

A close-up photograph of a black, curved metal component, likely part of a crane or lifting mechanism. The component features the DEMAG logo in white, which includes the word "DEMAG" in a bold, sans-serif font above a horizontal line and a series of small white dots. Below the logo are two yellow safety symbols: a triangular warning symbol with a lightning bolt and a hexagonal symbol with the letters "Ex". The background is dark and out of focus, with a blue light source creating a bright highlight on the top edge of the component.

DEMAG

Safe processes

**Explosion-protected
lifting technology**

DEMAG





Safety thanks to proven Demag quality

With our large portfolio of wire rope hoists, we offer the best possible solution for the specific requirements of our customers. This also includes solutions for lifting technology in explosive environments.

Demag stands for uncompromising quality. Our name is synonymous with maximum safety, reliability and innovation. Based on our brand promise "Committed to performance", we provide our customers with smooth processes, maximum efficiency and best results. And have done since 1819.



Potentially explosive environments

Certified explosion protection

Wherever dusts and gases occur in production and operation, we ensure the highest possible safety with certified crane components. For your employees, loads, machines and the environment.

DEMAG STANDS FOR UNCOMPROMISING QUALITY

Our Ex hoists meet the highest safety standards. They comply with EU directive 2014/34/EU (ATEX) and all related European safety standards (EN).

Our product portfolio ranges from DXR rope hoists to crane sets - our customised component packages for crane installations. Thus our product portfolio covers zones 1 and 2 as well as 21 and 22 as required and is therefore a reliable partner for all relevant industries and application areas.

Industries and zones

Classification of the ATEX zones

Explosion hazard areas for gases and dusts are divided into zones whose classification depends on two parameters:

- the type of fuel (dust or gas) that may be present
- the frequency or duration with which an explosive atmosphere may occur.

GAS

- Chemical industry
- Refineries
- Power supply
- Paint shops
- Pharmaceutical industry
- Wastewater treatment
- Distilleries
- Production plants

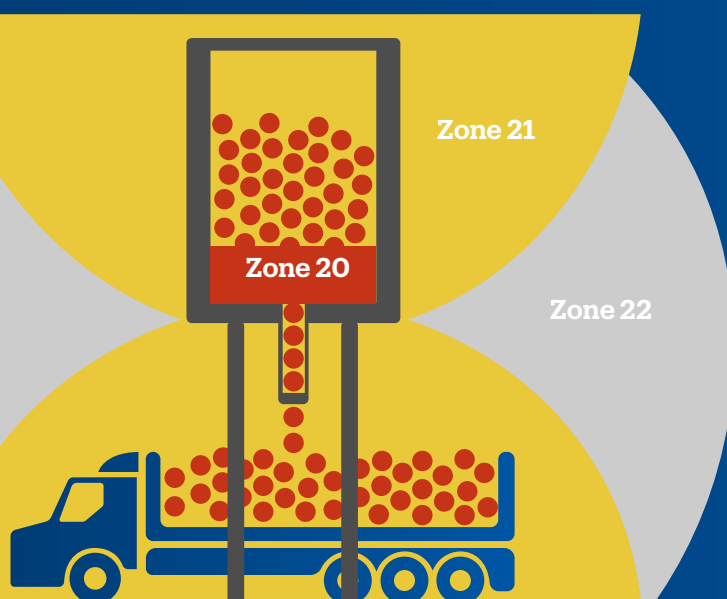
DUST

- Silo facilities
- Mills
- Wood processing
- Grinding mills
- Feed plants
- Bulk material
- Synthetic fibre production

