Technical Data

CHAIN HOIST DC-II

07 June 2024

20382544

DEMAG

Internal reference: X1019108 / en-US / A / DOC2799999 / A

Contact information

Contact the manufacturer’s local representative or
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After-sales service

If you have any questions about the product, need technical information, or wish to place spare parts orders, contact our after-sales service. Keep a note of the serial or order number. Specifying this data ensures that you receive the correct information or the required spare parts.
The current addresses of the sales offices in Germany and the subsidiaries and agencies worldwide can be found on the Demag Cranes & Components GmbH homepage at www.demagcranes.com.

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1 Introduction

1.1 About this information

1.1.1 How to use this information

This document is intended to provide technical information about the product and to complement instructions, not to replace them.

The manufacturer makes absolutely no warranty whatsoever regarding the contents of this document, express or implied, whether arising by operation of law or otherwise, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose.

This document helps to provide:

- Range of use of the different hoist types, loads, and hoisting speeds
- Standards considered in the design of the product
- List of features available for the range of these hoists
- Technical details about the product

1.1.2 Copyright notice

1.2 About this product

1.2.1 Standards and directives

This product has been designed and manufactured to conform to the following standards and directives:

- Machinery Directive 2006/42/EC
- Electromagnetic Compatibility Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment Directive 2011/65/EU
- UK Statutory instrument Supply of Machinery (Safety) Regulations 2008 No. 1597
- UK Statutory instrument Electromagnetic Compatibility Regulations 2016 No. 1091
- UK Statutory instrument Electrical Equipment (Safety) Regulations 2016 No. 1101
- UK Statutory instrument Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 No. 3032
- Structure and mechanisms: ISO, FEM and EN, or CMAA
- Electrification: IEC and EN, or NEC
- Hook forging: DIN (if not otherwise specified)
- Product also fulfills the requirements of the following standards (if applicable): CSA, UL.

The declaration of conformity and other certificates are included in the delivery package.

NOTE ***The manufacturer reserves the right to modify the design and material specifications without prior notice.***

1.2.2 Safety related functions

The safety aims of the Low Voltage Directive 2014/35/EU are met.

Improved safety due to rugged and proven electronic controls in comparison with conventional controls. At least Category 2 and Performance Level PL = c are achieved for the safety-related functions specified in DIN EN 14492-2.

- Emergency stop
- Lifting and lowering limiters
- Overload protection (as of 1 t)

For traveling hoists to EN 15011:

- Emergency stop
- Traveling limits (right and left)

And for tandem operation with two hoist units by means of Tandem box:

- Interlocking of the hoist units.

1.2.3 Operating conditions for chain hoist and trolley

NOTE ***The chain hoist and the trolley are not suitable for explosion-proof areas.***

Ambient temperature	Humidity	Height	Enclosure	Electromagnetic compatibility
-20 °C to +45 °C	Max. 90 % relative humidity	Up to 2000 m above sea level (> 2000 m on request)	IP55	Resistance to interference in industrial environments. Interference emission for residential, commercial and light-industrial environments.

NOTE ***Chain hoists operating outdoors should be provided with a protective cover against effects of the weather. Chain hoists, trolleys, and travel drives must be kept under shelter if they are not in use.***

Special operating conditions must be agreed with the manufacturer in individual cases. Special operating conditions include, for example:

- Galvanizing plants, electroplating facilities, foundries, and pickling plants
- Hygiene areas and clean rooms
- Low or high temperature applications and off shore

On request, optimized equipment and important information for safe and low-wear operation can be supplied for use in special operating conditions.

1.2.4 Emissions

1.2.4.1 Measured sound levels

Hoists generate some audible noise during operation. The total sound pressure level that is experienced in the operating area is a combination of the individual noise sources around the operator. The main sources of noise from the hoist arise from its components, vibrating structures, and reflective surfaces.

Hoist components which generate noise:

- Hoisting machinery
- Trolley, bridge, or other moving structures associated with the hoist.

Sound pressure level (L_{pAF}) to DIN 45635 at a distance of one meter from the chain hoist is:

Chain hoist		DC-II 1-250	DC-II 2-250	DC-II 5-500	DC-II 10-1000
Lifting speed up to	[m/min]	8	8	8	6
Sound pressure level	[dB (A)]	65+	65+	68+	68+

These noise emission levels were measured under maximum load. The following structural influences were **not** considered in the preceding measurements:

- transmission of noise through steel structures,
- reflections from walls, and son on.

1.2.5 Product types

NOTE ***Not all speed combinations are available as stock hoist, only as CTO (configure to order).***

Properties	DC-Pro II	DC-Com II
Control method / control voltage	Contactor / 24 V Tri-state signal transmission	
Class of mechanism FEM/ISO	M5+/2m+ – M7/4m	M5/2m – M6/3m
Class of mechanism A/Dh	A4.0/Dh2 – A8.0/Dh2	A4.0/Dh2 – A7.0/Dh2
Standard lifting speed up to 125 kg, [m/min]	8/2; 12/3; 16/4; 24/6	8/2
Standard lifting speed 160 –500 kg, [m/min]	4/1; 6/1.5; 8/2; 12/3; 16/4; 24/6	4/1; 6/1.5
Standard lifting speed 630 – 1000 kg, [m/min]	4/1; 6/1.5; 8/2; 12/3; 16/4	4/1
Cyclic duty factor [CDF%]	60 (40/20)	
Speed ratio	F4	
Hook path [m]	3–5	
Type of enclosure (chain hoist and trolley)	IP55 (IP66 on request)	
Height-adjustable pendant controller with plug connections	Yes	
Pendant controller options (can be fitted)	DSC, DSE, DST	
Final limit switch cut-off for DC-II 1 to DC-II 10 1/1	Yes	
Limit switch cut-off for DC-II 10 2/1	Yes	
Elapsed operating time counter	Yes (visible from the outside through a window underneath the electric equipment cover)	
Diagnostic interface	Yes (visible from the outside through a window underneath the electric equipment cover)	
Gearbox	Maintenance-free for up to 10 years	
Slipping clutch	Maintenance-free for up to 10 years	
Brake	Maintenance-free for up to 10 years	
Adjustable brake	Not required	
Speed monitoring	Yes	
Generative braking from main speed to zero through creep speed	Yes	
Wide voltage range entry	Yes	
Pro-Hub: V_{max} in partial load range	No	
Fast-to-slow cut-off	No	
Velocity, acceleration, deceleration parameters adjustable through pendant controller	No	
Motor temperature monitoring	Optional	
Electric equipment cover	Aluminum	
Surface of aluminum parts	Powder-coated	

1.2.6 Main features

The chain hoist standard scope of delivery already includes the following features:

- DC-Pro II: load capacities up to 2500 kg
- DC-Com II: load capacities up to 2000 kg
- FEM classification from 1Am to 4m (service life of 800 – 6300 hours at full load)
- Hoist classification according ISO 4301 up to class A9 with two million load cycles
- Various lifting speeds available:
  - DC-Pro II: 4/1; 6/1.5; 8/2; 12/3; 16/4
  - DC-Com II: 4/1; 6/1.5; 8/2
- 24V contactor control with internal tri-state signal transfer, can be extended with modules
- Operating limit switches for upper and bottom hook position
- Slipping clutch with automatic cut-out by means of speed monitoring (continuous slipping not possible)
- Maintenance-free for up to 10 years: gearbox, brake, and slipping clutch (size DC-II 10: brake for up to 5 years)
- The control cable is available in three different lengths and is adjustable in height:
  - H5: 0.8–3.8 m (for the DSC control pendants)
  - H8: 3.8–6.8 m
  - H11: 6.8–9.8 m
  - This enables the position of the pendant controller to be adjusted without the need for any wiring. The length of the control cable that is not needed is stored under the service cover.
- “Plug & Lift” and “Plug & Drive” plug-in electric connections:
  - Mains connection on the chain hoist
  - Control cable on the chain hoist/pendant controller
  - Signal and power cable between the chain hoist and trolley
- Operating hours and operating statuses can be read on a 7-segment display that is visible from the outside through a window underneath the electric equipment cover.
- Elapsed operating time counter can also be read from the outside.
- Infrared diagnostic interface (to read out and manage specific data by means of Demag IDAPSY software)
- Two speeds with main and creep lifting with F4 ratio
- Cyclic duty factor: 60% (40%/20%), switching operations/hour: 360 (120/240)
- Reliable operation from -20 °C to +45 °C without any reduction in the cyclic duty factor. Operation also possible up to 60°C and more.
- DC-Wind: Cyclic duty cycle up to 100% CDF depending on type
- Hoist motor is rated to insulation class F.
- Chain hoist and travel drive enclosure: IP55, (DC-II 1-10 optional IP65)
- Chain bucket with articulated attachment, made of tough, flexible and particularly impact-resistant plastic.

Rugged design and service life

Rugged hoist motor has large safety reserves to provide for reliable operation for many years. Can be used for switching cycles way beyond usual market levels.

- Tough and weight-saving aluminum housing of compact and modern industrial design. UV-resistant powder-coated surface is impervious to knocks and scratches.
- Cylindrical-rotor motor with fan and separate brake beneath the electric equipment cover (brake double encapsulated for enclosure type, no sticky brakes)
- Round-section steel chain:
  - High-strength, aging-resistant material with high surface hardening
  - Galvanized and additionally surface-treated for protection against hostile media
  - Optionally available with additional corrosion protection, for foodstuffs or extremely dusty applications

Improved safety and reduced wear

- Slipping clutch, hoist motor and brake are monitored by means of integrated speed sensors
- Low-wearing brake due to regenerative braking from main to creep lifting until standstill, mechanical braking from creep lifting to standstill
- The brake does not need to be adjusted. Minimum wear cause of regenerative braking.
- The brake arranged before the slipping clutch prevents the load from sinking when the unit is at rest.

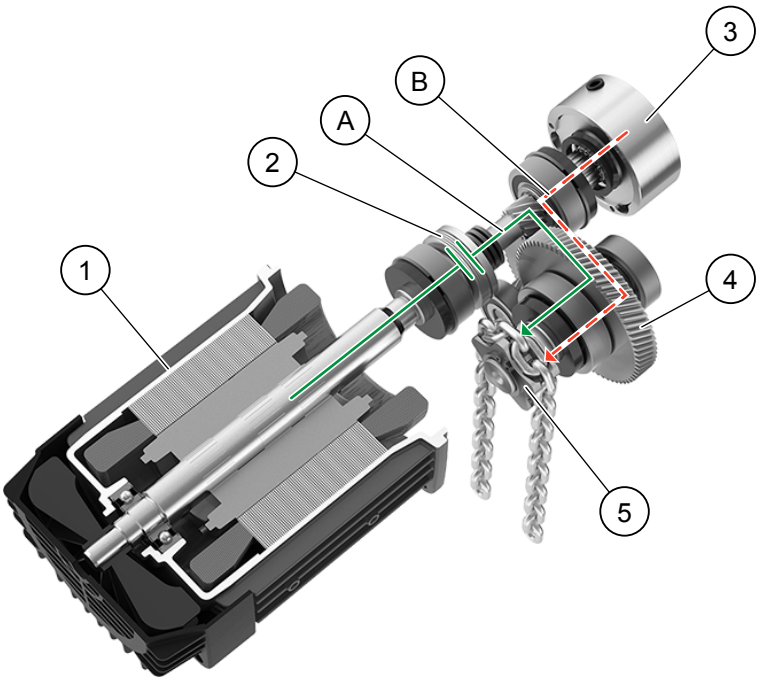


Figure 1. Parts in which the load is borne

A = Motor torque / B = Brake torque

1. Motor
2. Slipping clutch
3. Brake
4. Gears
5. Chain drive

- Automatic braking if the control system fails
- Up to 1000 kg only 1/1 reeving arrangement: reduced chain wear, improved ergonomics

Simple commissioning and optimum ergonomics

- Ergonomic DSC/DSE pendant controllers with gentle actuation force
- Control cable length or position of the pendant controller can be adjusted on site without any need for wiring (can be extended or shortened at any time).
- Control cable and control board signals are designed for 3-axis applications.
- Reduced operating noise due to helical gearing in all gearbox stages. Smooth operation through high-quality gearing.
- Pivoting suspension bracket enables the chain hoist to be attached when the trolley has been fitted.
- Ergonomic hook assembly with pivot point on the chain. Fixed connection between hook and hook assembly for more ergonomic gripping of the entire hook assembly when attaching the load handling attachments.

