

Built for environments that demand more.

Demag DBH belt hoist

DEMAG



In modern production environments, the requirements for cleanliness and process reliability are increasing. At the same time, hoists are often used in extremely abrasive, dusty or powder-intensive applications – from cement and metal dust to mineral substances.
These demanding applications may be very different, but they all have one thing in common: they are hygiene-sensitive, clean and abrasive environments. The Demag DBH belt hoist proves its worth in both cases. Instead of a rope or chain, it uses a high-strength synthetic fibre belt that is completely lubricant-free and corrosion-resistant. Because the many DBH-components are encapsulated, no substances can escape.
And the durable belt ensures smooth, precisely controllable lifting and lowering operations without hook migration and polygon effect.



Synthetic Dyneema® belt: Highly durable and easy to clean.

DEMAG BELT HOIST: STRONG, CLEAN AND SAFE

The key difference between a Demag DBH belt hoist and a rope or chain hoist is obvious: the DBH uses a belt made of heavy-duty, cross-woven polyethylene fibre material that complies with hygiene requirements. This means that it operates quietly, smoothly and without lubricant.

Thanks to their combination of high load capacity, comfortable handling and low weight, Dyneema® has already proven itself in mobile cranes and transport securing applications, among other things.

These belts enable the Demag DBH to lift loads of up to 6,300 kg safely – at lifting heights of up to nine metres.

The material is tear- and abrasion-resistant as well as UV-stable, and the form-fit deflection does not result in any polygon effects.. Because only minimal vibrations are introduced into the belt tension during lifting operations, the load can be positioned very precisely.

The hygiene of the belt is reliably ensured by standard cleaning methods, including high-pressure cleaning.

Shielded lifting technology.

The Demag belt hoist is resistant to dust and abrasive substances. In certain concentrations, these fine-grained materials can be harmful to the mechanical and electrical components of unprotected hoists.

CLEAN PROCESSES – PROTECTED INSIDE AND OUT

The Demag belt hoist is the ideal solution for production environments where cleanliness, safety and reliable processes are top priorities.

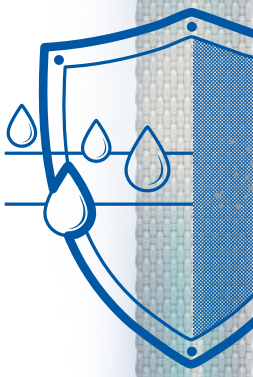
Its fully sealed drive system prevents particles and liquids from escaping. This means that the DBH meets the high requirements of sensitive industries, such as food production or clean rooms.

Thanks to its smooth, precise lifting and lowering behaviour, the belt hoist is suitable for a wide range of applications with a load capacity of up to 6,300 kg. It can be flexibly integrated into workstations, production lines or (light) crane systems, offering maximum process reliability.

PROTECTION AGAINST HARMFUL SUBSTANCES

The Demag belt hoist is designed with protection class IP55 as standard.

Optionally, the components can be upgraded so that the DBH meets the requirements of protection class IP66.



AT A GLANCE

- Polygon-free lifting
- Minimal vibration
- No lubrication required
- High wear resistance
- Easy to clean
- Low emissions
- Low noise levels