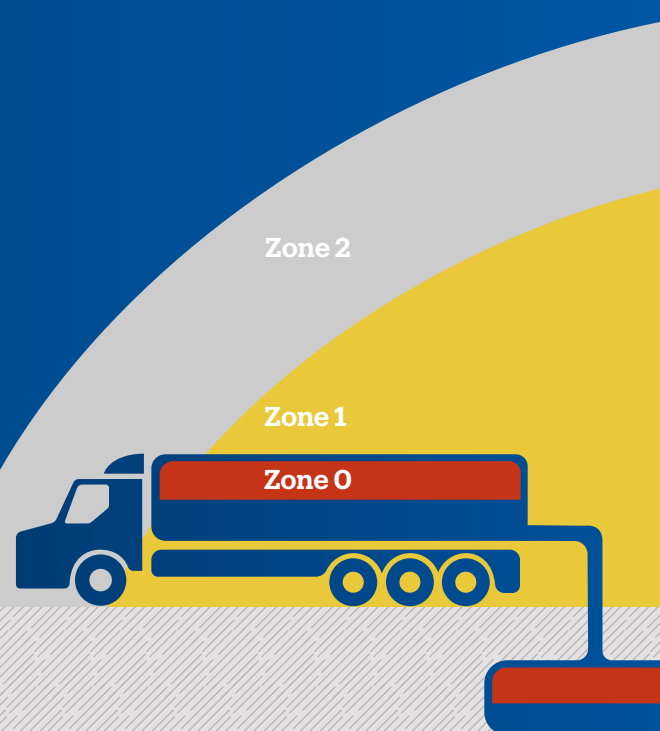
Classification of explosive atmospheres into three zones.

- Zone 0/20 - explosive atmosphere is present continuously or for long periods or frequently.
- Zone 1/21 - explosive atmosphere is likely to occur in normal operation occasionally.
- Zone 2/22 - explosive atmosphere is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

Dusts



Gases

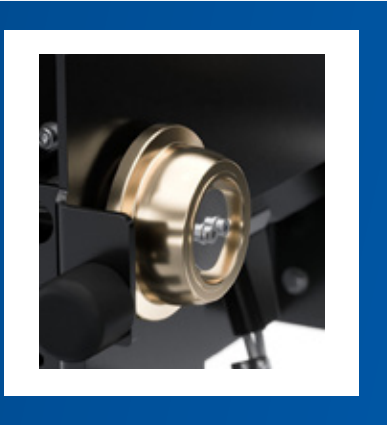


Explosion protection in detail

The Demag DXR rope hoist convinces with safety features and with load capacities up to 80 t.

EXPLOSION-PROOF ELECTRIC ROPE HOIST IN SERIES

- Compact design for optimal use of space



RELIABLE

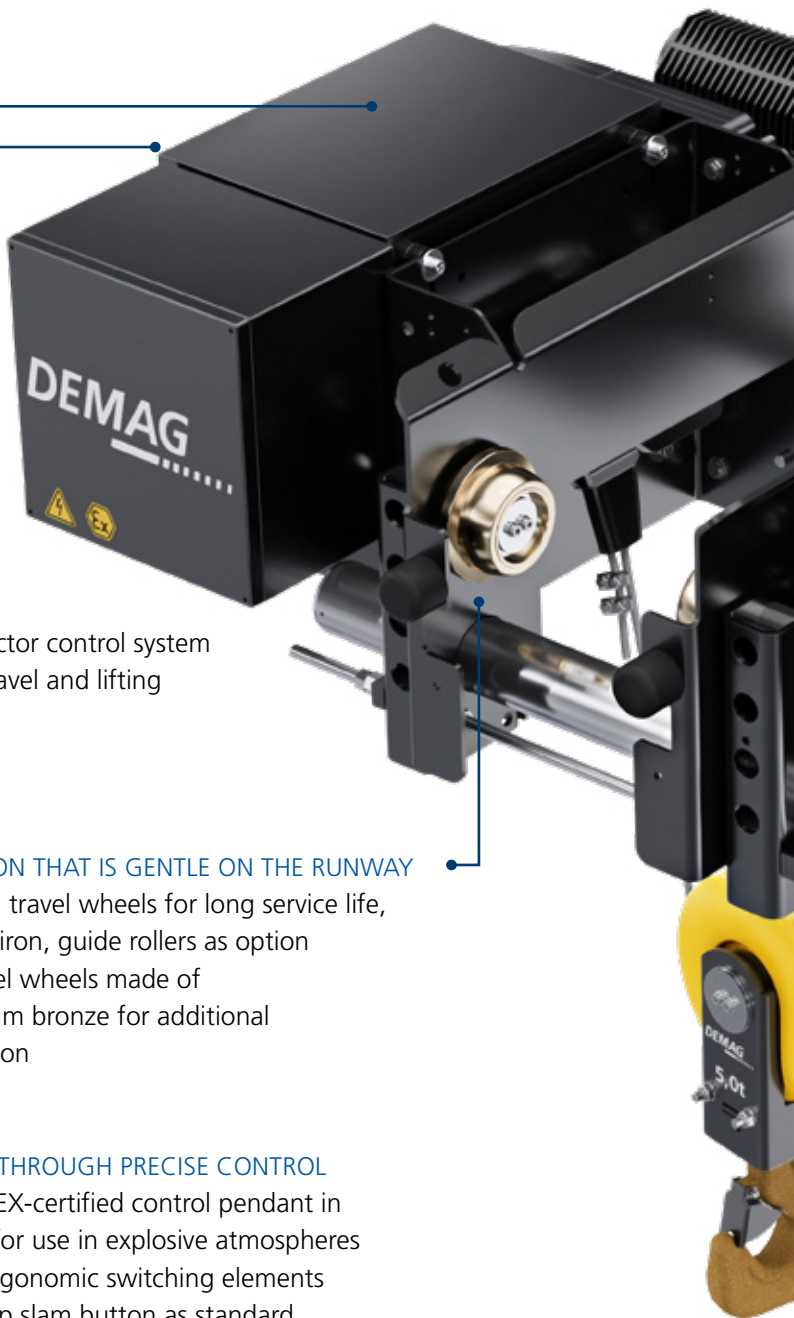
- Robust contactor control system for 2-stage travel and lifting