Service-friendly

- Simple and rapid maintenance and repair of individual components due to the modular chain hoist design – cuts any downtime to a minimum
- The gearbox housing consists of two parts. This makes the components inside easier to access for servicing.
- Elapsed operating time counter, status and error messages shown on 7-segment display
- Magnifing glass for better readability
- Infrared diagnostic interface (to read out and manage specific data by means of IDAPSY software)
- Service cover: Everything in one place – rapid access for commissioning and service:
  - Plug-and-socket connections (for power cable, control cable, limit switches, trolley connection)
  - Strain relief (for power supply and trolley supply cables)
  - Storage for three meters of control cable
  - Chain drive (fitted to output shaft)
- Chain lubrication (through lubrication opening in the chain guide for improved lubrication between the chain links on DC-II 1-10)
- Reduced downtimes as the entire chain drive can be replaced without dismantling motor or gearbox parts.

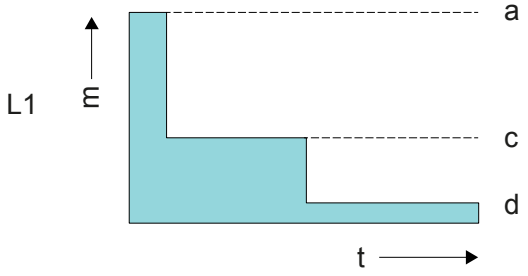
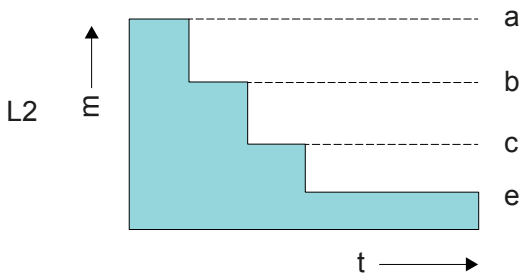
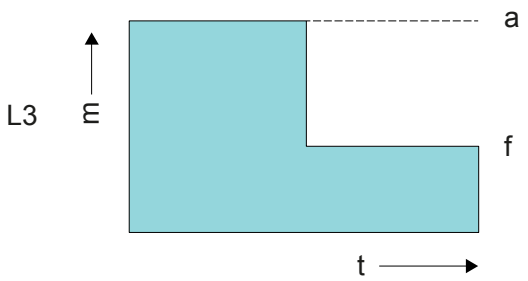
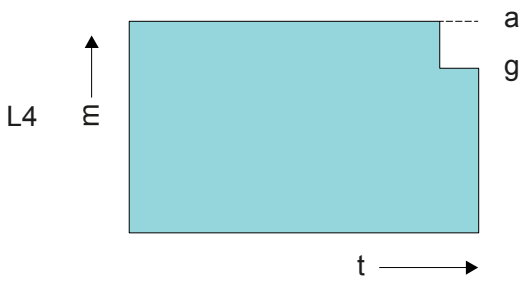
Trolleys

- Trolley sizes 11, 22, 34
- Variable adjustment of trolley flange width up to 200/310/500 mm via adjusting rings
- High travel performance with low wear due to universal travel wheels that have lateral steel guide rollers and no flanges.
- Integrated drop stop
- Low travel noise and resistance
- Die-cast aluminum, powder-coated
- U11 - U34 with optional dual-output gearbox for two-wheel drive, integrated as standard for EU56
- E11-2WD, E22-C2WD and E34-2WD travel drives with two output shafts for U11-U34 trolleys and E22-C1WD travel drive with one output shaft for KBK RF125
- Travel speeds for E11/E22 up to 24/6 m/min (E22-C with RF 125 up to 27 m/min), E34 up to 14 m/min, variable from 0.7 m/min
- E11-2WD, E22-C2WD and E34-2WD for application with U11-U34 trolleys and E22-C1WD for application with KBK
- E11-E34 have plug-in electrical connection, smooth starting by way of ramps, inputs for travel limit switches integrated on the control board. Speeds, acceleration, and braking rates can be modified with the pendant controller, if required.
- U11 - U34 can also be supplied with added ZBF/ZBA AC motor and dual-output gearbox
- Travel speeds for EU56 with 12/4; 24/6; 40/10 m/min (with ZBF motor, variable speeds with ZBA motor)
- Various low-headroom traveling hoist designs (stationary, RU or EU):
  - KDC low-headroom traveling hoist
  - KLDC low-headroom traveling hoist for big bag applications
  - LDC-D, KLDC-D double chain hoist
  - LDC-Q quadro chain hoist
  - UDDC, KDDC articulated monorail hoist

1.2.7 Selection criteria

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 the 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 load spectrum (in most cases estimated) can be evaluated in accordance with the following definitions:

	**L1** **Light**	Hoist units which are usually subject to very small loads and in exceptional cases only to maximum loads.
	**L2** **Medium**	Hoist units which are usually subject to small loads but rather often to maximum loads.
	**L3** **Heavy**	Hoist units which are usually subject to medium loads but frequently to maximum loads.
	**L4** **Very heavy**	Hoist units which are regularly subject to maximum and almost maximum loads.

m = Load capacity

t = Operating time

a = Full load

b = Medium partial load

c = Small to medium partial load

d = Small dead load

e = Small to medium dead load

f = Heavy dead load

g = Very heavy dead load

Example for L2:

Criterion	Value	Criterion	Value
Load capacity	250 kg	Average hook path	4 m
Load spectrum from table	Medium	No. of cycles/hour	20
Lifting speed	8 m/min	Operating time/day	8 hours
Reeving	1/1	–	

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

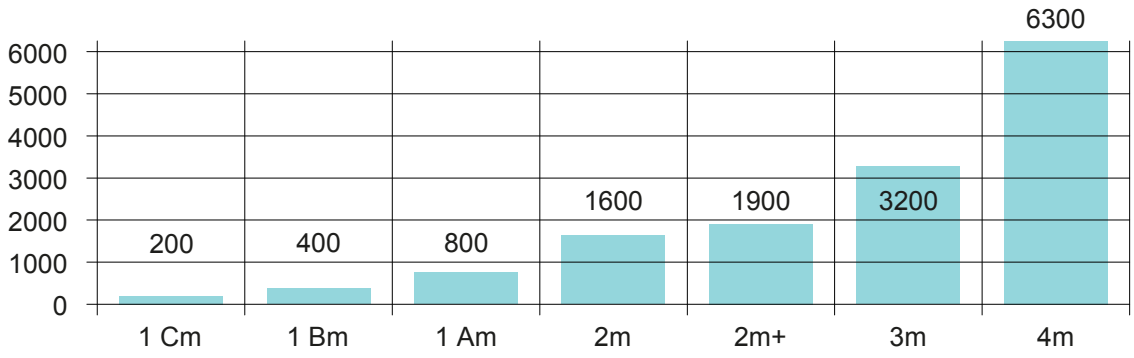
Average operating time/day = $\frac{\text{2 x average hook path x no. of cycles/h x operating time/day}}{\text{60 x lifting speed}}$

= $\frac{\text{2 x 4(m) x 20 x 8(h)}}{\text{60 x 8(m/min)}}$

= 2.66 hours

Service life in hours at full load [h]

The actual service life is considerably increased if the hoist unit is only operated with partial loads.



Class of mechanisms to FEM 9.511

The chain hoist group of mechanisms is determined by the load spectrum and the operating time.

1.2.8 Product code

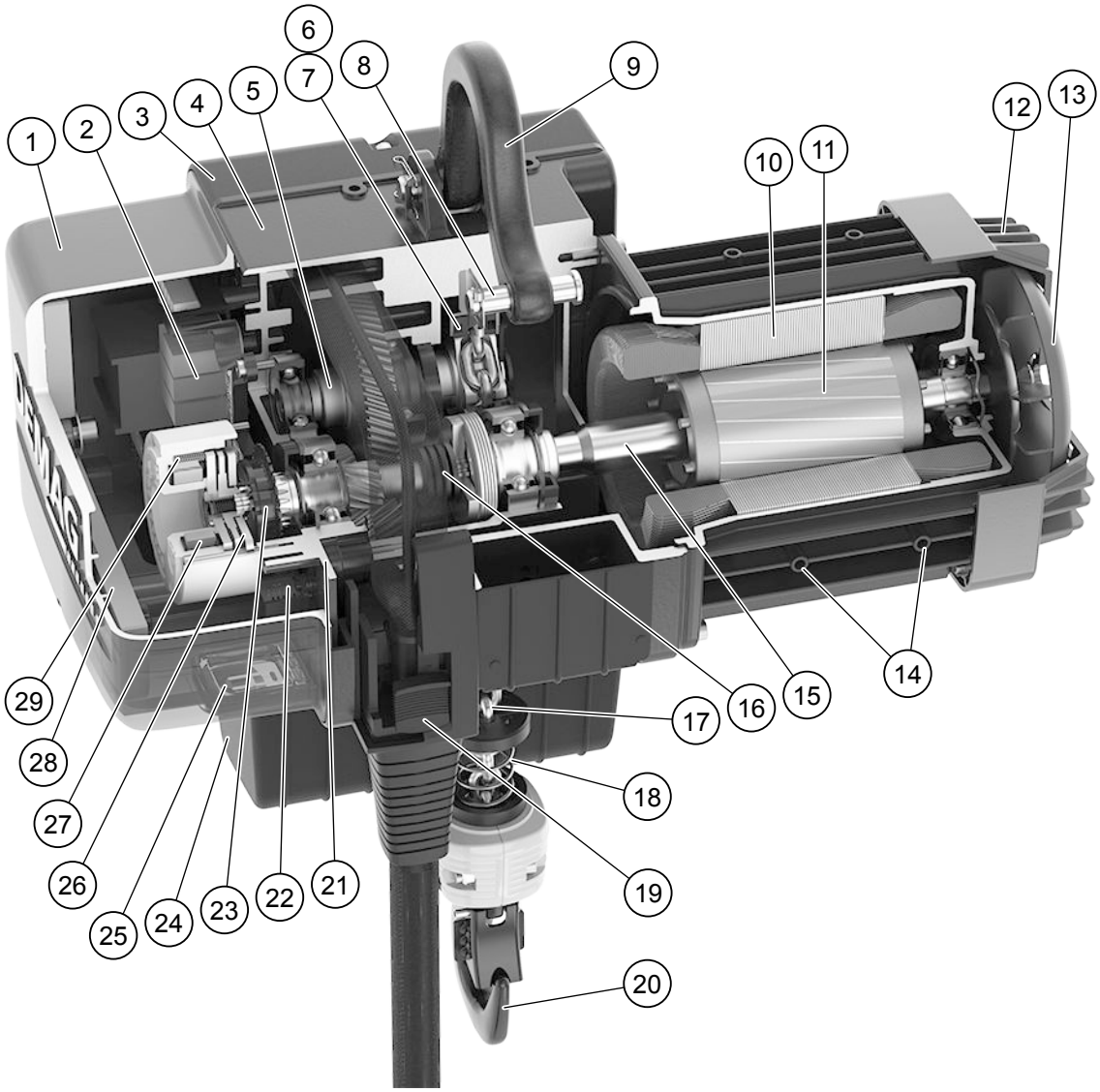
1.2.8.1 Demag product code

Hoist type and feature code	Structural design [opt.]	Frame size	Load capacity	Reeving	Hook path	Hoist speed	Supply V/Hz	Hook lead off [opt.]	Hoist hook distance [opt.]	Trolley type	Trolley speed	Max. flange	Drive type
DC-Pro II	K	10	1000	1/1	8	V12/3	400/50	2/4-	2000	U11	24/6	200	E11
(DES74)	(DES01)	(GE09)	(LOA01)	(DES27)	(DIM02)	(SPD03/ SPD02)	(ELE01/ ELE03)			(GE57)	(SPD06/ SPD05)	(DIM39)	(TM02)
1-11	13-15	17-18	20-24	26-31	33-36	37-42	44-49	51-54	55-58	60-62	64-69	71-73	75-82
Positions 12, 16, 19, 25, 32, 43, 50, 59, 63, 70, and 74 are empty.													

