

## Part I of III (User)

### EN: Translated version of the original instructions

#### Electric chain hoist

**PITCH-PF (250 - 32.000) kg**

#### Monorail trolley

**PITCH-EC (250 - 13.000)kg**

**PITCH-PC (250 - 13.000)kg**



Dear customer,

Thank you for purchasing our appliance. We appreciate your confidence in our brand and hope that you are satisfied with your purchase. If you have any questions or problems, please do not hesitate to contact us. Enjoy your new appliance!



Read these instructions carefully before use and keep them in a safe place.



Please make a note of the serial number and the corresponding dimensions before first use.

Serial number: \_\_\_\_\_

Under hook:

g= \_\_\_\_\_ mm

b= \_\_\_\_\_ mm

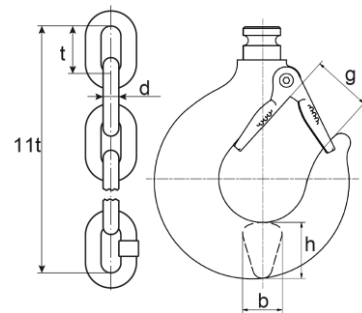
h= \_\_\_\_\_ mm

Load chain:

d= \_\_\_\_\_ mm

t= \_\_\_\_\_ mm

11t= \_\_\_\_\_ mm



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## 1 Introduction

### 1.1 General information



Read these instructions carefully before use and keep them in a safe place.



These instructions provide information on proper commissioning, intended use and safe and efficient operation and maintenance. The operating instructions are an integral part of the product. The illustrations shown in these operating instructions are for basic understanding and may differ from the actual design.



Fitters, operators and maintenance personnel must observe in particular the operating instructions and the documentation provided by the employers' liability insurance association.



Please observe their local regulations and rules. Information on safety, installation, operation, testing and maintenance from these operating instructions must be made available to the appropriate persons. Make sure that these operating instructions are available in close proximity to the product during the period of use of the product.

### 1.2 Information on the manufacturer

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Adresse: Resser Str. 17 | 44653 Herne | Germany

E-Mail: info@planeta-hebetechnik.de  
Phone: 49-(0)-2325-9580-0

### 1.3 CE declaration and declaration of incorporation



A ready-to-use machine with all its associated safety devices has a CE declaration of conformity and is labelled with a CE mark. Incomplete machines are supplied without a CE mark and only contain a Declaration of Incorporation in accordance with the current Machinery Directive.

### 1.4 Copyright



These original operating instructions are protected by copyright. The authorised user has a simple right of use within the scope of the purpose of the contract. Any modified use or exploitation of the contents provided, in particular reproduction, modification or publication of any deviating kind, is only permitted with the prior consent of the manufacturer. If the operating instructions are lost or damaged, a new copy can be requested from the manufacturer. The manufacturer has the right to change the operating instructions without prior notification and is not obliged to replace earlier copies.

### 1.5 Warranty



The warranty is contractually regulated (see General Terms and Conditions or contract).

Warranty and liability claims for personal injury and damage to property are excluded if these are due to one or more of the following causes:

- Improper use of the device.
- Improper operation and maintenance of the device and improper commissioning.
- Failure to follow the instructions in the operating instructions.
- Unauthorized structural changes to the device.
- Disasters caused by foreign bodies and force majeure.
- Inadequate monitoring of equipment parts that are subject to wear and tear.
- Improperly performed repairs.
- Wear parts are not covered by liability for defects.
- We reserve the right to make technical changes to the device in the context of improving the performance characteristics and further development.



For the purposes of this document

Qualified professional:	A qualified professional is a person who has specific knowledge, skills and experience in a particular field. These professionals usually have formal training or relevant work experience that qualifies them for their job. They are able to perform complex tasks independently and responsibly and bring a high level of expertise to the job. Qualified professionals are employed in various fields such as engineering, medicine, IT, crafts, education, management and many others.
Competent person:	Qualified persons for testing are persons who have the required specialist knowledge due to their technical training, knowledge and experience as well as their recent professional activity. The exact requirements for qualification are specified in the relevant regulations and codes of practice. As a rule, these are specialists for occupational safety, experts for the inspection of work equipment or persons with comparable qualifications. However, the exact qualification and competence depends on the type and scope of the inspection. It is important to ensure that the person appointed has the necessary expertise and can carry out the inspection properly.
Expert:	An expert is a "recognised competent person" who, due to his professional training and experience, has knowledge in the field of the work equipment to be tested and is familiar with the relevant state occupational health and safety regulations, regulations of the employers' liability insurance association and generally recognised rules of technology. This competent person must regularly inspect and assess work equipment of the appropriate design and regulations. This qualification is granted by approved inspection bodies.
Electronic specialist:	An electronic specialist is a person who has specific knowledge and skills in the field of electronics. He is able to install, maintain and repair electronic equipment.
Hoist:	Hoist is the generic term for all equipment used to move or lift weights (loads).
Device:	A device is a technical appliance or machine designed to perform a specific function or task. It can be operated electronically, mechanically or manually and consists of various components that work together to achieve the desired result.
Crane:	A crane is a lifting device that can lift loads with a load-bearing device and also move them in one or more directions.
Lifting equipment:	Lifting equipment is equipment that is permanently attached to the hoist, e.g. ropes, chains, lifting beams, grabs, crane hooks, tongs. They are permanently installed in the hoist and are used to take up slings, load handling attachments or loads.