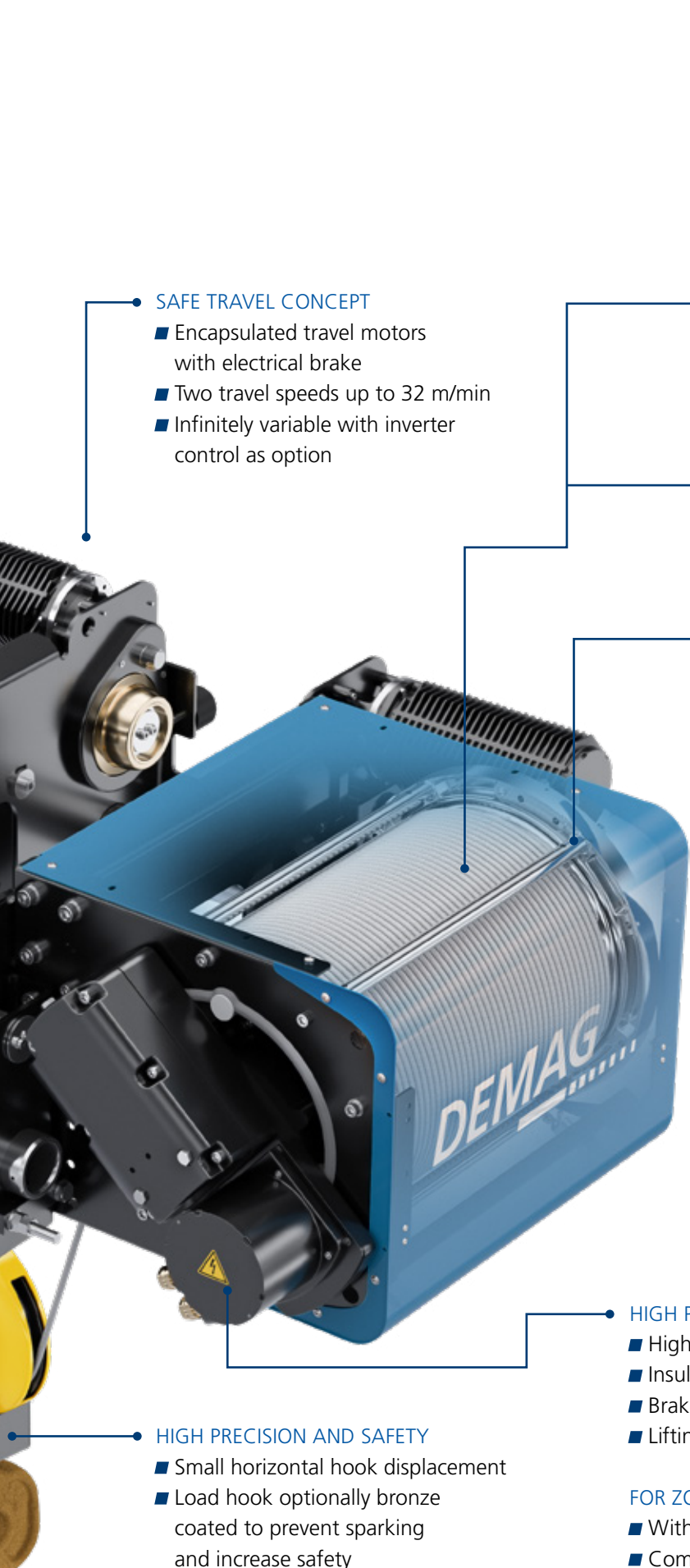
QUIET OPERATION THAT IS GENTLE ON THE RUNWAY