Pos.	Feature code	Feature	Available properties	
1-11	(DES74)	Hoist type	DC-Pro II 1-10, DC-Com II 1-10	
13-15	(DES01)	Struct. design [opt.]	K Low-headroom monorail hoist	Standard-headroom monorail hoist
17-18	(GE09)	Frame size (FS)	1 Frame size (= FS) 1 2 Frame size (= FS) 2	5 Frame size (= FS) 5 10 Frame size (= FS) 10
20-24	(LOA01)	Load capacity	FS LOA01 value [kg] 1 125 2 250	FS LOA01 value [kg] 5 500 10 1000
26-31	(DES27)	Reeving	1/1 Reeving	2/1 Reeving
33-36	(DIM02)	Hook path	5.5 Hook path (height of lift) 5.5 m	8 Hook path (height of lift) 8 m
37-42	(SPD03/ SPD02)	Hoist speed	V6/1.5 hoist (lifting) speed V6/1.5 [m/min.]	V12/3 hoist (lifting) speed V12/3 [m/min.]
44-49	(ELE01/ ELE03)	Supply V/Hz	400/50 supply V/Hz	
51-54	(DIM78/ DIM79)	Hook lead off [opt.]	2/4- hook lead off (hook run-off position)	
55-58	(DIM77)	Hoist-hook distance [opt.]	Hoist-hook distance 2000 [mm]	
60-62	(GE57)	Trolley type	CF5 Click-fit 5, load capacity up to 550 kg U11 trolley size, load capacity up to 1100 kg	U22 trolley size load, load capacity up to 2200 kg U34 trolley size, load capacity up to 3400 kg
64-69	(SPD06/ SPD05)	Trolley speed	14/3.5 trolley speed 14/3.5 [m/min.]	24/6 trolley speed 24/6 [m/min.]
71-73	(DIM39)	Max. flange	200 Max. flange width of the trolley [mm]	
75-82	(TM02)	Drive type	E11-2WD travel drive: E11 with two-wheel drive E34-2WD travel drive: E34 with two-wheel drive	E22-C1WD travel drive: E22-C with one-wheel drive and contactor control E22-C2WD: E22-C with two-wheel drive and contactor control
Positions 12, 16, 19, 25, 32, 43, 50, 59, 63, 70, and 74 are empty.				

2 Product description

2.1 Main parts of the chain hoist



1. Electric equipment cover
2. Control system
3. Service cover
4. Gearbox housing
5. Two-stage helical gearbox with sizes 1–5, three-stage helical gearbox with size 10
6. Chain guide
7. Chain sprocket
8. Suspension pin
9. Suspension bracket
10. Stator
11. Rotor
12. Fan cover
13. Fan
14. Mounting points
15. Motor shaft
16. Slipping clutch
17. Round-section steel chain
18. Cut-off buffer for operating limit switch
19. Adjusting mechanism for control cable
20. Hook assembly
21. Gearbox cover (cut)
22. Light barrier, 7-segment display (with elapsed operating time counter)
23. Pulse wheel for speed monitoring
24. Chain bucket
25. Window
26. Brake disc with linings
27. Brake magnet
28. Counterweight (cut)
29. Brake springs

2.2 Product range for DC-Com II

Load capacity	Frame size	Reeving	Hoist classification		Chain size	Lifting speed	Motor size[1]	Max. weight for hook path
(LOA01)	(GE09)	(DES27)	(DIM01)	(DIM116)/ (DIM117)	(RR11)	(SPD03)	(HM18)	(DIM02)
			DIN EN 14492 / ISO 4301			at 50 Hz		4 m
[kg]			FEM/ISO	A/Dh class	[mm]	[m/min]		[kg]
125	1	1/1	M6/3m	A7/Dh2	4.2x12.2	8.0/2.0	ZNC 63 B 8/2	21
250	2	1/1	M5/2m	A6/Dh2	4.2x12.2	6.0/1.5	ZNC 63 B 8/2	21
500	5	1/1	M5/2m	A5/Dh2	5.3x15.2	4.0/1.0	ZNC 80 B 8/2	31
1000	10	1/1	M5/2m	A5/Dh2	7.4x21.2	4.0/1.0	ZNC 100 A 8/2	52

The standard hook path is 4 m. Other hook paths from 3 m, also longer than 4 m, are possible.

1) Motor key data. For more information, see "Electric key data" or the motor data tables.

The hoist type DC-ComA II is available in several stock hoist sizes, with very short lead time and attractive prices. Option range is limited. Technically the DC-ComA II is like the DC-Com II.

2.3 Product range for DC-Pro II

Load capacity	Frame size	Reeving	Hoist classification		Chain size	Lifting speed	Motor size[1]	Max. weight for hook path
(LOA01)	(GE09)	(DES27)	(DIM01)	(DIM116)/ (DIM117)	(RR11)	(SPD03)	(HM18)	(DIM02)
			DIN EN 14492 / ISO 4301			at 50 Hz		5 m
[kg]			FEM/ISO	A/Dh class	[mm]	[m/min]		[kg]
125	1	1/1	M7/4m	A7.8[3]/Dh2	4.2x12.2	8.0/2.0	ZNC 63 B 8/2	21
250	2	1/1	M5+/2m+[2]	A6.0/Dh2	4.2x12.2	8.0/2.0	ZNC 63 B 8/2	21
500	5	1/1	M5+/2m+[2]	A6.0/Dh2	5.3x15.2	8.0/2.0	ZNC 80 B 8/2	32
1000	10	1/1	M5+/2m+[2]	A5.6[4]/Dh2	7.4x21.2	6.0/1.5	ZNC 100 A 8/2	53

The standard hook path is 5 m. Optionally, hook paths of 3–180 m are available.

1) Motor key data. For more information, see "Electric key data" or the motor data tables.

2) 2m+ corresponds to a service life of 1900 hours at full load.

3) The first digit refers to the A-class A7. The second digit is an additional load cycle value as a percentage. For example, ".8" is 80%. A7.8 means A7 with 500,000 cycles and additional 80%, in total 900,000 cycles.

4) The first digit refers to the A-class A5. The second digit is an additional load cycle value as a percentage. For example, ".6" is 60%. A5.6 means A5 with 125,00 cycles and additional 60%, in total 200,000 cycles.

2.4 Hoist classification

The added A and Dh classes are based on EN 14492-2 and ISO 4301. A DC-II chain hoist is designed load cycle-based and not time-based with full load working hours. Load cycle-based is much more demanding regarding the design of the product than just time-based.

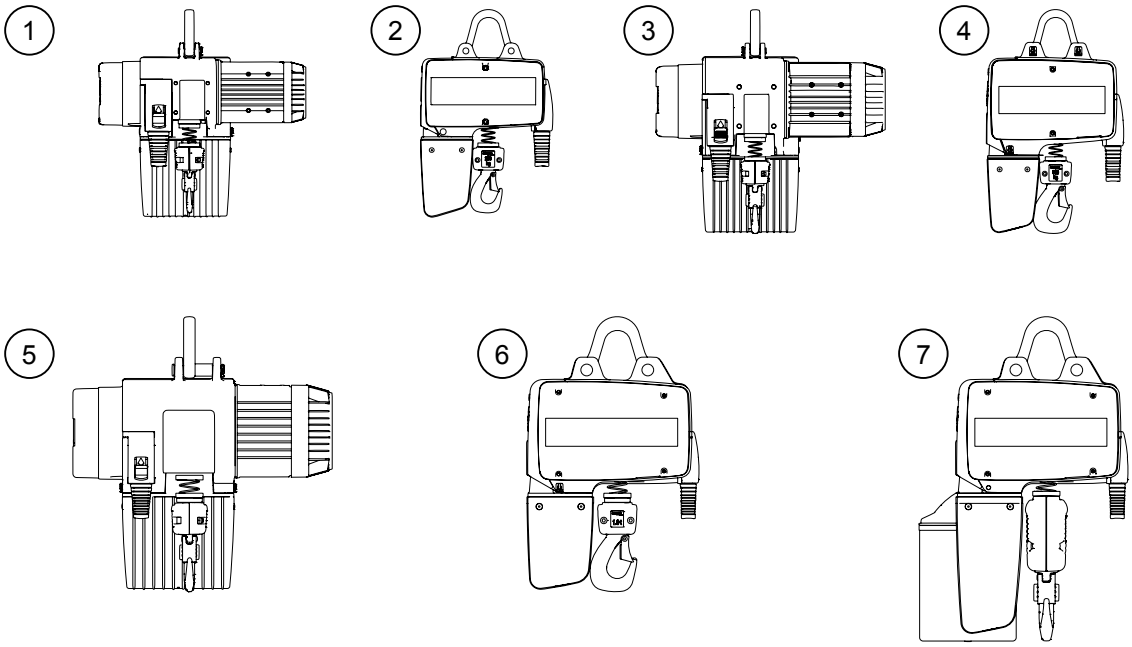
The first digit after A refers to the A-class. The second digit means an additional load cycle value as a percentage.

- A5.5 means A5 with 125.000 cycles and additional 50%, in total 187.500 cycles.
- A4.3 means A4 with 63.000 cycles and additional 30%, in total 81.000 cycles.

A-class	Load cycles
A5	125,000
A6	250,000
A7	500,000
A8	1,000,000

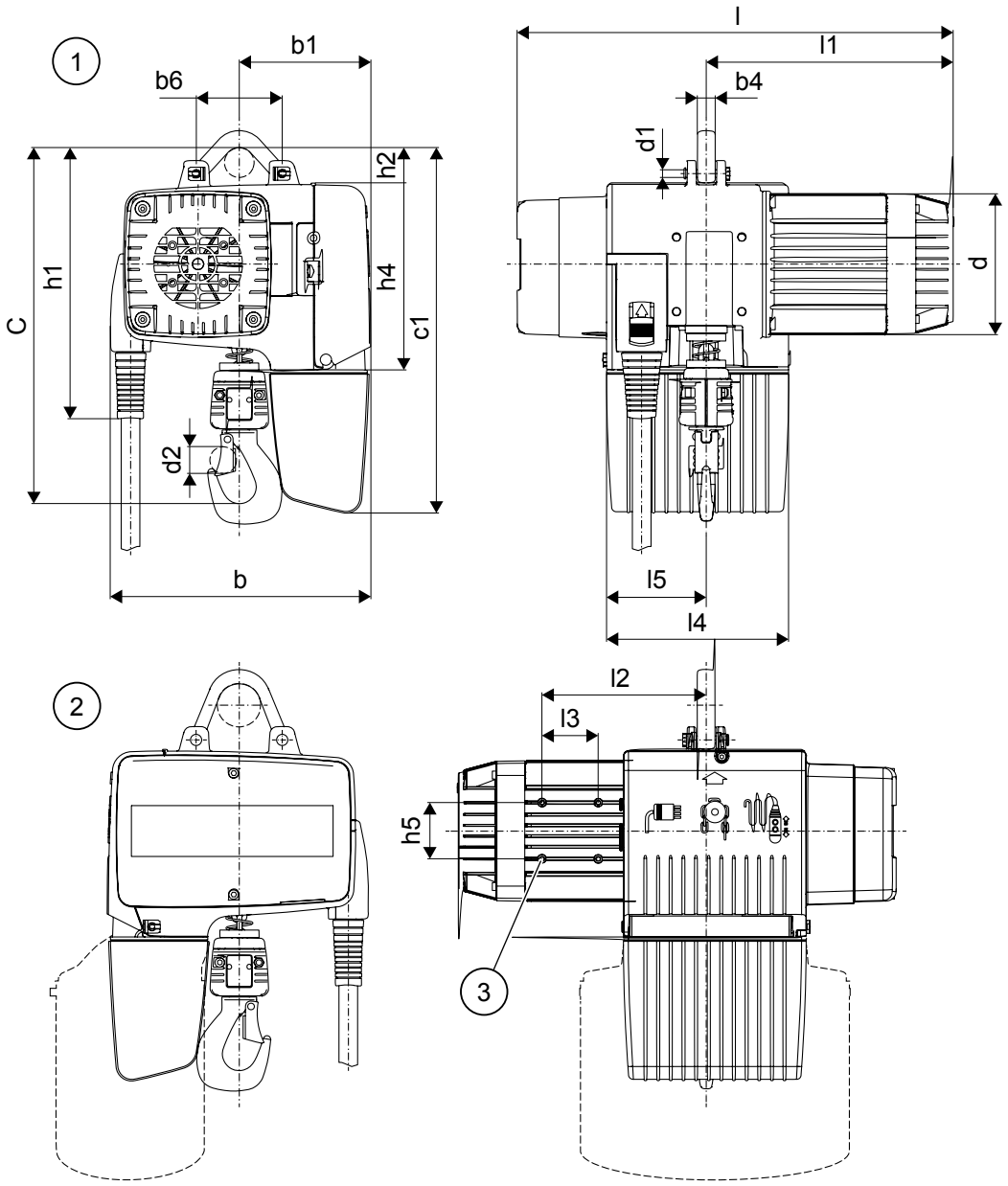
Dh class	Hook path per load cycle
Dh2	2.5 m (1.25 m up and 1.25 m down)
Dh3	5.0 m (2.5 m up and 2.5 m down)