## 2 Safety

### 2.1 Safety information



Most accidents when handling technical equipment are due to disregard of basic safety rules. Recognising a possible hazard can prevent an accident before it occurs.



Disregarding the safety instructions can result in death or serious injury. As the manufacturer of the appliance, we cannot foresee all possible circumstances that may contain potential hazards. Consequently, the safety instructions in this manual are not all-inclusive.



The appliance must not be used in any way that deviates from the considerations in this manual. All applicable safety regulations and protective measures at the place of use must be observed, including site-related regulations and protective measures at the workplace.



Information, descriptions and illustrations in this manual are based on information available at the time of writing.

### 2.2 Regulations and directives



Please take into account the current rules and regulations in your country. The guidelines listed here may not apply to every single device or machine.

Table 1 European directives & regulations

European directives & regulations	
Regulation-2023/1230 EU L165/1	Machinery Product Ordinance
Regulation-1907/2006 L136/3	REACH-Regulation
Directive-2014/34/EU L 96/309	ATEX-Directive**
Directive-2014/53/EU 02014L0053	Funkanalgen-Directive*
Directive-2014/30/EU	EMV-Directive*
Directive-2012/19/EU L197/38	WEEE-Directive*
Directive-94/62/EG 01994L0062	Packaging -Directive
Directive-2011-65/EU L174/88	RoHS-Directive*

\*These listed directives only apply to motor-driven devices or those equipped with an RFID chip.

\*\* These listed directives only apply to equipment used in potentially explosive atmospheres.

### 2.3 Personal protective equipment



Appropriate work clothing must be worn for each task.

For safety reasons, operators and other persons in the immediate vicinity of the machine must wear personal protective equipment (PPE). There are different types of protective equipment that must be selected according to the requirements of the working environment. The chapter "Symbols, command signs and signal words" lists the Personal Protective Equipment that must be worn as a minimum.

## Safety

### 2.4 Requirements for safeguarding health and safety



As a manufacturer, we have taken all necessary measures to ensure the safety and health protection of our machines, equipment, equipment and products. We ensure that all relevant legal and normative requirements in accordance with the Machinery Ordinance (VO-EU-2023/1230) and the Industrial Safety Ordinance (BetrSichV) are met. This includes the careful planning, design and manufacture of our products, the testing and documentation of conformity, as well as the provision of comprehensive operating instructions and safety information. Our products have been developed and tested in accordance with all safety requirements to ensure the health of users and protection against hazards. All necessary tests and certifications have been carried out, and we provide the necessary test certificates as well as declarations of conformity that demonstrate compliance with the legal requirements.



However, safe operation and ensuring health and safety is not the sole responsibility of the manufacturer. Compliance with safety precautions and the proper use of the machines and equipment requires close cooperation with the operators and all other people involved who work with the product or put it into operation. In this context, we would like to expressly point out that the responsibility for the safe use and operation of our products is a joint task. Only through consistent compliance with the defined safety standards and obligations by all parties can a permanently safe and healthy operation be guaranteed. The specific responsibilities of the various parties involved are explained in detail later in this document. However, as a manufacturer, we cannot fully list all the responsibilities of the parties involved, as they are outside our remit. Moreover, such a comprehensive list would go beyond the scope of this document and would unnecessarily prolong it. Our responsibility is limited to the aspects associated with design, manufacture, compliance and the provision of documentation and safety information.



## 2.5 Responsibilities of the various parties involved



The responsibilities of the various parties involved – operators, users and all other persons involved – in connection with machines, equipment, devices and products are laid down in various legal regulations, guidelines and standards. These responsibilities relate to the safe operation as well as the maintenance and repair of the aforementioned lists.

### 2.5.1 Responsibility of manufacturers



The manufacturer of a machine has full responsibility for the safety and compliance of the product he is placing on the market. This responsibility begins with the design and development of the machine and extends to the provision of all relevant documentation and to ensure a proper market launch. The manufacturer must ensure that the machine complies with all applicable national and international regulations and that it is safe for use. This includes not only the Machinery Ordinance, but also other relevant standards and regulations, depending on the type of machine and the intended use. One of the manufacturer's key responsibilities is to conduct a thorough risk assessment and ensure that all potential hazards associated with the machine are identified and adequately addressed. All safety-relevant aspects, such as mechanical, electrical, thermal and chemical hazards as well as the user-friendliness of the machine, must be analysed and minimised by suitable protective measures. The manufacturer must ensure that the machine is designed and built in such a way that, when used correctly, it does not pose a risk to the health and safety of persons, animals or the environment. Another important aspect is the preparation and provision of complete technical documentation, which, in addition to the declaration of conformity, also includes operating instructions, maintenance and repair instructions and, if applicable, test books and test certificates. This documentation must be clear, understandable and complete to ensure that the operator of the machine has all the relevant information to operate and maintain the machine safely and efficiently. The operating instructions must contain detailed information on installation, commissioning, maintenance, operation and, if necessary, disposal of the machine. In addition, the instructions must also include warnings about potential hazards and safety-related aspects. The manufacturer must ensure that the machine complies with applicable safety standards throughout its life cycle and also that it is regularly checked and maintained to ensure safe operation. For machines that need regular maintenance or repair, the manufacturer is obliged to provide spare parts and appropriate maintenance procedures. He must also ensure that all parts and components required for safe operation comply with the required standards.