- High-strength travel wheels for long service life, made of cast iron, guide rollers as option
- Optional travel wheels made of solid aluminium bronze for additional spark protection

LOAD CONTROL THROUGH PRECISE CONTROL

- Proven and ATEX-certified control pendant in robust design for use in explosive atmospheres
- Smooth and ergonomic switching elements
- Emergency-stop slam button as standard





SAFE TRAVEL CONCEPT

- Encapsulated travel motors with electrical brake
- Two travel speeds up to 32 m/min
- Infinitely variable with inverter control as option

VERSATILE ROPE REEVINGS

- Single reeved rope drives 2/1, 4/1 up to DXR 20
- Single reeved rope drives 6/1 and 8/1 up to DXR 20

TRUE VERTICAL LIFT

- True vertical lift reeving standard on DXR 40
- Optional on DXR 10 and 20

DURABLE ROPE GUIDE

- Precise rope guidance that is gentle on the material
- Optional rope pressure roller



HIGH PRECISION AND SAFETY

- Small horizontal hook displacement
- Load hook optionally bronze coated to prevent sparking and increase safety

HIGH PRECISION AND SAFETY

- High-performance hoist motor
- Insulation class H, enclosure IP66
- Brake designed for service life
- Lifting speeds: 2-stage up to 16 m/min

FOR ZONE 1 OR 21

- With pressure-resistant enclosure
- Completely closed with fan cooling

FOR ZONE 2 OR 22

- Standard "nA" motor (Zone 2)
- Motor "tc" (Zone 22)



Tailor-made for special requirements

STANDARD EQUIPMENT DXR ELECTRIC ROPE HOIST

- Two lifting speeds (6:1)
- Two travel speeds (4:1)
- Lifting and travel overheating protection
- 2-stage hoist limit switch
- Electro-mechanical overload protection
- Elapsed operating time counter
- Hook block readily reeved prior to shipment
- Hook with safety latch
- 360° rotating hook
- Ambient temperature +5°C to +40°C

MOTOR ZONE 1 OR 21

- Completely enclosed, cooled with fan
- PTC Thermistor
- Pressure-resistant enclosure (d)
- Insulation class H, enclosure IP66
- Brake designed for service life

OPTIONAL FEATURES DXR ELECTRIC ROPE HOIST

- Aluminium bronze travel wheels and drop stop
- Bronze coated load hook
- Radio control system
- Service platform
- Second hoist unit brake
- Drum brake
- DIN or double load hook
- Rope pressure roller
- Ambient temperature -20°C or +50°C
- Ambient temperature +55°C on request

MOTOR ZONE 2 OR 22

- Standard "nA" motor (Zone 2)
- Motor "tc" (Zone 22)
- PTC Thermistor
- Insulation class H, enclosure IP66
- Brake designed for service life

DXR - Your safety is our responsibility

F-DXR foot-mounted hoist

Load capacity [kg]	800 - 80,000 kg
Hook path [m]	6 - 98.5
Lifting speed [m/min]	up to 16
Sizes	5, 10, 20, 40



EK-DXR monorail hoist (low-headroom design)

Load capacity [kg]	800 - 12,500 kg
Hook path [m]	6 - 24
Flange width [mm]	100 - 610
Lifting speed [m/min]	up to 16
Sizes	5, 10



EU-DXR standard-headroom monorail-travelling hoist

Load capacity [kg]	800 - 40,000
Hook path [m]	6 - 32
Flange width [mm]	80 - 610
Lifting speed [m/min]	up to 16
Sizes	5, 10, 20, 40



EZ-DXR double-rail crab

Load capacity [kg]	800 - 80,000
Hook path [m]	6 - 98.5
Track gauge [mm]	1200 - 4200
Lifting speed [m/min]	up to 16
Sizes	5, 10, 20, 40