2.5 Overview of hoist frame size



1. Side view of DC-II 1 and DC-II 2
2. Front view of DC-II 1 and DC-II 2
3. Side view of DC-II 5
4. Front view of DC-II 5
5. Side view of DC-II 10
6. Front view of DC-II 10 with 1/1 reeving
7. Front view of DC-II 10 with 2/1 reeving

2.6 Dimensions – Hoist sizes DC-II 1-10, 1/1 reeving

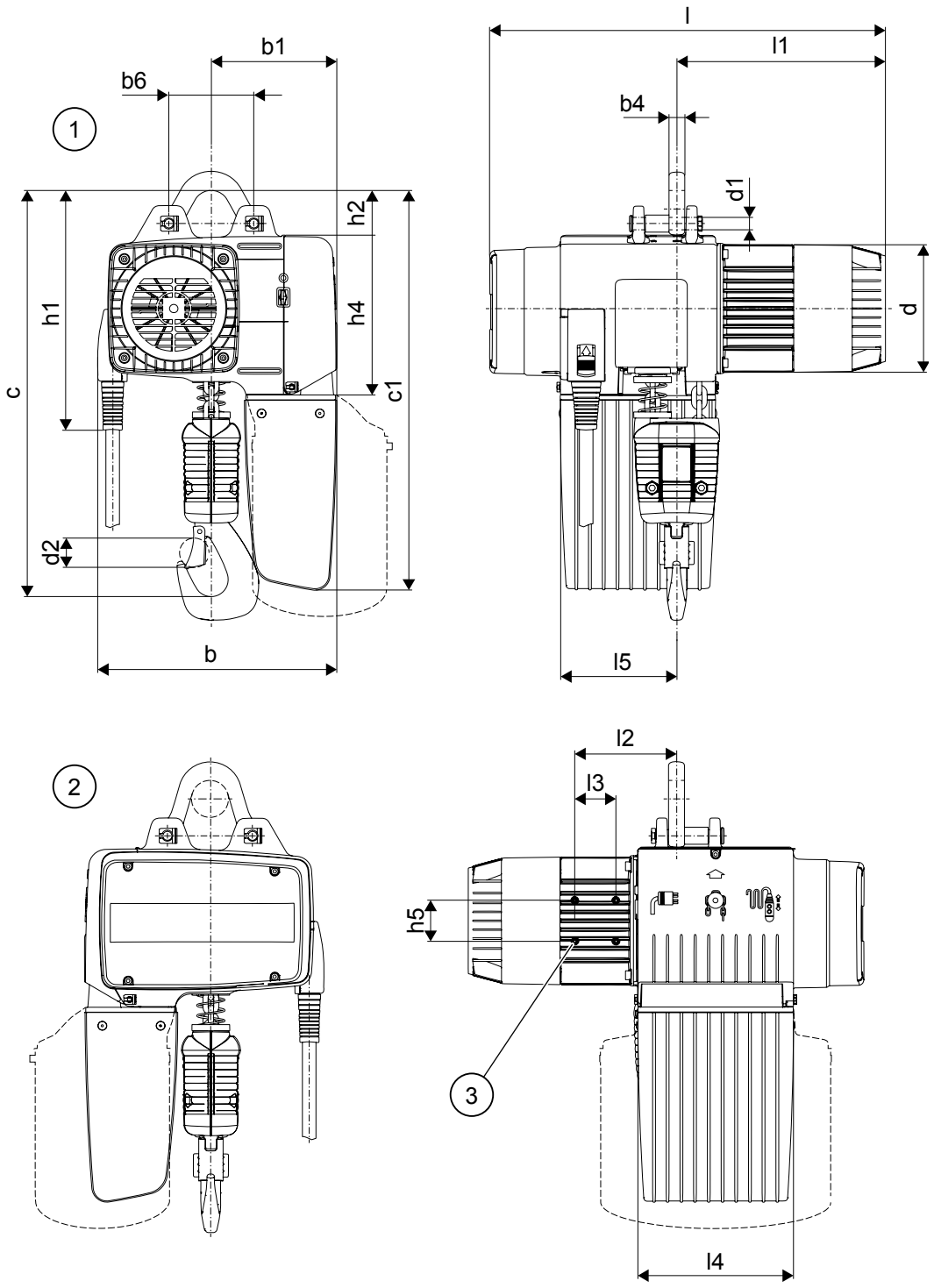


1. 1/1 reeving with short suspension bracket
2. 1/1 reeving with long suspension bracket
3. M5, min./max. thread depth 10 mm

Hoist size	Motor ZNC	Suspension bracket					b	b1	l		l1	l2		l4	l5	b4	b6	d	d1	d2	R	Suspension bracket				h4	l2	l3	h5
		Short[3]	Long	Size of chain collector box	Short[3]	Long			Extension			Extension										Short[3]		Long					
		C[1]			C1				Yes[2]	No		Yes[2]	No									h1	h2	h1	h2				
1/2	63 B	383	421	H5	355	393	271	142	564	444	253	291	191	195	104	19	115	115	12	22	15	261	39	299	77	185	169	60	50
				H8	374	412																							
				H12	404	442																							
5	80 B	380	418	H3	380	418	281	142	582	472	264	318	208	195	110	19	115	151	12	24	18	286	40	324	78	208	176	60	60
				H5	399	437																							
				H8	429	467																							
10	100 B	499	532	H5	494	527	351	185	674	582	299	375	283	227	177	23	124	186	18	33	25	349	65	382	98	241	183	60	60
				H10	583	616																							

1) Dimension C is increased by 42 mm for chain hoist with v = 16/4 or v = 12/3.
1) Dimension C is increased by 111 mm for size 05 chain hoist with v = 24/6.
1) Dimension C is increased by 131 mm for size 10 chain hoist with v = 24/6.
2) For CC, double brake, rotary encoder configuration
3) Not suitable for every trolley

2.7 Dimensions – Hoist size DC-II 10, 2/1 reeving



1. 2/1 reeving with short suspension bracket
2. 2/1 reeving, long suspension bracket
3. M5, min./max. thread depth 10 mm

Hoist size	Motor ...	Suspension bracket					b	b1	l		l1	l2		l4	l5	b4	b6	d	d1	d2	R	Suspension bracket				h4	l2	l3	h5
		Short	Long	Size of chain collector bag	Short	Long			Extension			Extension										Short		Long					
		C[1]			C1				Yes[1]	No		Yes[1]	No									h1	h2	h1	h2				
10	100 B	590	623	H5	494	527	351	185	674	582	299	375	283	227	177	23	124	186	18	33	25	349	65	382	98	241	150	60	60
				H10	583	616																							

1) For ContactorControl, double brake, rotary encoder configuration
2) Not suitable for every trolley

2.8 Available chains

Genuine chain is a round-section steel chain. The chain is tested to EN 818-7 and is subject to the regulations and test criteria issued for round-section steel chains used in hoist applications. The chain is also subject to the inspection regulations to DIN 685 part 5 of Nov. 1981 and the rules and regulations of the German Social Accident Insurance (DGUV).

NOTE ***Pay attention to reduced load capacities. For non-standard operating conditions, the following listed special chains are available for special ambient conditions.***

	Chain hoist size	Max. load capacity for reeving		Dimension	Stamp, Chain grade	Weight per meter	Production test force	Minimum breaking force	Minimum elongation at rupture
		1/1	1/2						
		[kg]	[kg]	[mm]		[kg]	[kN]	[kN]	[%]
Demag DAT standard chain, high-strength									
	DC-II 1 DC-II 2	250	-	4.2 x 12.2	DAT RDC/TDK	0.38	13.8	22	10
	DC-II 5	500	-	5.3 x 15.2		0.62	22	35	
	DC-II 10	1250	2500	7.4 x 21.2		1.20	43	70	
Properties	High-strength ageing-resistant material with a high degree of surface hardening, galvanized with extra surface treatment, color: DC-II1-10 golden.								
Material	Ni-Mo special chain steel to EN 818-7, part 5.3.1								
Lubrication	GP00H-30REN.SO-GFB grease								
Chain DAT (Corrud), with high corrosion protection, high-strength									
Application, for example, Galvanizing, electro plating facilities, pickling plants	DC-II 1	125	-	4.2 x 12.2	DAT RDC/TDK	0.38	13.8	22	10
	DC-II 2	250							
	DC-II 5	500	-	5.3 x 15.2		0.62	22	35	
	DC-II 10	1250	2500	7.4 x 21.2		1.20	43	70	
Properties	Ageing-resistant, corrosion-free, "Corrud DS" micro-layer corrosion protection, black-coated, color: black, Stabylan 2001								
Material	Ni-Mo special chain steel to EN 818-7, part 5.3.1								
Lubrication	Acid-resistant chain grease, for example, Ceplattyn BL white paste (part no. 665 023 44)								
Chain HS7, with deeper surface hardening									
Application, for example, foundry, dust, emery, blasting	DC-II 1 DC-II 2	160	-	4.2 x 12.2	RSX/DS	0.38	12.5	19.3	5
	DC-II 5	400	-	5.3 x 15.2		0.62	19.8	30.8	
	DC-II 10	800	1600	7.4 x 21.2		1.20	38.7	60	
Properties	Ageing-resistant, color: silver, with deeper surface hardening								
Material	Material Ni-Mo special chain steel to EN 818-7, part 5.3.1								
Lubrication	Dry or with dry lubricant, for example, Ceplattyn 300 paste (part no. 665 022 44)								
Chain RS6, stainless steel, not hardened									
Application, for example, foodstuffs sector	DC-II 1 DC-II 2	125[1)]–160[2)]	-	4.2 x 12.2	RSA/S	0.38	10	16	15
	DC-II 5	200[1)]–250[2)]	-	5.3 x 15.2		0.62	16	25	
	DC-II 10	400[1)]–500[2)]	800[3)]–1000[4)]	7.4 x 21.2		1.20	32	50	
Properties	Non-rusting chain, not hardened, bright								
Material	Stainless steel AISI 316 (V4A) 1.4401								
Lubrication	Food-safe lubricant, e.g. Berusynth CB 180 H1 oil (part no. 678 645 39)								

1) For max. 25–50 cycles per day
2) For max. 10 cycles per day
3) For max. 12–25 cycles per day
4) For max. 5 cycles per day

NOTE ***Use of HS7 special chain in foundries, fettling shops, or other environments with high dust levels: It is recommended to lubricate the chain with a dry lubricant, for example, Ceplattyn 300 Paste (part no. 665 022 44).***

The chain can also be used dry. Without any lubrication, however, greatly increased wear and louder operating noise in the chain drive must be expected. The chain must not be lubricated with normal grease in environments with high dust levels. Grease will form clumps and chain wear will not be visible.

