.4/8	0.32 - 6.4 0.64 - 12.5 0.8 - 16	9.6 19 24	4m/M7	
	1.25		2/12	0.64 - 12.5	19	3m/M6		8		2/12			3m/M6	
	1.6		2.6/16	1-25	38	2m/M5		10		2.6/16			2m/M5	
	2		1.4/8	0.32 - 6.4	9.6	1Am/M4		12.5		1/6 1.4/8 2/12			1Am/M4	
	4/1							4/2						
	2	6 10 15	0.7/4	0.16 - 3.2	4.8	4m/M7		6.3	7.6 14.6 21.6 31.3	1.4/8	0.32 - 6.4 0.64 - 12.5 0.8 - 16	9.6 19 24	4m/M7	
	2.5		1/6	0.32 - 6.4	9.6	3m/M6		8		2/12			3m/M6	
	3.2		1.3/8	0.5 - 12.5	19	2m/M5		10		2.6/16			2m/M5	
	4		0.7/4	0.16 - 3.2	4.8	1Am/M4		12.5		1/6 1.4/8			1Am/M4	
DMR 5	2/1						DMR 20	4/1						
	1.6	12 20 30	1.4/8	0.32 - 6.4	9.6	4m/M7		12.5	10 15 20 27	0.7/4	0.16 - 3.2 0.32 - 6.4 0.4 - 8	4.8 9.6 12	4m/M7	
	2		2/12	0.64 - 12.5	19	3m/M6		16		1/6			3m/M6	
	2.5		2.6/16	1 - 25	38	2m/M5		20		1.3/8			2m/M5	
	3.2		1.4/8	0.32 - 6.4	9.6	1Am/M4		25		0.5/3 0.7/4 1/6			1Am/M4	
	4/2							8/2						
	1.6	9.9 16.3	1.4/8	0.32 - 6.4	9.6	4m/M7		12.5	7.8 11.3 16.1 27.1	0.7/4	0.16 - 3.2 0.32 - 6.4 0.4 - 8	4.8 9.6 12	4m/M7	
	2		2/12	0.64 - 12.5	19	3m/M6		16		1/6			3m/M6	
	2.5		2.6/16	1 - 25	38	2m/M5		20		1.3/8			2m/M5	
	3.2		1.4/8	0.32 - 6.4	9.6	1Am/M4		25		0.5/3 0.7/4 1/6			1Am/M4	
4/1						6/1								
3.2	6 10 15	0.7/4	0.16 - 3.2	4.8	4m/M7	20	6.7 10 13.3 18	0.7/4	0.22 - 4.3 0.26 - 5.3	6.4 8	4m/M7			
4		1/6	0.32 - 6.4	9.6	3m/M6	25		0.9/5.3			3m/M6			
5		1.3/8	0.5 - 12.5	19	2m/M5	32		0.7/4			2m/M5			
6.3		0.7/4	0.16 - 3.2	4.8	1Am/M4	40		0.7/4			1Am/M4			
DMR 10	2/1						DMR 20	12/2						
	3.2	12 20 30 40	1.4/8	0.32 - 6.4	9.6	4m/M7		20	8 11.2 18	0.7/4	0.22 - 4.3 0.26 - 5.3	6.4 8	4m/M7	
	4		2/12	0.64 - 12.5	19	3m/M6		25		0.9/5.3			3m/M6	
	5		2.6/16	1 - 25	38	2m/M5		32		0.7/4			2m/M5	
	6.3		1.4/8	0.32 - 6.4	9.6	1Am/M4		40		0.7/4			1Am/M4	
	4/2							8/1						
	3.2	5.8 11.35 18.4 25.2	1.4/8	0.32 - 6.4	9.6	4m/M7		25	7.5 10 13.5 21.3	0.7/4	0.16 - 3.2 0.2 - 4	4.8 6	4m/M7	
	4		2/12	0.64 - 12.5	19	3m/M6		32		0.9/5.3			3m/M6	
	5		2.6/16	1 - 25	38	2m/M5		40		0.7/4			2m/M5	
	6.3		1.4/8	0.32 - 6.4	9.6	1Am/M4		50		0.5/3			1Am/M4	
4/1														
6.3	6 10 15 20	0.7/4	0.16 - 3.2	4.8	4m/M7	25	7.5 10 13.5 21.3	0.5/3	0.16 - 3.2 0.2 - 4	4.8 6	4m/M7			
8		1/6	0.32 - 6.4	9.6	3m/M6	32		0.7/4			3m/M6			
10		1.3/8	0.5 - 12.5	19	2m/M5	40		0.5/3			2m/M5			
12.5		0.7/4	0.16 - 3.2	4.8	1Am/M4	50		0.5/3			1Am/M4			
DMR 16	4/1						DMR 20	6/1						
	16	6 10 15 20	0.7/4	0.16 - 3.2	4.8	1Bm/M3		25	7.5 10 13.5 21.3	0.5/3	0.16 - 3.2 0.2 - 4	4.8 6	4m/M7	
								32		0.7/4			3m/M6	
								40		0.9/5.3			2m/M5	
								50		0.5/3			1Am/M4	
6/1														
12.5	6.7 13.3	0.7/4	0.22 - 4.3	6.4	3m/M6									
16		0.9/5.3	0.32 - 8.3	12.6	2m/M5									

\* ProHub: 50 % higher lifting speed for up to 30 % of rated load capacity.





## TEREX MATERIAL HANDLING

Terex MHPS GmbH is one of the world's leading suppliers of crane technology with Demag industrial cranes and crane components. The core competence of the Terex Material Handling business group lies in the development, design and production of technically sophisticated cranes, hoists and components and the provision of sales support and services for these products. Terex Material Handling manufactures at 19 locations on five continents and reaches its customers thanks to its presence in more than 60 countries.

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