DXR selection table

Size	Load capacity [t]	Hook path [m]		Lifting speed		Group of mechanisms	
				[m/min]		FEM	ISO
DXR 5	2 / 1						
	0.8	12	24	10 / 1.7		3m	M6
	1			8 / 1.3		3m	M6
	1.25			10 / 1.7		2m	M5
	1.6			8 / 1.3		2m	M5
	2	18	30	10 / 1.7		3m	M6
	2.5			8 / 1.3		3m	M6
	4 / 1						
	1.6	6	12	5 / 0.8		3m	M6
	2			4 / 0.7		3m	M6
	2.5			5 / 0.8		2m	M5
	3.2			4 / 0.7		2m	M5
	4			5 / 0.8		3m	M6
	5			4 / 0.7		2m	M5

Size	Load capacity [t]	Hook path [m]		Lifting speed		Group of mechanisms		
				[m/min]		FEM	ISO	
DXR 10	2 / 1							
	3.2	18	24	16 / 2.7		3m	M6	
	4			8 / 1.3 10 / 1.7		3m	M6	
	5			16 / 2.7		2m	M5	
				8 / 1.3 10 / 1.7		2m	M5	
	4 / 1							
	6.3	9	12	8 / 1.3		3m	M6	
	8			4 / 0.7 5 / 0.8		3m	M6	
	10			8 / 1.3		2m	M5	
		4 / 0.7 5 / 0.8		2m	M5			
	6 / 1							
	12.5	6	8	5 / 0.8		2m	M5	
	15			2.5 / 0.4 3.2 / 0.5		2m	M5	
	8 / 1							
	20	4	5	6	8	10	2 / 0.3 2.5 / 0.4 4 / 0.7	1Am M4
	4 / 2							
	3.2	8.5	13	18	8 / 1.3 10 / 1.7 16 / 2.7		3m	M6
	4				8 / 1.3 10 / 1.7		3m	M6
	5				16 / 2.7		2m	M5
					8 / 1.3 10 / 1.7		2m	M5
	6	16 / 2.7		1Am	M4			
	8 / 2							
	6.3	4	6.5	9	4 / 0.7 5 / 0.8 8 / 1.3		3m	M6
	8				4 / 0.7 5 / 0.8		3m	M6
8 / 1.3					2m	M5		
10	4 / 0.7 5 / 0.8		2m	M5				
	8 / 1.3		1Am	M4				
12 / 2								
12.5	4	6	8	2.5 / 0.4 3.2 / 0.5		3m	M6	
15				5 / 0.8		2m	M5	
				2.5 / 0.4 3.2 / 0.5		2m	M5	
16 / 2								
20	4.5	6	8	11.5	2 / 0.3 2.5 / 0.4 4 / 0.7	1Am M4		

Size	Load capacity		Hook path		Lifting speed		Group of mechanisms		
	[t]	[m]	[m]	[m]	[m/min]	[m/min]	FEM	ISO	
2 / 1									
6.3	15.5	47	8 / 1.3		3m	M6			
			21	61	10 / 1.7		2m	M5	
8	28	80.5	8 / 1.3		2m	M5			
			36	97	10 / 1.7		1Am	M4	
10			8 / 1.3		1Am	M4			
4 / 1									
12.5	7.5	23.5	4 / 0.7		3m	M6			
			10.5	30.5	5 / 0.8		2m	M5	
16	14	40	4 / 0.7		2m	M5			
			18	48.5	5 / 0.8		1Am	M4	
20			4 / 0.7		1Am	M4			
6 / 1									
20	5	15.5	2.5 / 0.4		3m	M6			
			7	20	3.2 / 0.5		2m	M5	
25	9	26.5	2.5 / 0.4		2m	M5			
			12	32	3.2 / 0.5		1Am	M4	
30			2.5 / 0.4		1Am	M4			
8 / 1									
25	7	15	2 / 0.3		2.5 / 0.4	2m	M5		
			9	20	2 / 0.3		2m	M5	
32	11.5	24	2.5 / 0.4		1Am	M4			
			40		2 / 0.3		1Am	M4	
4 / 2									
8	15	63.5	8 / 1.3		2m	M5			
			21	77	10 / 1.7		1Am	M4	
10	28.5	87	8 / 1.3		1Am	M4			
			38	98.5					
51.5									
8 / 2									
12.5	7.5	31.5	4 / 0.7		3m	M6			
			10.5	38.5	5 / 0.8		2m	M5	
16	14	43.5	4 / 0.7		2m	M5			
			19	49	5 / 0.8		1Am	M4	
20	25.5		4 / 0.7		1Am	M4			
12 / 2									
20	5	21	2.5 / 0.4		3m	M6			
			7	25.5	3.2 / 0.5		2m	M5	
25	9.5	28.5	2.5 / 0.4		2m	M5			
			12.5	32.5	3.2 / 0.5		1Am	M4	
30	17		2.5 / 0.4		1Am	M4			
16 / 2									
25	5	15.5	2 / 0.3		2.5 / 0.4	2m	M5		
			7	19	2 / 0.3		2m	M5	
32	9.5	21.5	2.5 / 0.4		1Am	M4			
			12.5	24.5	2 / 0.3		1Am	M4	
40									