2.9 Materials and coating

Slipping clutch and brake linings are free of asbestos. As standard, the chain hoist is provided with corrosion protection (powder coating or paint finish).

Standard housing materials

Part	Material
Chain hoist housing and motor	Die-cast aluminum
Fan cover of the motor	Plastic, partially impact-resistant
Service cover	Plastic, partially impact-resistant
Chain collector box	Plastic, partially impact-resistant

The chain hoist or the trolley can be supplied with other than standard paint finishes.

Standard paint finish

Component	Color code	Color
Chain hoist body and motor	RAL 7021	Dark gray
Electric cover and fan	RAL 5009	Azure blue
Hook assembly	RAL 1007	Daffodil yellow
Load hook and suspension bracket	RAL 9005	Jet black
Trolley	RAL 5009	Azure blue

2.10 Electric key data

2.10.1 Chain hoist motor data

Frame size	Motor size	Poles	P_N	CDF	n_N	Starts/h	I_N	I_{start}/I_N	$\cos\varphi_N$	Voltage[1)]	Frequency	Conformity
		[pcs]	[kW]	[%]	[rpm]		[A]	[A]		[V]	[Hz]	
DC-Pro II 1/2	ZNC 63 B 8/2	8	0.09	20	650	240	1.20	1.32	0.76	3 ~ 380–415	50	CE
		2	0.36	40	2820	120	1.60	4.64	0.67	3 ~ 380–415	50	CE
DC-Pro II 5	ZNC 80 B 8/2	8	0.18	20	665	240	1.60	2.35	0.51	3 ~ 380–415	50	CE
		2	0.72	40	2745	120	2.40	7.20	0.77	3 ~ 380–415	50	CE
DC-Pro II 10	ZNC 100 A 8/2	8	0.45	20	695	240	3.10	6.51	0.50	3 ~ 380–415	50	CE
		2	1.80	40	2790	120	4.90	20.10	0.80	3 ~ 380–415	50	CE
DC-Pro II 10	ZNC 100 B 8/2	8	0.57	20	700	240	3.90	7.41	0.50	3 ~ 380–415	50	CE
		2	2.30	40	2845	120	5.60	25.76	0.82	3 ~ 380–415	50	CE

1) Temporary voltage tolerances of ± 10% and temporary frequency tolerances of ± 2% are possible. Motors are rated to insulation class F.

2.10.2 Mains connection circuit breaker and supply lines

Frame size	Motor size	[A]	[mm²]	[m]	[V]	[Hz]
1/2	ZNC 63 B 8/2	3	1.5	100	380–415	50
5	ZNC 80 B 8/2	4	1.5	100	380–415	50
10	ZNC 100 A 8/2	10	1.5	54	380–415	50
	ZNC 100 B 8/2	10	1.5	36	380–415	50

[A] = amperage of the mains circuit breaker (EN 60898-1, tripping characteristic B)

Minimum values have been specified here. Larger circuit breakers up to 10 A with 1.5 mm² supply lines or 13 A with 2.5 mm² supply lines can also be used.

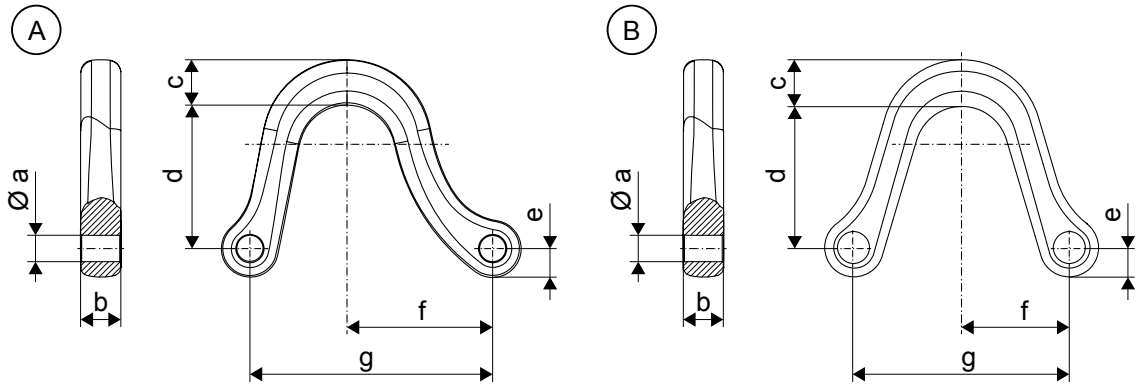
[mm²] = cross-section of the supply line

[m] = max. cable length in meters

The lengths of the supply lines are calculated based on 5% voltage drop, start-up current, and an earth-loop impedance of 200 mOhm.

2.11 Suspension bracket

The suspension bracket facilitates installation, since the chain hoist can be suspended directly from the trolley. It is not necessary to dismantle existing trolleys.



Dimensions [mm]								
Frame size	Ø a	b	c	Bracket long [1]	Bracket short [2]	e	f	g
				d				
A) 1/2	12.5	19	21.5	68	30	13.5	69	115
A) 5	12.5	19	21.5	68	30	13.5	69	115
B) 10	18.4	23	27	81	48	17	62	124

[1] Standard for frame size 1-5.

[2] Optional for frame size 1-5; standard for frame size 10.

NOTE ***The bracket has markings “I” and “II” according to the reeving (1-fall or 2-falls). The markings must match with the markings on the chain hoist body.***

NOTE ***If the DC-II is to be installed directly to the four attachment points on the gearbox housing without a suspension, you must expect to see stronger chain oscillation.***

3 Trolleys

3.1 General information on standard trolleys

Trolley	Description
Standard	Product features: ■ Variable adjustment of the flange width through adjusting rings ■ U11 travel wheels made of plastic (optional steel rollers) ■ U22/U34/RU56 travel wheels made of spheroidal-graphite cast-iron ■ Universal travel wheels for parallel and sloping running surfaces ■ Travel wheels without flanges, additional lateral steel guide rollers ■ Integrated drop stops in the individual die-cast aluminum halves ■ Powder-coated side cheek surfaces
U11–U34 travel on curved track	To ensure good travel characteristics and a longer trolley service life the use of larger curve radii is recommended. Wear of the travel wheels depends highly on the curve radius. I beam track must be bent with the care to obtain an even and regular curve. The forces required to move the load can strongly increase in the case of small curve radii in connection with high loads.
Trolleys with steel travel wheel and spheroidal-graphite cast iron travel wheel	Steel travel rollers are recommended to be used for: ■ Frequent travel on curved tracks ■ Extreme ambient conditions (for example, dirt accumulation or hot atmospheres) ■ Heavily worn girders ■ Very heavy dead loads
Articulated trolleys	The travel wheels and guide rollers of four-wheel trolleys can display increased wear in installations featuring intensive operation. Double wheel articulated trolleys are recommended for: ■ Frequent travel on curved tracks that have small curve radii (1000 mm) and high load capacities, ■ Automatic operation in connection with travel on curved tracks, small curve radii (1000 mm) and high load capacities.

3.2 Track girder characteristics

Crane runways:

Tolerance	C[1)]	c[2)]
Category 1	C = ± 5 mm	c = 1 mm
Category 2	C = ± 10 mm	c = 2 mm
Category 3	C = ± 20 mm	c = 4 mm

Tolerance	C[1)]	c[2)]
1) Tolerance **C** of straightness with reference to the height of the crane rail center and the crane runway length 2) Tolerance **c** of straightness with reference to 2000 mm measured length (sample measurement) at any point on the crane runway		
Source: VDI 3576, recommendation: minimum tolerance class 2		

NOTE ***In the interest of good travel characteristics, we recommend the use of much larger curve radii. Wear of the travel wheels is highly dependent on the curve radius. The forces required to move the load can strongly increase in the case of small curve radii in connection with high loads.***

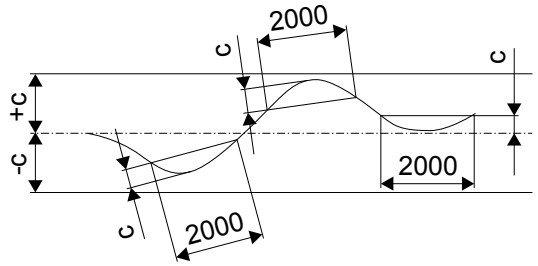


Figure 2. Position of a crane rail seen in elevation (longitudinal slope)

Pay attention to the following when the trolleys are employed:

- I-beams with parallel flanges or sloping flanges to DIN 1025 can be used as tracks. The travel track must satisfy at least tolerance category 2 for manufacturer tolerance C. Displacement between the rails and gaps at the joint must be avoided. Any displacement between the rails must be ground flat, if required.
- The trolleys must not be obstructed by protruding suspension pins, bolt heads, clamping plates, joint flanges and so on, on the track.
- The running surface of the track girder must only be given a primer coat of 40 µm in the area engaged by the trolley wheels.
- In unclean environments, the running surface of the track should be cleaned regularly and should be free of oil and grease.
- Assume a uniform distribution of the total load (maximum permissible load + deadweight of the traveling hoist + any load handling attachment) for calculating wheel loads.
- Supporting rollers must be fitted to the trolleys if U11/U22/U34 trolleys are used with ZBF motors in combination with small fl ange widths.

NOTE ***Metal or similar hard stops must not be approached as this can result in damage to the chain hoist. Resilient buffers should be mounted at the level of the travel wheel axle at the ends of tracks to prevent the trolley from derailing.***

3.3 Curve radii for standard trolleys

The specified curve radii apply for normal applications. Contact the manufacturer or representative of the manufacturer for frequent travel on curves (for example automatic installations).

Trolley size		Load capacity	Push travel		Electric travel		Trolley wheels
Push-travel trolley	Travel drive, travel motor	[kg]	Girder flange width[1] [mm]	R_{min} [mm]	Girder flange width[1] [mm]	R_{min} [mm]	
CF 5	–	550	50-91	800	–	–	Plastic
U11	E11-C2WD	1100	58-310	1000	58-310	2000	Plastic[2]
U22	E22-C2WD	2200	74-200[3]	2000	74-200	3000	spheroidal-graphite cast-iron[3]
U34	E34-C2WD	2200	201-310	2000	201-310	3000	spheroidal-graphite cast-iron
		3400	74-310	2000	74-310	3000	

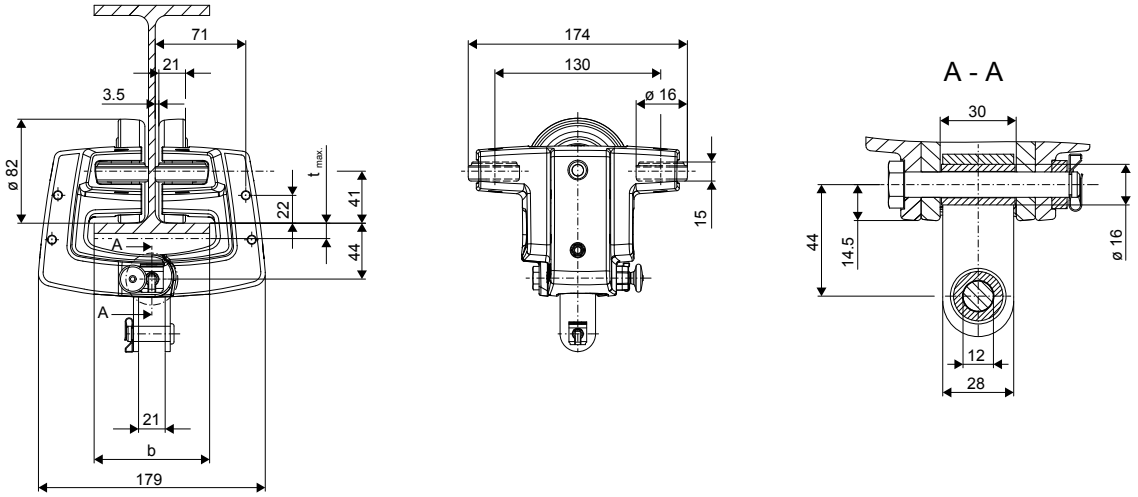
1) Max. flange width 500 mm (except CF 5)

2) Steel travel rollers optional

3) Plastic travel rollers on request

3.4 Click-fit trolley CF5

Click-fit trolley CF5 for girders to DIN 1025, part 1 + 5 is suitable for chain hoists DC 1–5 and DC-II 1–5.