In summary, the manufacturer of a machine has the overall responsibility for ensuring that the product is safe and functional, complies with legal requirements and provides all the necessary information for safe operation. This includes design, production, documentation, maintenance, market surveillance and, if necessary, correction of safety defects.



The operator of a machine has a comprehensive responsibility that includes the safety of the machine itself as well as the protection of employees and the environment. One of the operator's essential responsibilities is to ensure that the machine complies with applicable legal requirements and is properly operated, maintained and tested. This responsibility is laid down in various legal and normative regulations, in particular in the Industrial Safety Ordinance (BetrSichV), the Machinery Ordinance (VO-EU-2023/1230) and in the corresponding standards and occupational health and safety regulations. One of the operator's key responsibilities is to ensure that the machine complies with the relevant safety regulations. The operator must ensure that all machinery and equipment used in his operation bears the necessary CE markings and has a declaration of conformity from the manufacturer. This declaration confirms that the machine complies with the essential health and safety requirements. In the event of modifications to the machine that could affect its safety characteristics, the operator is obliged to carry out a new risk assessment and, if necessary, update the declaration of conformity. The operator must also ensure that all documentation, such as operating instructions, maintenance protocols, test certificates and safety data sheets, is available and always up to date. These documents are essential for the safe operation and maintenance of the machine and must be made available to all affected employees. An important aspect is that the operating manuals provide users with all relevant information on safe operating conditions, emergency measures and maintenance requirements. Another central element of operator responsibility is the regular maintenance and servicing of the machines. The operator must ensure that regular inspections, maintenance and inspection intervals are maintained to ensure the safety and functionality of the machines throughout their life cycle. This includes the proper execution of inspections, repairs and adjustments by qualified personnel. The use of spare parts must also be carried out in such a way that the machine can continue to be operated safely. In addition to technical maintenance, the operator is also responsible for training and instructing users. All persons who work with the machine must be informed about how it works, safety precautions and the correct operating methods. The operator must ensure that all employees are regularly instructed in the safe handling of the machine and have the necessary knowledge of potential hazards and emergency measures. Likewise, the operator must ensure that the necessary personal protective equipment (such as helmets, goggles, gloves) is available and used by users. In addition, the operator must ensure that the working environment is safeguarded. This includes ensuring that the machine is operated in a safe and well-maintained condition, for example by providing the right lighting, ventilation and emergency exits around the machine. The operator is also responsible for the correct marking of hazardous areas and the installation of protective devices, such as protective devices or emergency stop switches. In the event of an accident or safety incident, the operator is responsible for carrying out accident analyses and taking appropriate measures to avoid future incidents. This also includes the timely reporting of accidents at work to the relevant authorities, as well as the documentation and investigation of accidents in order to determine their causes and take preventive measures.



In summary, the responsibility of the operator of a machine goes far beyond mere operation. It includes legal and technical responsibility for the safety of the machine, compliance with all relevant regulations, provision of training and documentation, regular maintenance and continuous monitoring of safe operation. All of these tasks are designed to ensure employee safety, maximize operational efficiency, and identify and address potential hazards at an early stage.

### 2.5.3 Responsibility of the users



The user or operator of a machine bears a variety of important responsibilities aimed at the safe, efficient and proper operation of the machine. Its central tasks include the safe handling of the machine in accordance with the manufacturer's specifications and compliance with the applicable safety precautions and operating regulations. A major responsibility of the user is to familiarize himself intensively with the operating instructions in order to correctly understand and apply all the functionalities of the machine. This includes, in particular, information on safe modes of operation, permissible operating conditions and possible sources of danger. The user is obliged to operate the machine exclusively for the intended purpose and within the specified operating limits. Another essential point of responsibility is the use of the necessary personal protective equipment (PPE), such as goggles, helmets, hearing protection and special protective clothing, which may be mandatory for the safe operation of the machine. The user must ensure that all protective devices, such as protective grilles, emergency stop switches, etc., are in perfect condition and working properly. If a guard is defective or out of service, the machine must not be operated until the defect is corrected. The user is also obliged to regularly check whether the machine operating equipment and safety functions are working correctly. Furthermore, the user is responsible for immediately informing the operator or maintenance technician if defects or malfunctions of the machine are discovered. The proper cleaning and maintenance of machines, insofar as this is necessary in the context of daily use, also falls within the scope of the user's area of responsibility. The user must also ensure that he or she participates at regular intervals in training and instruction necessary to maintain operational and occupational safety. This includes recurring safety briefings as well as special training on new machine functions or changes in the safety concept. An important aspect of user responsibility is the proper reporting of accidents, near misses or hazards. If an incident occurs, the user must react quickly and correctly to emergency situations and, if necessary, initiate emergency measures to prevent major damage or injury. This also includes the correct handling of emergency stop switches and the rapid evacuation of people in the event of danger. In addition, the user must ensure that no hazardous work is carried out when operating the machine that could lead to damage to health. This includes, for example, avoiding dangerous postures or unprotected contact points that can lead to accidents. In addition, the user must always work attentively and concentrated, and is obliged to regularly monitor the machine during use in order to detect malfunctions or anomalies at an early stage. Finally, the user must ensure that all relevant documents such as test protocols and maintenance reports are available and complete. This means that it can be traced at any time whether the machine has been properly maintained and meets the current safety requirements.