DXR 20

Size	Load capacity		Hook path		Lifting speed		Group of mechanisms		
	[t]	[m]	[m]	[m]	[m/min]	[m/min]	FEM	ISO	
4 / 2									
12.5	15.5	46	8 / 1.3		3m	M6			
			20.5	55.5	10 / 1.7		2m	M5	
16	27.5	62.5	8 / 1.3		2m	M5			
			37.5	71	10 / 1.7		1Am	M4	
20			8 / 1.3		1Am	M4			
8 / 2									
25	7.5	23	4 / 0.7		3m	M6			
			10	27.5	5 / 0.8		2m	M5	
32	13.5	31	4 / 0.7		2m	M5			
			18.5	35.5	5 / 0.8		1Am	M4	
40			4 / 0.7		1Am	M4			
12 / 2									
40	5	15	2.5 / 0.4		3m	M6			
			6.5	18.5	3.2 / 0.5		2m	M5	
50	9	20.5	2.5 / 0.4		2m	M5			
			12.5	23.5	3.2 / 0.5		1Am	M4	
60			2.5 / 0.4		1Am	M4			
16 / 2									
50	6.5	13.5	2 / 0.3		2.5 / 0.4	2m	M5		
			9	15.5	2 / 0.3		2m	M5	
63	11	17.5	2.5 / 0.4		1Am	M4			
			80		2 / 0.3		1Am	M4	