Designation	Rated capacity [kg]	Part no.	Flange width [mm]	maximum flange thickness t_{max} [mm]	Weight [kg]	Curve radii of articulated trolleys R_{min} [mm]
Click-fit CF5	550	840 007 44	50–91	15	2.6	800

3.5 U11 trolley

U11 trolley is suitable for chain hoists with load capacity ≤ 1000 kg:

- DC 1–5 and DC-II 1–5
- DC 10 and DC-II 10 up to 1000 kg

Rated capacity is 1100 kg.

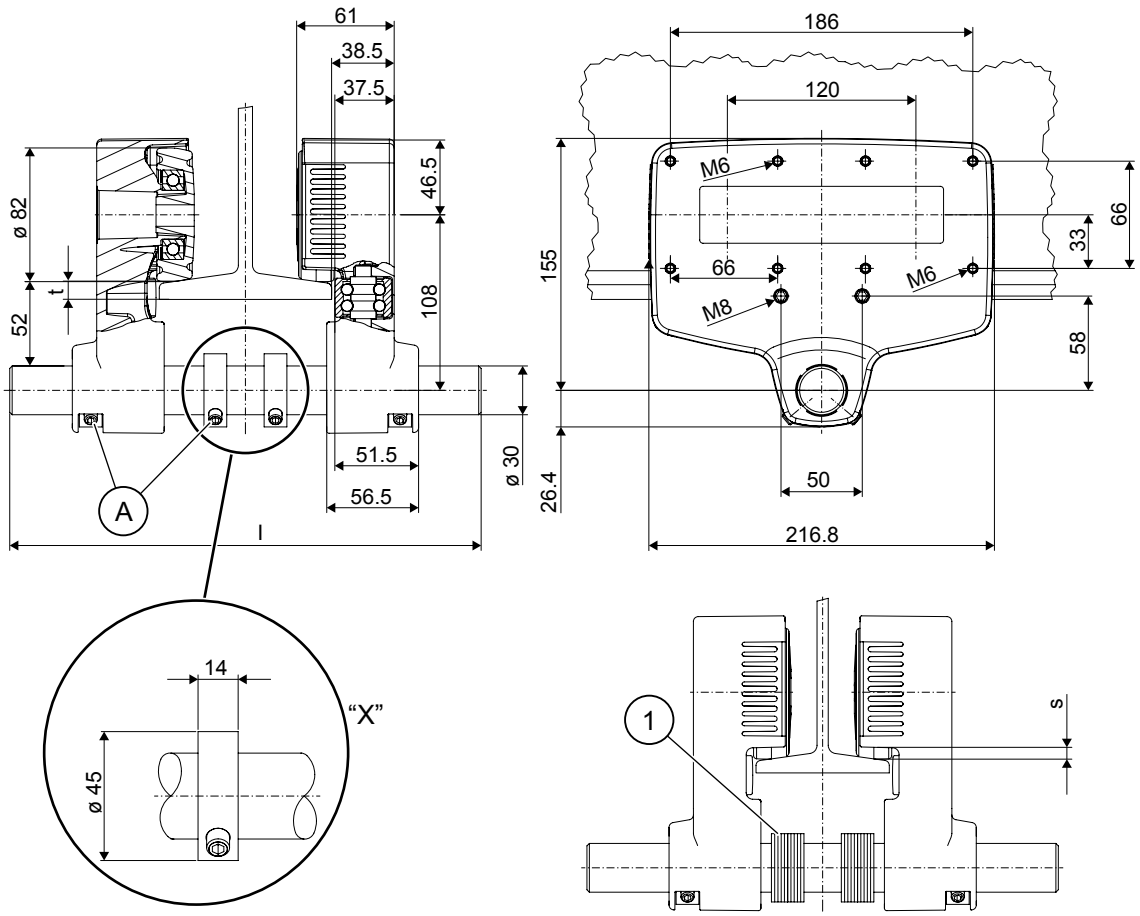


Figure 3. U11 trolley for girders to DIN 1025, part 1–5

A = Adjusting rings with grub screw (tightening torque 18 Nm)

"X" = Fixing element complete

1 = Supporting washers

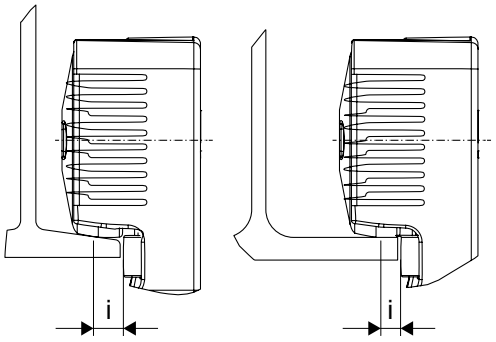


Figure 4. Wheel contact point

NOTE ***For girder connection by means of fish plates, comply with clearance. Total clearance between adjusting rings and suspension bracket: U11 = 2–6 mm. Travel wheel material: plastic, steel travel rollers optional.***

Designation	Rated capacity	Part no.	Flange width	Max. flange thickness	Cross beam	Sloping flange		Parallel flange		Weight	Curve radii of articulated trolleys	
				t	l	i	s	i	s		Push travel	Electric travel
	[kg]		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	R_{min} [mm]	R_{min} [mm]
U11–200	1100	716 502 45	58–200	22	320	13	min. 3 – 6	7.8	min. 4 – 7	7.3	1000	2000
U11 S–200		716 507 45								9.0		
U11–310		716 503 45	201–310		430					7.7		
U11–500		on request	311–500		620					9.9	On request	

Quantity supporting washers	Flange width [mm]					
	58	66	74	82	90	98–310
DC 1–5 and DC-II 1–5	5	Adjusting rings				
DC 10 and DC-II 10 1/1	6					

Screw fittings	Tightening torque	Screw-in depth	
		min.	max.
	[Nm]	[mm]	[mm]
M6	11	12	17
M8	18	16	21

3.6 U22 and U34 trolleys

NOTE ***The decisive factor for the combination of trolley and chain hoist is the rated capacity.***

U22 trolley and U34 trolley are suitable for the following **chain hoists up to 2000 kg rated capacity**: DC 1–10 and DC-II 1–10

U22 trolley and U34 trolley are suitable for the following **chain hoists up to 3400 kg rated capacity** as shown in the table:

1/1 reeving	DC 15, 16, 25 and DC-II 16, 25
2/1 reeving	DC 10, 15, 16 and DC-II 10, 16

Rated capacity of U22 trolley is 2200 kg.

Rated capacity of U34 trolley is 3400 kg.

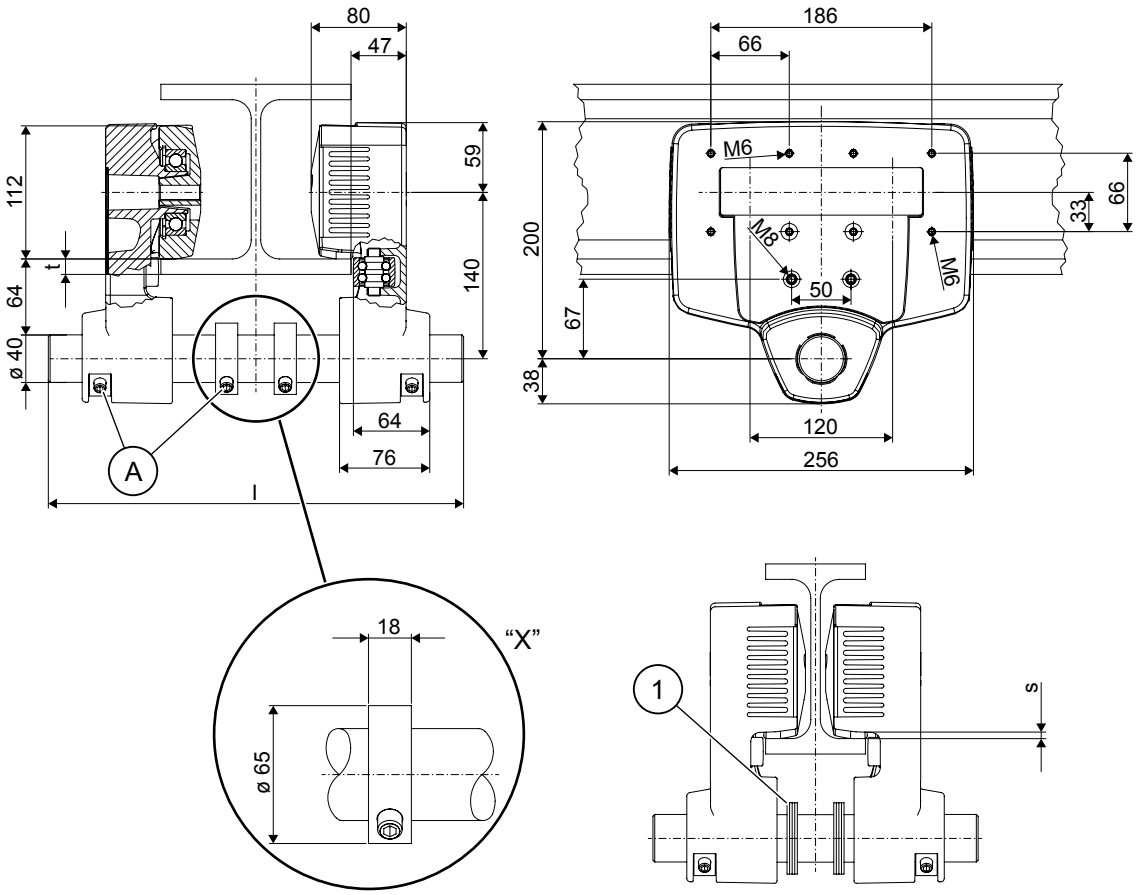


Figure 5. U22 and U34 trolleys for girders to DIN 1025, part 1–5

A = Adjusting rings with grub screw (tightening torque 36 Nm)

"X" = Fixing element complete

1 = Supporting washers

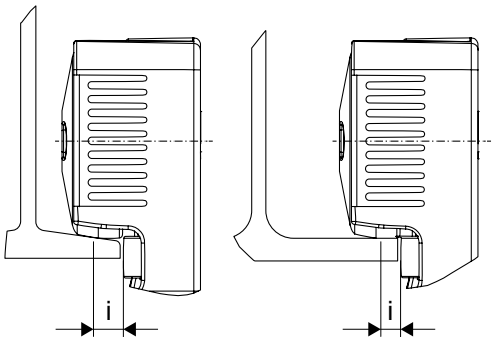


Figure 6. Wheel contact point

NOTE ***For girder connection by means of fish plates, comply with clearance. Total play between adjusting rings and suspension bracket: U22 and U34 = 2–6 mm. Travel wheel material: spheroidal-graphite cast-iron, plastic travel rollers on request.***