Overall, the user bears a high responsibility for safety during the operation of the machine and is responsible for ensuring that the machine is operated in accordance with the established regulations and taking into account all safety aspects.



An installer responsible for assembling a machine carries a variety of important tasks and responsibilities that are central to the safety, functionality and proper operation of the machine. His tasks include not only the physical assembly of the machine, but also the observance of safety precautions and compliance with relevant legal regulations. First of all, the fitter must ensure that he has all the necessary technical documents and documentation. This includes, in particular, the detailed installation instructions, test certificates and, if applicable, the manufacturer's declarations of conformity. On the basis of these documents, the machine is carefully assembled, with each step of the assembly process being carried out exactly according to the instructions to ensure the functionality and safety of the machine. The fitter is responsible for ensuring that all components are assembled correctly and that all mechanical, electrical and hydraulic connections are made without errors. An essential part of the installer's responsibility is to inspect all safety-related elements during assembly and to ensure that all guards, emergency shutdowns, emergency stop switches and safety interlocks are properly installed. This serves to protect the future users of the machine and is often also a prerequisite for complying with the Machinery Ordinance (VO-EU-2023/1230) and the Industrial Safety Ordinance (BetrSichV). During assembly, the fitter must carry out regular checks to ensure that there are no sources of error and that the machine is operating in accordance with the specified technical requirements. In addition, he is responsible for ensuring that no components are damaged and that the entire construction meets the permissible tolerances. In the event of any ambiguity or problem, the fitter must inform the supervisor or the technical manager in order to find a solution. Another important aspect of the installer's responsibility is compliance with health and safety regulations. The fitter must ensure that all work is carried out taking into account personal protective equipment (such as helmets, goggles, gloves) and in accordance with the applicable safety standards. It is also part of his duties to identify potential hazards during installation and, if necessary, to take appropriate measures to mitigate the risk. Once the assembly is complete, the fitter is also responsible for ensuring that the machine undergoes a thorough final inspection. This includes an audit of all functions and safety mechanisms to ensure that the machine is working properly before being handed over to the operator. In many cases, the installer also needs to perform initial commissioning, monitoring that all parts are working properly and that there are no unexpected problems. In addition, the fitter is responsible for the correct documentation of the work carried out, for example by filling out test protocols and maintenance reports. This documentation is important for future maintenance and inspection measures and ensures that the machine meets the required standards at all times.



In summary, the fitter has a far-reaching responsibility for the safe and proper assembly of the machine. This includes strict adherence to the assembly instructions, ensuring the functionality and safety of the machine, compliance with health and safety regulations, and thorough final inspection and documentation of the work carried out. All these tasks must be carried out in compliance with the relevant standards and legal regulations, in particular the Machinery Directive and the Industrial Safety Ordinance.

## 2.6 Requirements for users and fitters: Physical, mental and professional requirements



Users and fitters must be able to perform their tasks safely and efficiently, both physically and mentally. The physical condition should enable the persons concerned to carry out the necessary work without any health risks. This includes the ability to lift heavy loads, cope with physical stress over long periods of time, and have sufficient mobility and coordination to comply with safety requirements. Especially in work environments that operate with machines and equipment, physical fitness is a crucial factor in preventing injuries and accidents. The mental state of the users and fitters also plays a central role. They must be able to understand complex instructions, correctly operate and maintain machines, and identify potential hazards at an early stage. Quick reactions and a high degree of concentration are required in order to react adequately in the event of malfunctions or unforeseen situations. A strong problem-solving ability and the ability to interpret technical documentation correctly are essential for the error-free execution of maintenance work and the elimination of faults. In addition, sound vocational training is a prerequisite for acquiring the necessary specialist knowledge. This includes both theoretical and practical training content that is tailored to the respective activities. Users and installers must be familiar with the relevant regulations and standards and be able to take safety precautions and take the right protective measures. Regular education and training on current safety standards and new technologies is also of great importance in order to keep the specialist knowledge up to date and to ensure the safe operation of the machines and systems.



If operators do not ensure that users and fitters have the necessary physical, mental and professional qualities, serious consequences can occur that endanger both the safety of the persons concerned and the smooth operation of the machines and systems.