DXR 40



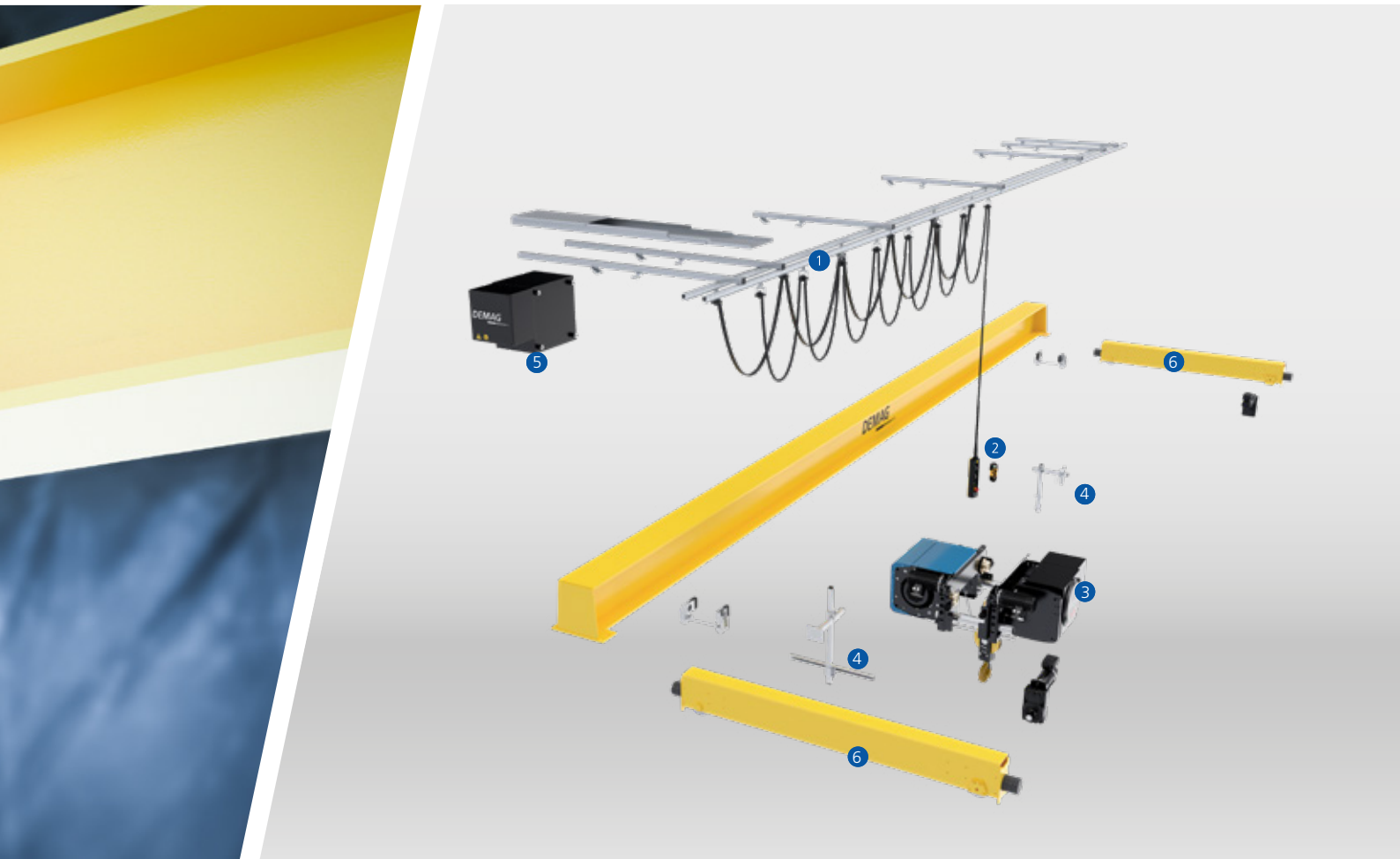
Crane sets

Standardised components - for individual applications

- High level of safety and reliability
One-stop-shopping principle: All components from a single source ensure reliable and safe interaction
- Low assembly time
Matched, pre-assembled and pre-wired components
- Versatile designs
Sophisticated component base consisting of standardised components, planning support and configuration by CraneExpert software

CRANE COMPONENTS FOR LOAD CAPACITIES UP TO 80 T

- DXR Crane sets contain all components required for the construction of an Ex crane, except for the crane bridge. Flat cable power supplies are pre-assembled.
- DXR Crane set end carriage
- Pre-assembled electrics
- EU Declaration of Conformity



DXR CRANE SET

- 1 Cross-travel power supply
- 2 Control pendant with emergency off
- 3 DXR rope hoist
- 4 Long/cross-travel limit switches
- 5 Crane control cabinet
- 6 End carriage with travel drive

OPTIONAL FEATURES

- Radio control system
- Anti-collision devices
- Anti-condensation heating
- Spark-proof features
- Warning indication for travelling movement
- Inverter control (Long and cross travel)
- Crane lighting
- Horn
- Signal lamp

Demag components

Benefit from our comprehensive range

MAIN SWITCH/SAFETY SWITCH

- Safety switch for disconnecting the electrical power supply from installations in explosion hazard areas during cleaning and repair work
- Approved for use in explosion hazard areas for selected zones

TERMINAL BOXES

- Explosion-protected equipment for stationary installation
- Safe distribution of electrical energy in explosion hazard areas
- Housing in various sizes

END CARRIAGES AND TRAVEL DRIVES

- Numerous design variants of end carriages and travel drives for operation in explosive atmospheres
- Enable the coordination of new installations as well as modernisations according to requirements
- Easily integrated single and double girder overhead travelling cranes as tailor-made individualists

CRANE LIGHTING

- Increased safety during crane operation due to good illumination
- Explosion-protected designs enable illumination of surfaces, working areas and objects indoors and outdoors
- Stationary mounted, approved for selected zones

SIGNAL LAMP AND HORN

- Ex signal lamp and Ex horn increase safety during crane and crab operation through optical and acoustic marking of various system states
- Support in avoiding accidents: signal to the crane operator, for example, an overload or activation of the radio control system
- Optimum individualisation of the signal lamp to the respective requirements through different light modes and colour caps
- Audible horn according to selected zones
- Protection against mechanical damage and external influences through robust housing of the compact and encapsulated EX components - including first-class corrosion protection



Excellent advice – perfect planning

Right from the start of the planning stage, we will apply our expertise to provide you with an innovative crane solution.

WE PLAN – YOU BENEFIT

Project engineering and design work for the crane installation are both simplified and accelerated by the use of our planning tool, which also verifies the plausibility of the data. Rather than find out during installation whether the design and layout are correct, we check in advance using simulation to ensure engineering accuracy and adherence to budgets.