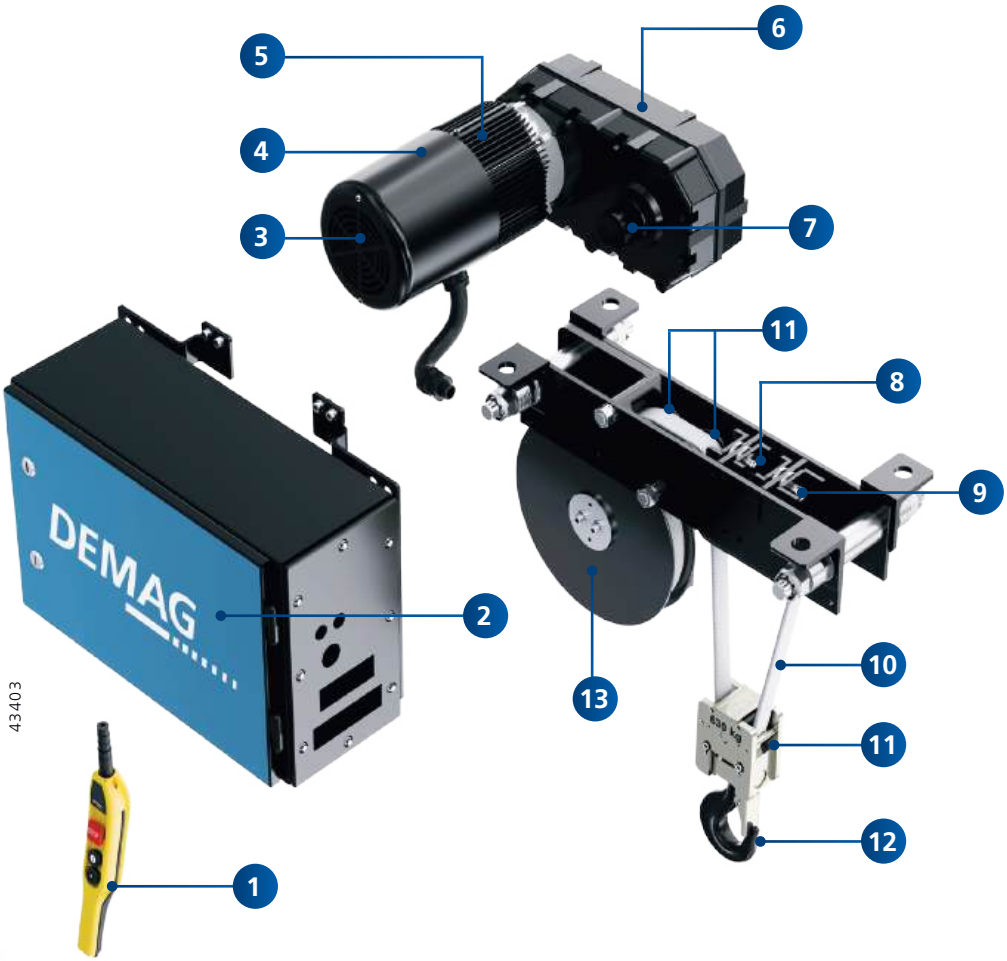
TYPICAL AREAS OF APPLICATION

- Grinding dust, powders or flour, big bag handling
- Food industry / Zero lubrications environments
- Chemical- / Galvanisation Industry
- Pharmaceutical industry /Medical Industry
- Optical industry
- Automotive and electric vehicle industry
- Electrical manufacturing and battery production
- Cleanroom environment



The sealed housing protects against the leakage of substances.

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1 Controller DSB (incl. emergency stop button), optional DSXor DST
2 Cubicle
3 Motor fan and cover
4 Motor brake
5 Lifting motor
6 Lifting gear
7 Drum drive shaft
8 Mechanical overload device
9 Drum and belt fixation
10 Belt
11 Pulleys
12 Hook
13 Drum

FIXED SUSPENSION

- For stationary installations
- Direct attachment to ceilings and existing structures



43396

PUSH TROLLEY

- Flange wheels made of cast iron GJS700
- For flange widths up to 300 mm
- Optional: stainless steel version
- Derailment protection



43392

DEMAG KBK TROLLEY

- Demag DBH 2 belt hoist:
  - Traverse with two single trolleys for Demag KBK II and II-H profiles



43395

ELECTRICAL TROLLEY

- Belt hoist drive units with compact brakes
- DBH 2: One drive motor
- DBH 5: Two motors
- DMU converter installed in electrical enclosure
- Optionally available with pole-changing drive (with two travel speeds)



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Demag belt hoist: Mechanical components

The belt hoist drum is made of painted steel. A stainless steel belt hoist drum is available as an option.

The lifting motor has a closed brake design to prevent unwanted leakage of fine dust. In addition, the motor is maintenance-free. The gearbox is lubricated for life to reduce servicing requirements. The hoistcomes with a 4-stage limit switch as standard.

The standard version comes with painted DIN hooks made of forged steel. The polyamide rope pulleys are equipped with sealed bearings. We offer a stainless steel version with stainless steel bearings as an option.