- Increased risk of accidents and injuries: A physically or mentally unfit user or fitter cannot safely operate machines or equipment. This increases the risk of accidents, injuries or even deaths. Lack of physical fitness or concentration can lead to errors when handling dangerous machinery or lifting heavy loads. Errors in the assembly or maintenance of equipment can lead to operational disruptions or serious accidents.
- Malfunctions and damage to machines: An inadequately trained user or installer cannot operate or maintain machines or equipment properly, which can lead to incorrect use or inadequate maintenance. This can lead to serious machine failures, breakdowns, or even damage to machinery and equipment, which in turn results in costly repairs and downtime.
- Non-compliance with safety regulations and standards: Without the necessary training and expertise, users and installers can disregard important safety regulations and standards. This can lead to the machines and systems not being operated in accordance with the legal and safety-relevant requirements, which in the worst case can lead to legal consequences and liability issues for the operator.
- Negative impact on productivity and efficiency: If users and installers are not sufficiently qualified, this can lead to repeated errors, inefficient work and increased resource expenditure. This affects productivity, increases costs, and lowers the overall performance of the company.
- Damage to the company's image: A company that does not take sufficient measures to ensure the suitability of its employees risks damaging its image. Accidents, poor product quality and improper maintenance can affect the trust of customers and business partners and lead to financial losses and a loss of market share.
- Legal consequences and liability: If accidents or damage occur due to a lack of qualification of users or fitters, the operator may be liable for the consequences. Legal action against the company, fines and claims for damages are possible if the operator does not assume its responsibility for the suitability of the persons involved.

Overall, the failure to ensure the necessary physical, mental and professional characteristics of the users and fitters leads not only to immediate safety risks, but also to long-term economic and legal consequences for the operator.

## Safety

### 2.7 Symbols, mandatory, warning and prohibition signs



This operating manual contains mandatory, warning and prohibition signs that convey important information and safety instructions. Not all characters are relevant to every situation, as they can vary depending on the model, application, or regulations. The user must read the instructions carefully and identify the applicable characters. If you are unsure, it is advisable to consult the manufacturer or experts. Note that not all hazards are covered, and it is the user's responsibility to assess the environment and take necessary safety measures.



#### General Mandatory Sign

This icon indicates important information.



#### Follow the operating instructions

This symbol indicates that the existing operating instructions must be observed.



#### Use hearing protection

This symbol indicates that hearing protection must be used to avoid the risk of hearing damage.



#### Use eye protection

This symbol indicates that eye protection must be used to prevent eye injuries.



#### Use handguards

This symbol indicates that hand protection must be worn to avoid injuries to the hands/fingers.



#### Use foot protection

This symbol indicates that foot protection must be used to prevent foot injuries.



#### Pay attention to the power plug

This symbol warns against unplugging the power supply before maintenance or repair work to prevent electric shock or unauthorized operation.



#### De-energizing

This symbol indicates that the machine must be unlocked before maintenance or repair to ensure safe work



#### Keep closed

This symbol indicates that the device must be kept closed at all times to avoid danger.



#### Audible signal

This symbol indicates that an audible signal is emitted. Be sure to respond to the signal to avoid hazards.



#### General warning sign

This warning sign indicates potential dangers. Follow the safety instructions provided to prevent damage or injury.



#### Hot surface warning

This warning sign indicates that the surface is hot and there is a risk of burns if touched.



#### Electrical voltage warning

This warning sign indicates that there is dangerous electrical voltage in this area. Touching can lead to serious injury or danger to life.



#### Warning of obstacles in the head area

This warning sign indicates that there are obstacles in the header area. Protect yourself from injury by staying alert and using protective measures such as a helmet if necessary.



#### Suspended load warning

This warning sign indicates that suspended loads can pose a hazard. Stay out of the danger zone to avoid injury.



#### Warning of obstacles on the ground

This warning sign indicates that there may be obstacles on the ground that pose a risk of tripping or accidents.



#### General prohibition sign

This prohibition sign indicates that a certain act is prohibited. Failure to do so can result in serious damage and/or fatal injury.



#### No touching

This prohibition sign indicates that touching the marked object or area is prohibited. Failure to do so can result in serious damage and/or fatal injury.

## 2.8 Proper and improper uses

### 2.8.1 Proper uses



The intended use of a stationary electric chain hoist is to move or hold goods such as machinery and machine parts, building materials, containers, etc. in a vertical direction, as long as the weight of these goods is below the load capacity of the cylindrical pulley.



An electric chain hoist permanently installed with a monorail trolley can move goods horizontally along a steel girder. According to DGUV V52, such a combination is considered a crane, even in mobile or (partially) power-driven use. Any use beyond this is contrary to its intended purpose and increases the risk of accidents and damage. The operator is obliged to use the pulley in accordance with regulations and within its specifications. Expert advice is recommended to comply with the regulations.