THIS MEANS:

- We focus on your needs
- Logistical interfaces are defined at an early stage

This approach ensures a reliable solution for the complete project and for every detail.

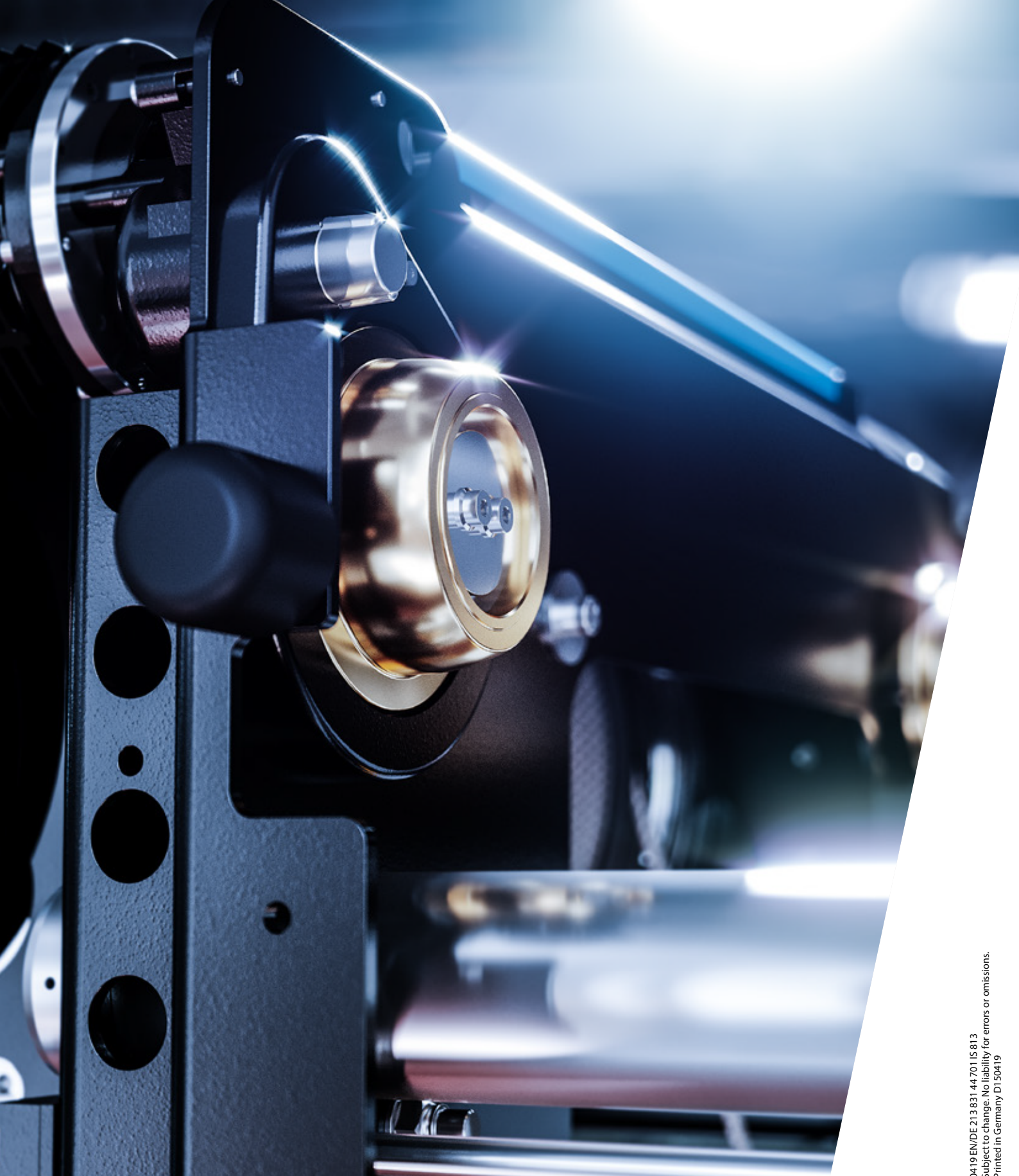
USE OF CAD SYSTEMS

When designing Demag Universal cranes, we make full use of state-of-the-art CAD systems. The parameters specific to each project are used to generate the necessary documents using CAD systems:

- Layout drawing
- Project drawing
- Assembly and component part drawings



This allows planning to be checked in advance.



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