Designation	Rated capacity	Part no.	Flange width	Max. flange thickness t [1]	Cross bar l	Sloping flange		Parallel flange		Weight	Curve radii of articulated trolleys	
						i	s	i	s		Push travel	Electric travel
	[kg]		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	R_{min} [mm]	R_{min} [mm]
U22–200	2200	716 602 45	74–200 [2]	30	350	17	min. 2 – 6	9.5	min. 1 – 5	14.5	2000	3000
U22–500		on request	311–500 [2]		640					18.6		
U34–310	2200 3400	716 703 45	201–310 [3] 74–310 [3]		460					15.5		
U34–500	3400	on request	311–500 [2]		640					18.6		

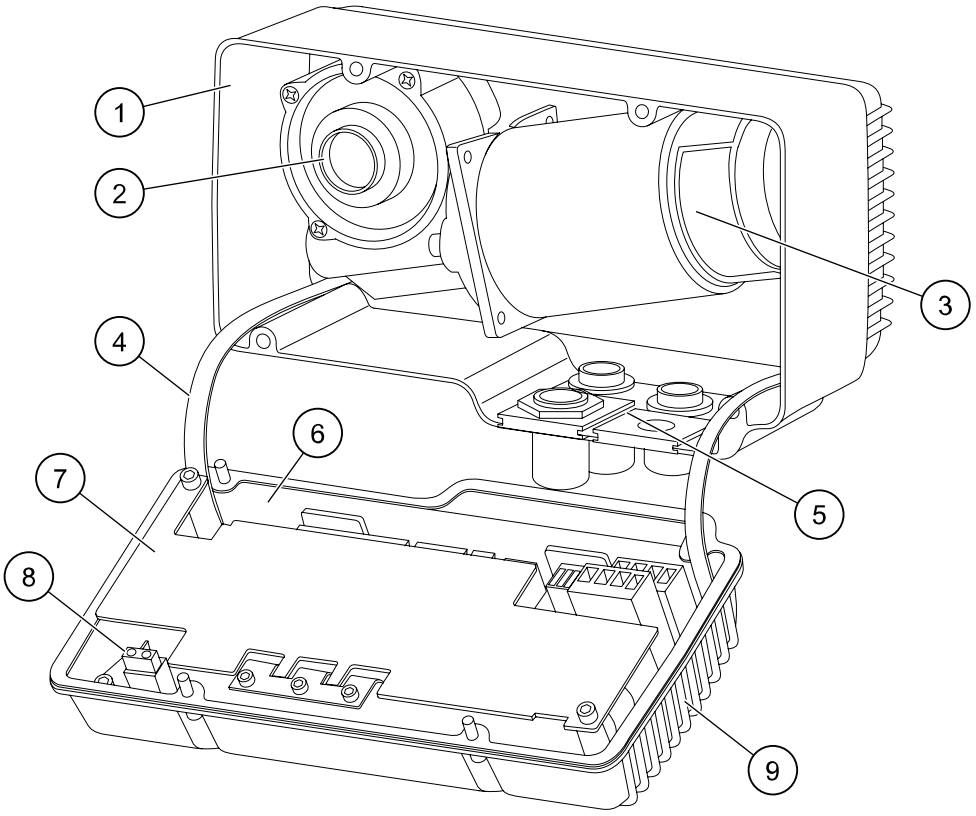
1) For DC 16, 25 and DC-II 16, 25 max. 28 mm
2) For DC 16, 25 and DC-II 16, 25 = 90–200 mm
3) For DC 16, 25 and DC-II 16, 25 = 90–310 mm

Quantity supporting washers	Flange width [mm]			
	74	82	90	100–310
DC 1–5 and DC-II 1–5	3	0	Adjusting rings	Adjusting rings
DC 10 and DC-II 10	4	2		
DC 16, 25 and DC-II 16, 25	3	6	4	

Screw fittings	Tightening torque	Screw-in depth	
		min	max
	[Nm]	[mm]	[mm]
M6	11	12	17
M8	18	16	21

3.7 E11–E34 travel drive 1WD and 2WD

3.7.1 Main parts of the travel drive



1. Housing lower section
2. Worm geared motor
3. Rotary encoder (E22-C)
4. Housing cover safety retainer
5. Plug-in module with cable gland
6. Window for 7-segment display (E11/E34/E22-C)
7. Cover plate of control board
8. Control board
9. Housing cover

The travel drives are controlled by electric signals from the machine control system (crane, crab) in which they are integrated. Control (crane and crab) is preferably manual by an operator. For application in program-controlled machinery, extra safety requirements must be considered, as required. Travel drives for limited travel paths (traveling hoist runway, crane runway) must be provided with motion limiter devices.

3.7.2 Travel drive variants

Travel drive	Part number	Part number for $_{c}CSA_{us}$ design
E11-2WD	71690045	71696545
E22-C1WD	71690145	71696845
E22-C2WD	71690345	71696645
E34-2WD	71690245	71696745

3.7.3 Selection table

Chain hoist			Travel drive								
Load capacity	Size	Reeving	Max. rated capacity incl. dead load [1]	Type	Traveling speed at 50/60 Hz				Possible trolleys	Part number	Max. weight
					Steps		Variable				
					v rated at full load [2]	v max at partial load [2]	v at full load [2]	v at partial load [2]			
[kg]			[kg]		[m/min]	[m/min]	[m/min]	[m/min]			[kg]
125–1000	1-10	1/1	1100	E11–2WD / E11–2WD cCSAus	24/6	30/7.5	1.92–24	2.40–30	U11	716 900 45 716 965 45	4
1000	16	1/1	2200	E22–C2WD / E22–C2WD cCSAus	24/6	30/7.5	1.92–24	2.40–30	U22/U34	716 903 45 716 966 45	5
1250	10	2/1		E22–C1WD / E22–C1WD cCSAus	27/7	33/8	2.16–27	2.64–33	RF 125	716 901 45 716 968 45	
1250	10, 16	1/1									
1600	10	2/1									
1600	16	1/1		E22-C2WD / E22-C2WD cCSAus	24/3	30/7.5	1.2–24	1.5–30	U22/U34	716 903 45 716 966 45	
2000	10, 16	2/1		E22–C1WD / E22–C1WD cCSAus	27/3.5	33/4	1.4–27	4–33	RF 125	716 901 45 716 968 45	
2000	25	1/1	3400	E34–2WD / E34–2WD cCSAus	14/3.5	-	1.12–14	–	U34	716 902 45 / 716 967 45	
2500	10, 16	2/1									
2500	25	1/1									
3200	16	2/1									

1) Max. gradient 1%, > 1% on request

2) Traveling speed values = default. They can be changed by parameterization. For more information, see "Overview of parameters".

I-profile curve radii							
Trolley size		Rated capacity	Push travel		Electric travel		Material travel wheels
Trolley	Traveling motor		Girder flange width [1]	R_{min}	Girder flange width [1]	R_{min}	
		[kg]	[mm]	[mm]	[mm]	[mm]	[mm]
U11	E11–2WD	1100	58–310	1000	58–310	2000	Plastic [2]
U22	E22–C2WD	2200	74–200 [3]	2000	74–200 [3]	3000	Spheroidal-graphite cast-iron [4]
U34	E22–C2WD	2200	201–310 [5]		201–310 [5]		Spheroidal-graphite cast-iron
	E34-2WD	3400	74–310 [5]		74–310 [5]		

1) Max. flange width 500 mm

2) Steel travel rollers optional

3) Flange width for frame size DC 15 – 25 and DC-II 16, 25 = 90–200 mm

4) Plastic travel rollers on request

5) Flange width for frame size DC 15 – DC 25 and DC-II 16, 25 = 90–310 mm

The specified curve radii apply for normal applications. Contact the manufacturer or their representative for frequent curve travel operation (for example, automatic installations). If several trolleys are operated on one girder, it is recommended to use trolley buffers to dampen any collisions between the trolleys. For more information, see Technical Data of the chain hoist.

3.7.4 Electric key data

Voltage [1] frequency (conformity)	Size	Motor size	P_N	CDF	n_N	Starts/h	Min./max. currents and start-up current		
							I_N 220	I_N 480	$I_{max.}$
			[kW]	[%]	[rpm]		[A]	[A]	[A]
3 ~ 220-480 V 50/60 Hz (CE/ cCSAus)	E11–2WD	MP 56 M	0.025	20	862	240	0.30	0.15	1.30
			0.10	40	3450	120	1.10	0.55	2.60
	E22-C1WD / E22–C2WD	MP 56 L	0.05	20	630	240	0.50	0.24	1.16
			0.20	40	2525	120	1.80	0.90	4.30
	E34–2WD	MP 56 XL	0.04	20	478	240	0.50	0.24	1.16
			0.15	40	1914	120	1.60	0.80	3.80

1) Temporary voltage tolerances of +5% and -10% are possible. Motors are rated to insulation class F.

For more information on mains connection fuses, supply cables, and cable lengths, see documentation of the chain hoist.

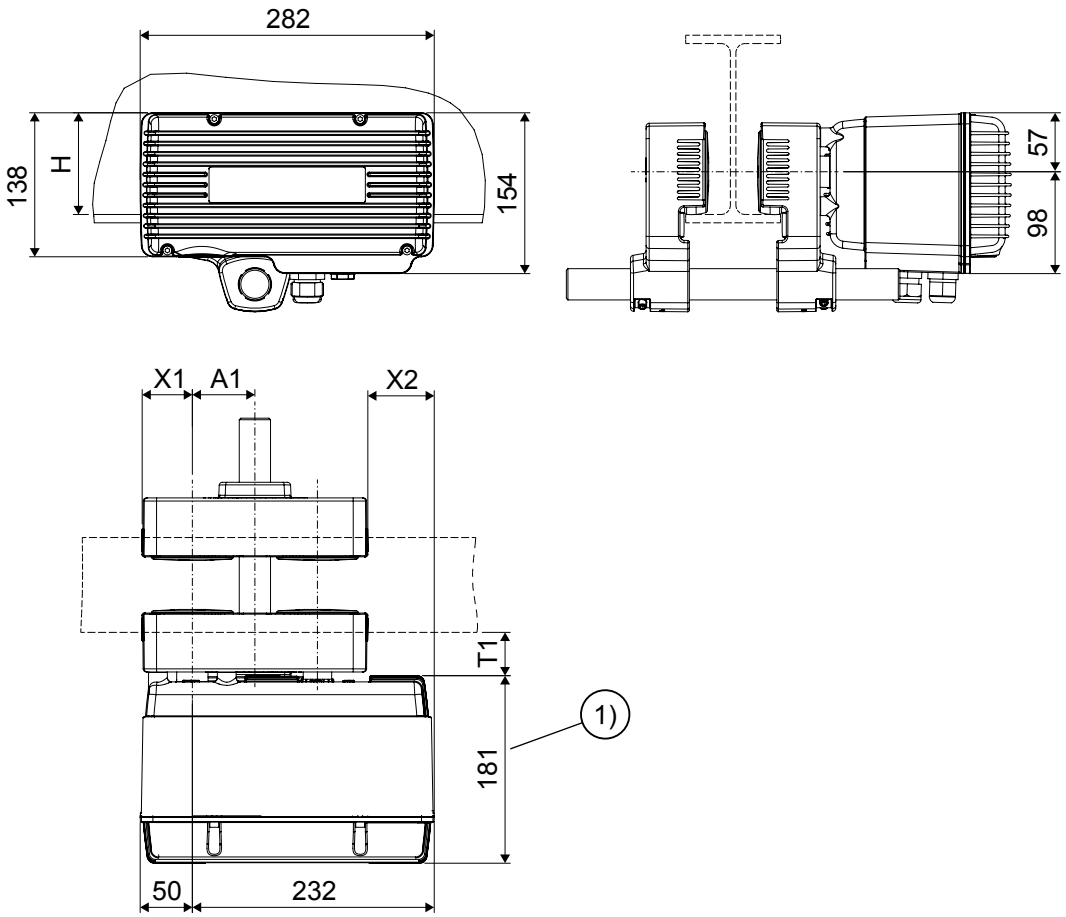
3.7.5 Properties

- Type of enclosure IP 55
- Ambient temperature -20 °C to +40 °C
- Temperature control
- 7-segment display for operating status, error messages, parameterization
- All electrical connections are of plug-in design.
- Inputs for limit switches and fast-to-slow limit switches are integrated on the control board.
- Smooth starting by way of ramps
- For voltages greater than 480 V - 575 V, a single-phase isolating transformer with the following technical data must be integrated into the power supply line:

Type	TTT 0.25
Primary voltage	575 V
Secondary voltage	230 V
Output	250 VA

- E11 - E34 as 2WD is fitted to the relevant U11 - U34 trolley. A toothed belt drive transmits the power to both output shafts.
- E22-C as 1WD is fitted to the new RF 125 friction-wheel travel drive.
- The travel drive is designed to match the electric concept of the chain hoist.
- Line voltage relayed from the travel drive to the chain hoist.
- Signal transmission in steps with 24 V tri-state signals for controlled chain hoists (half-wave evaluation).