WEITERE OPTIONEN

- Travel limit switch, two-stage
- Food-safe gear oil
- Enhanced protection thanks to stainless steel options for hooks, lower block, wheels, etc.
- Drag arm for power supply cable
- Pole-changing travel motors
- Heat protection / protection against particle abrasion
- Dongle for programming converters
- Rain protection cover
- Limit switch with hook actuation
- Control voltage optionally with 380V/60Hz or 460-480V/60Hz



Standard: travelling block in zinc-nickel coating. Option: travelling block in stainless steel



Heat protection for production processes – also acts as a protective shield against possible particle removal



Stainless steel options: E-housing, hook, protective shield, drum, chassis components

Electrical components



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Demag DBH 2 3/1 with variable lifting speeds

The lifting speed of the belt hoist can be controlled either by a pole-changing lifting motor with two fixed speed settings or by a frequency inverter-controlled lifting motor with variable speed control.

Lifting speeds between 0.5 and 20 m/min enable both precise positioning and fast lifting movements in daily use. The trolley can also be converter-controlled for infinitely variable trolley speeds.

OWL MONITORING UNIT

Compact device for overload cut-off and status display for increased safety and preventive maintenance (ELM I). The Demag DBH is equipped with an electronic overload device, which is monitored by the compact OWL monitoring unit for overload cut-off and status display.

- Overload protection for individual hoists
- Simple status monitoring/number of switching operations/operating time
- Number of braking operations/number of control operations
- Switch-on time/temperature index/number of overload events
- Can be used for SWP calculation



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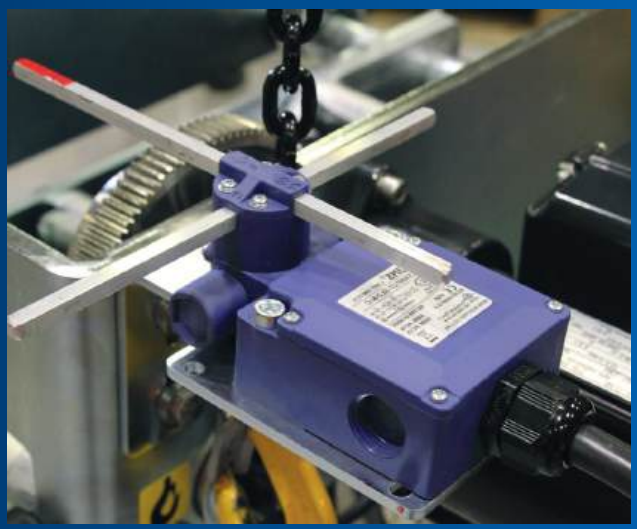
DEMAG FREQUENCY INVERTERS



Variable lifting and driving movement for smooth lifting/lowering and precise positioning

MECHANICAL LIMIT SWITCHES WITH THREE OPTIONS FOR ADJUSTED TRAVEL SPEEDS:

- 1-stage stop
- 1-stage speed reduction
- 2-stage reduction and stop



Technical data



Demag DBH 2 2/1



Demag DBH 2 3/1



Demag DBH 2 4/1

The technical data for the Demag DBH belt hoist is divided into the BH 2 and BH 5 sizes. The load capacities, FEM classifications and options for trolley shape, lifting speed and lifting height vary accordingly.

Size	Reeving		Load capacity [t]														Configurations					Lifting speed [m/min 50 Hz]			Lifting height
	x/1	x/2	0,125	0,25	0,5	0,63	0,8	1	1,25	1,6	2	2,5	3,2	4	5	6,3	F	N	Y	U	YN	2-step speed	Variable speed	Corridor	[m]
DBH 2	2/1	x	2m	1Am	1Bm												√	√	√	x	√	20/3,3	2-20	high	9
	2/1	x	2m	2m	2m	2m	1Am	1Bm									√	√	√	x	√	10/1,6	1-10	low	9
	3/1	x			2m	1Am	1Bm										√	√	√	x	√	13/2	1,3-13	high	6
	3/1	x						2m	1Am	1Bm							√	√	√	x	√	6,5/1	0,6-6,5	low	6
	4/1	x							2m	1Am	1Bm						√	√	√	x	√	5/0,8	0,5-5	low	4,5
DBH 5	x	2/2									2m	1Am	1Bm				√	√	x	√	x	5,9/0,9	x	high	8,2
	x	4/1												2m	1Am	1Bm	√	√	x	√	x	3,8/0,6	x	low	5,9

F = Stationary; N = Electric trolley; Y = Manual; U = Curving trolley; YN = Demag KBK trolley

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