### 2.8.2 Improper uses



Uses that are contrary to their intended purpose are those in which the above-mentioned device is not used in accordance with the intended conditions of use and safety regulations. These include, but are not limited to:

- Overload prohibited: The maximum load capacity of the device must never be exceeded.
- Attach load correctly: The load must always be securely and stably attached to the device to prevent it from slipping or loosening during lifting or transport.
- Keep suspension equipment free of twisting: Suspension equipment must not be knotted or twisted.
- Avoid sharp deflections: Loads must not be guided over sharp edges, as this can lead to material damage to the suspension equipment.
- Avoid diagonal pulling: Diagonal pulling with an angle of more than 4° is prohibited.
- Avoid dynamic loads: Sudden bumps or blows, such as those caused by jerky movements or falling into a loose chain, can damage the structure of the device and affect safety.
- Avoid static loads: Permanent loading, e.g. by applying loads over long periods of time, can put a permanent load on the device and lead to premature wear.
- Pulling against fixed resistances: The device must not be used to pull loads against fixed, immovable objects.
- Tampering or Modification: Any manipulation or modification of the device without the manufacturer's authorization is prohibited and may cause security issues and void the warranty.
- Maintain safety distances: Safety distances from people and other equipment must be maintained at all times to avoid accidents caused by unexpected movements or load drops. It is particularly important that no loads are positioned above people.
- Involve specialist personnel for examinations: Examinations, in particular safety-relevant inspections, may only be carried out by qualified specialists. The operating personnel must be trained in the safe handling of the device to ensure proper operation and safety.
- Comply with temperature specifications: The device must only be operated within the temperature range specified by the manufacturer. Extreme temperatures can affect the material or the functioning of the device.
- Protection against weather extremes: The device should only be operated with appropriate protective measures in extreme weather conditions, such as heavy rain, snow or extreme temperatures. Extreme weather conditions may affect the functionality and safety of the device.
- Use for personal security and transport: The device must not be used for personal security or passenger transport.
- Use in potentially explosive atmospheres: In areas with a high risk of explosion, the device may only be used if it has been specially equipped for this purpose (e.g. explosion-proof equipment).
- High-vibration use: If the device is operated in a high-vibration environment, it can cause damage to the components and shorten the life of the device.
- Use in environments with harsh chemicals: Contact with harsh chemicals can lead to corrosion or other material damage. Therefore, the device should either not be used in such environments or operated with protective precautions.
- Regular maintenance and inspection: The unit must be serviced and inspected regularly to ensure the proper functioning of all components. All maintenance and inspection measures must be documented in order to ensure a complete history.
- Reuse without periodic inspection: Continued use without adherence to the inspection intervals is prohibited.



Please note that the above examples of improper use of the above-mentioned device are only excerpts and do not fully cover all possible scenarios. They are only intended as a guide to give you an overview of potential risks. It is important to emphasize that the responsibility for the safe use of the above-mentioned equipment lies with the user or operator.

## Safety

### 2.9 Hazards according to DIN EN ISO 12100



The following hazards may occur when handling the device.

Please note that the following types of hazards and examples of how to use the device are only excerpts and do not fully cover all possible scenarios. They are only intended as a guide to give you an overview of potential risks. It is important to emphasize that the responsibility for the safe use of the above-mentioned devices lies with the user or operator.

#### 2.9.1 Mechanical hazards



Various mechanical hazards can occur when handling lifting equipment. Here are some examples:

- Risk of entrapment: For example, if a crane hook or load is lowered uncontrollably, there is a risk of fingers or other body parts being trapped.
- Crush hazard: When lifting or moving heavy loads, they can be pressed against other objects or people and thus pose a crushing hazard.
- Risk of falling: If hoists are not properly secured or used improperly, the load can fall, which can be dangerous for both the load itself and people nearby.
- Risk of slipping: If the load is not properly secured or the hoist is not properly attached, the load can slip and fall, which can lead to injury.
- Risk of overloading: If a hoist is loaded beyond its maximum load capacity, there is a risk of breakage or damage to the hoist, which can lead to accidents.
- Snagging parts: There is a risk that clothing, tools or other objects could become entangled in the moving parts of the hoist, causing injury.
- Sharp edges or pointed objects: Some loads that are lifted with hoists may contain sharp edges or pointed objects. If these are not properly secured or fall off, there is a risk of cuts or puncture wounds.
- Lack of maintenance: If hoists are not regularly serviced and checked, signs of wear and tear can occur, which can lead to equipment failure and thus pose a hazard.

#### 2.9.2 Electronic Hazards



Various electronic hazards can occur when handling lifting equipment. Here are some examples:

- Risk of electric shock: If electrical hoists are not properly insulated or have damaged wires or plugs, there is a risk of electric shock to anyone operating or in the vicinity of the equipment.
- Short-circuit risk: Damaged cables or plugs can lead to a short circuit, which can not only damage the hoist itself, but also cause fires or other electrical disturbances.
- Risk of overheating: When electric hoists are overloaded or run for an extended period of time without adequate cooling, there is a risk of equipment overheating, which can lead to breakdowns or even fires.
- Lack of grounding: If an electric hoist is not properly grounded, it can cause electrostatic discharge, which can be dangerous for both the equipment itself and people nearby.
- Improper use of extension cords: If extension cords are used to drive the hoist, they must comply with the appropriate safety standards and must not be overloaded. Otherwise, there is a risk of short circuits or fires.
- Lack of maintenance: Electrical hoists need regular maintenance and inspection to ensure that all electrical components are working properly and there is no risk of electrical interference.