3.8 Dimensions for E11–E34 travel drive on U11–U34 trolley

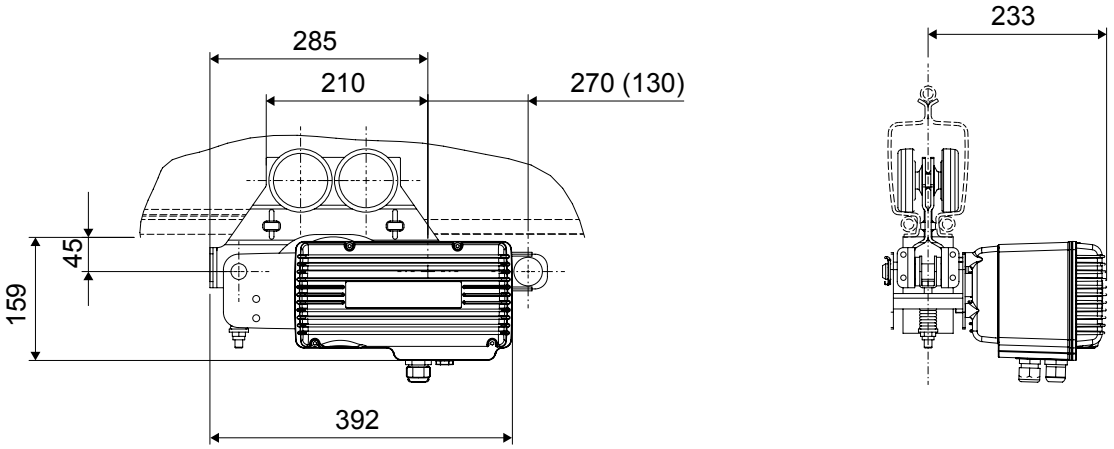


Trolley	A1	H	X1	X2	T1
	[mm]	[mm]	[mm]	[mm]	[mm]
EU11	58	98	50	68	41
EU22-C/EU34	60	112	68	44	49
1) From 04/2018, housing depth is modified from 182–204 mm.					

NOTE

- ***If a long-travel drive on bottom flanges is needed, use the E... 2WD travel drives.***
- ***E11–E34 travel drives cannot be used with a dual-output gearbox in a vertical mounting arrangement.***
- ***Horizontal mounting of the travel drive is recommended for outdoor operation.***

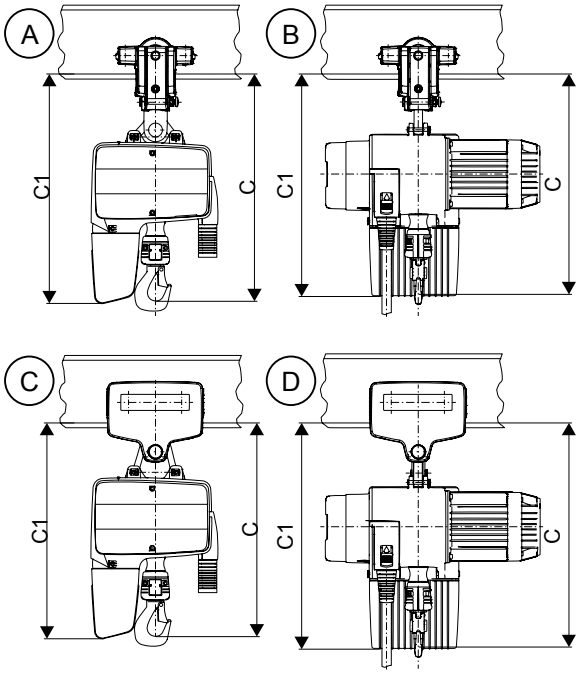
3.9 Dimensions for travel drive on RF 125 trolley



The RF 125 trolley can be used as a cross and long-travel drive.

Spring length (A) with a washer must measure 47 mm when pre-tensioned.

3.10 Hook dimension C with trolleys



A = DC-II 1–5 chain hoist at right angles to the girder with CF5 trolley

B = DC-II 1–5 chain hoist parallel to the girder with CF5 trolley

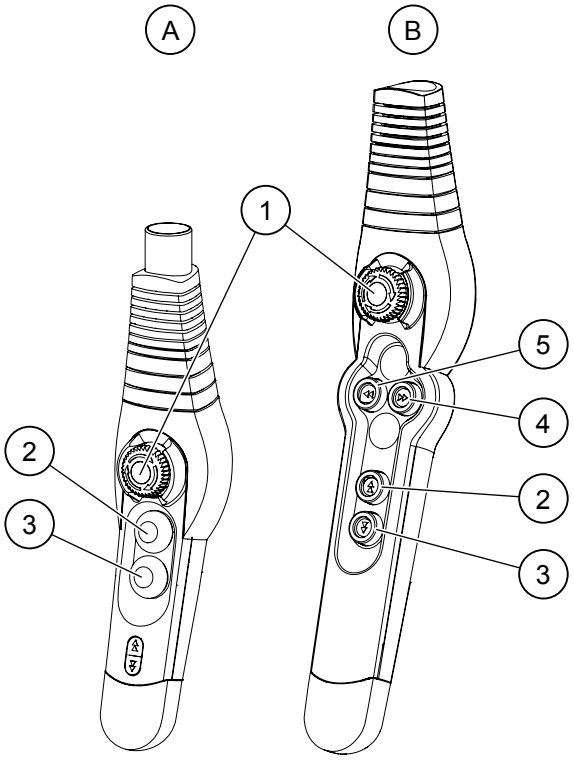
C = DC-II 1–10 chain hoist at right angles to the girder with U11–U34 trolley

D = DC-II 1–10 chain hoist parallel to the girder with U11 - U34 trolley

Hoist size	Motor ZNC ...	Reeving	Trolley type	A and C: Trolley with chain hoist at right angle to the girder				B and D: Trolley with chain hoist parallel to the girder			
					Chain collector size				Chain collector size		
1–2	63 B	1/1		C	H5	H8	H12	C	H5	H8	H12
					C1				C1		
			CF5	499	471	490	520	456.5	428.5	447.5	477.5
			U11	473	445	464	494	–	439.5	458.5	488.5
5	80 B	1/1		C	H3	H5	H8	C	H3	H5	H8
					C1				C1		
			CF5	496	496	515	545	453.5	453.5	472.5	502.5
			U11	470	470	489	519	464.5	464.5	483.5	513.5
10	100 B	1/1		C	H5	H10	–	C	H5	H10	–
					C1				C1		
			U11	584	579	668		578.5	573.5	662.5	
			U22	596	591	680		620	615	704	
		2/1	U22/U34	687				711			
Dimension C = Distance from track to underside of chain bucket											
Dimension C1 = Distance from track to inside hook											
Dimensions C and C1 decrease when the short suspension bracket is used: ■ by 38 mm for hoist sizes 1–5 ■ by 33 mm for hoist size 10											

4 Control units

4.1 Overview and functions of control units



A = DSC, B = DSC-5

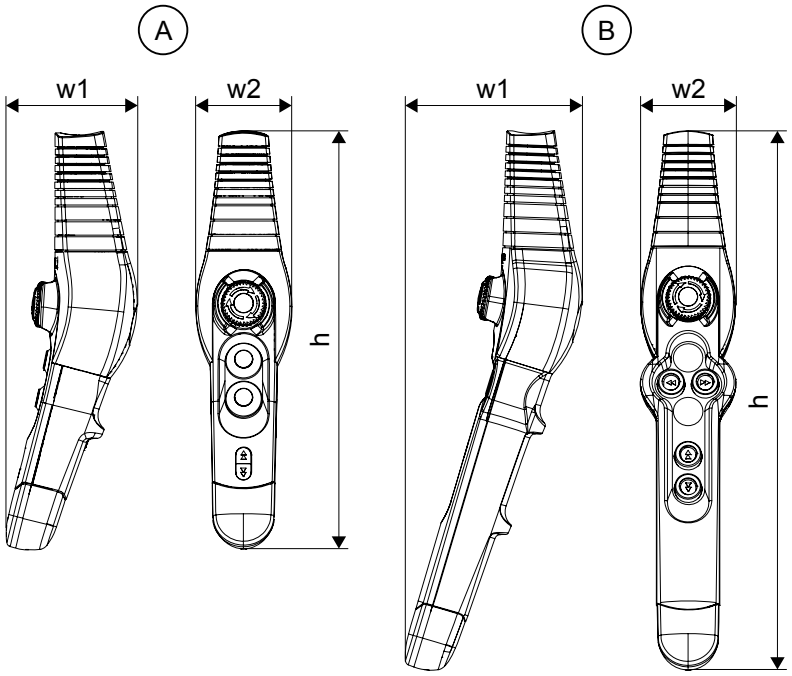
1. Emergency stop
2. Lift
3. Lower
4. Traveling hoist units right
5. Traveling hoist units left

4.2 Standard pendant controllers

Standard DSC (lifting and lowering) pendant controllers are used for manual cable-connected control of the chain hoist. The pendant controllers have a plug-in connection for the control cable. The control cable and the pendant controller are connected by means of a bayonet connector. DSC pendant controllers can be fitted to the height-adjustable standard control cable for DC-II chain hoists.

Technical features

- The housing is non-flammable, climate-proof, corrosion-proof, and resistant to impacts.
- Protective insulation
- Switching distances and forces, holding force < 8 N
- IP 65 enclosure as standard
- Resistant to fuels, salt water, grease, oils, and lyes



Pendant controllers for stepped motions:

Designation		w1 [mm]	w2 [mm]	h [mm]	Axes	Part number	Weight [kg]
A	DSC	87	64	278	1	77330033	0.380
B	DSC-5	119.5	64.4	364.6	2	77393533	0.420

4.3 Standard control cable

The control cable is protected by a flexible, easily bent strain relief sleeve. The suspension height can be adapted to the requirements at the workplace by means of an adjusting mechanism. It is not necessary to cut the cable conductors or to shorten the strain relief sleeve. The adjustable-height control cable is available in three different lengths up to a maximum hook path H11 (9.8 m length). The length of the control cable that is not needed (max. 3 m) is stored under the service cover or in the cable collector. The strain relief sleeve must be fixed at the required suspension height by means of a self-locking clamp mechanism. The pendant controller can be adjusted to a different suspension height by unlocking the locking device.

The strain relief sleeve for the control cable consists of an abrasion-resistant fabric hose with flame-protection impregnation.

The control cable is reinforced by rubber-elastic filler material in the gripping area (0.8 m above the pendant controller) of the strain relief sleeve.

Designation		Part number
Standard control cable	H4, H5	71881033
	H8	71880933
	H11	72003745

ORIGINAL INSTRUCTIONS
07 June 2024
Document ID: DOC2799999A en-US

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