### 2.9.3 Material and/or substantial hazards



When handling lifting equipment, various hazards can occur due to materials and/or substances. Here are some examples:

- Hazardous or toxic substances: When handling lifting equipment, loads containing hazardous or toxic substances can be transported. If these substances leak or are released, there is a risk of injury or poisoning to people nearby.
- Explosive materials: Transporting explosive materials by lifting equipment can pose a significant hazard. Improper handling or accidental dropping of such loads can lead to explosions and endanger both people and property.
- Heavy or unstable material: Handling heavy or unstable material can lead to increased danger. For example, if a heavy load is not lifted properly or shifts during transport, it can cause accidents and injure people.
- Chemicals: There is a risk of exposure to hazardous fumes, gases, or liquids when using lifting equipment in areas where chemicals are used. This can lead to respiratory problems, skin irritation, or other health problems.
- Asbestos or other harmful substances: When lifting equipment is used in areas where asbestos-containing materials or other harmful substances are present, there is a risk of exposure to these substances. This can lead to serious health problems, especially if proper protective measures are not taken.

### 2.9.4 Acoustic hazards



When handling lifting equipment, various hazards can occur due to acoustic noise. Here are some examples:

- Hearing damage: The operation of lifting equipment can result in significant noise pollution that can damage hearing. Long-term exposure to high noise levels can lead to permanent hearing damage.
- Communication difficulties: Due to the loud noise level, communication and understanding between employees can be difficult. This can lead to misunderstandings or mistakes and compromise security.
- Distraction: Noise can be distracting and affect employee concentration. This can lead to errors in the operation of the hoist or carelessness, which in turn increases the risk of accidents.
- Stress and fatigue: Continuous noise can cause stress and lead to fatigue. This can affect job performance and increase the risk of errors or accidents.
- Interference with warning signals: In a noisy environment, audible warning signals or alarm signals may not be heard, which can lead to a delayed response to potential hazards.

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### 2.10 Residual risks

#### 2.10.1 General residual risks



When handling the device, different residual risks can occur in different phases of life. Although it is impossible to completely eliminate all risks, residual risks can be minimized by various measures. Here are some ways to avoid residual risks:

- Risk assessment: Conduct a thorough risk assessment to identify potential hazards and assess their likelihood and impact. This allows you to take targeted measures to minimize risks.
- Technical protective measures: Use technical protective measures such as protective devices, emergency stop switches or safety systems to shield or control sources of danger.
- Organizational measures: Implement organizational measures such as clear work instructions, employee training, regular maintenance and inspections, and compliance with safety standards and regulations.
- Personal Protective Equipment (PPE): Provide appropriate PPE and ensure that employees use and maintain it correctly.
- Training and awareness-raising: Regular training for employees to educate them about potential hazards and provide them with the necessary knowledge and risk prevention skills.
- Continuous improvement: Regularly review your security measures and procedures to identify and improve potential vulnerabilities.
- Collaborate with experts: Consult professionals such as safety engineers or occupational health and safety experts to conduct an informed risk assessment and recommend appropriate risk mitigation measures.

It is important that all employees are actively involved in the identification and mitigation of residual risks. Through a holistic safety approach, residual risks can be minimized and a safe workplace can be guaranteed.

#### 2.10.2 General Types of Residual Risks:



There are different types of residual risks that can persist despite all security measures. Here are some examples:

- Accepted risks: These are risks that are considered acceptable due to their low probability or impact. They can occur, for example, when all possible risk mitigation measures have been taken, but a residual risk remains.
- Unforeseen risks: In any situation, there is always some uncertainty and unpredictability. Unforeseen risks can arise when new sources of danger or unexpected events arise for which no specific safety precautions have been taken.
- Human error: Despite training and guidance, human error can occur, whether through negligence, inattention, or misjudgment. This can lead to residual risks, as not all employees always act correctly.
- Technical defects: Although machines and systems are regularly maintained and checked, there is always the risk of technical defects or failures, which can lead to residual risks.
- External influences: External factors such as weather conditions, natural disasters, or human error can create residual risks that are beyond the company's control.
- Change in the work environment: As the work environment or working conditions change, new risks may arise that may require additional protective measures.

It is important to note that residual risks cannot be completely avoided. It is best to take all possible measures to mitigate risk and to continuously train and sensitize employees to keep the residual risk as low as possible.

## 2.11 Basic ideas

### 2.11.1 Duty cycle ED in %



- For each engine group, the duty cycle in intermittent mode refers to the period during which the engine can be actively operated before the engine needs a rest period to avoid overheating. The duty cycle is expressed as a percentage. A typical duty cycle value is between 30% and 60%. This means that within a certain period of time, for example 10 minutes, the engine can be on for a maximum of 3 / 6 minutes before it has to be switched off for the rest of the time.
- Unless otherwise specified by the manufacturer, the minimum values for intermittent and short-term operation in relation to the engine group are specified in FEM 9.683 paragraph 5.8.2.2.
- Intermittent operation: In intermittent mode, the motor can be operated at smaller intervals than the specified maximum permissible operating time. This regularly results in smaller breaks. E.g. engine group 1Am, the engine can run for 3 minutes at a time under full load and then has to take a break of 7 minutes.
- Short-term operation: In short-term operation, the engine can be operated without a break for the duration of the maximum permitted operating time. This only applies to the main hub! After that, a much longer break must be taken. Break time is at least 1.5 times the operating time. This corresponds to a break time of at least 22.5 minutes with the same engine group 1Am.

### 2.11.2 Switching cycles s/ & circuits c/h



- The switching backlash s/h for electrical appliances indicates how many times per hour the appliance can set a load in motion without causing damage or impairment of functionality. A switching cycle consists of a complete lifting process (lifting and setting down a load) and is expressed in games/hour.
- In electrical engineering, the circuit c/h or the frequency refers to a complete change of a switching state (start/stop) or pressing/releasing and is also specified per hour. Colloquially, the switch-on also refers to "typing mode".
- A higher switching cycle means that the device has a higher switching frequency and can therefore be switched on and off more often. This can be relevant, for example, for devices such as switches, relays or electronic components that need to be switched frequently. A lower switching cycle, on the other hand, means that the device has a lower switching frequency and can be switched on and off less often. This can be relevant, for example, in equipment such as motors, compressors or heaters, where frequent switching can lead to overload or premature wear.
- The number of possible games or starts per hour depends, among other things, on the duty cycle.
- The backlash s/h and the circuits c/h are therefore important indications to ensure that an electrical appliance functions properly and reliably. It is advisable to follow the manufacturer's instructions.

### 2.11.3 Degrees of protection



- The IP protection class describes an internationally standardised property of electrical equipment against external influences. In particular, it is a question of how well an enclosure is protected against the ingress of foreign bodies and liquids. This classification makes it easy to see whether a device is suitable for a particular purpose. For example, lighting for an uncovered area in the garden, for example, should be able to cope with both moisture and dirt. It is obvious that a lamp for the desk is not the ideal choice here.
- The IP protection classes allow gradations to be displayed. The description of the degree of protection is provided by the IP code. This is made up of two digits. The decisive factor here is the order in which the digits are displayed in the code.
- Protection against foreign objects and contact is expressed with the first digit. And the second digit indicates the moisture protection.
- The abbreviation IP stands for "International Protection" (sometimes also for "Ingress Protection").

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### 2.11.4 D8, D8+ and C1 versions



- D8: A D8 device within the meaning of this quality standard complies with the requirements set out in DIN EN 14492-2:2010-5 and may not be used to hold and move loads over persons without additional protective measures.
- D8 Plus: A D8 Plus device within the meaning of this quality standard is designed, dimensioned and equipped in such a way that it can be used to hold loads over people.
- C1: A C1 device within the meaning of this quality standard meets the requirements set out in DIN 56950-1 and can generally be used to hold and move loads over people.

Table 2 Types of embodiment

Type of use	D8 Without secondary fuse	D8 With a secondary fuse	D8+ With additional brake	C1 With additional brake
People are underneath a stationary held load	not allowed	allowed		
People are underneath a moving load	not allowed			allowed
Movement of people	not allowed			allowed

## 2.11.5 FEM 9,511 Engine group



The FEM 9.511 engine group is a standard that specifies specific requirements for electric hoists. It defines different classes based on load capacity and intended use and specifies requirements for design, safety, performance and maintenance.

Table 3 Engine group according to FEM 9.511

Engine group		Intermittent operation		Short-term operation	
FEM	ISO	Games per hour	Switch-ons per hour	Duty cycle in %	Max. operating time in min
1Dm	M1	15	90	15	7,5
1Cm	M2	20	120	20	7,5
1Bm	M3	25	150	25	15
1Am	M4	30	180	30	15
2m	M5	40	240	40	30
3m	M6	50	300	50	30
4m	M7	60	360	60	60
5m	M8	60	360	60	>60

## 2.11.5.1 Runtime Classes



The runtime class indicates the average running time of an engine per day. An engine is considered to be running when it is in motion. For engines that are not used regularly during the year, the average running time per day is given by the ratio of the annual running time to 250 working days per year.

Table 4 Runtime classes according to FEM 9.511

Runtime class	Mean daily runtime in h	Calculated total runtime in h
V 0,12	$\leq 0,25$	400
V 0,25	$\leq 0,5$	800
V 0,5	$\leq 1$	1.600
V 1	$\leq 2$	3.200
V 2	$\leq 4$	6.300
V 3	$\leq 8$	12.500
V 4	$\leq 16$	25.000
V 5	$> 16$	50.000

## 2.11.5.2 Load collective



The load spectrum indicates the extent to which an engine or part of it is exposed to its maximum stress or only minor loads. For the exact group classification, the cubic central work  $k$ , related to the load-bearing capacity, is required.

Table 5 Load collective according to FEM 9.511

Load collective	Cubic Mean	Definition
L1 (easy)	$k \leq 0,5$	exceptionally maximum load
L2 (medium)	$0,5 \leq k \leq 0,63$	Frequent maximum load
L3 (difficult)	$0,63 \leq k \leq 0,80$	Often maximum load
L4 (very difficult)	$0,80 \leq k \leq 1,00$	Regular maximum load

## 2.11.5.3 Classification of engines



With the help of the runtime classes and the load spectrums, the engines are classified into 8 groups. Classification of engines into groups according to the table below allows for the same life expectancy in years for all load spectra and mean daily runtimes. The prerequisite here is that the service life of the individual components depends on the third power of the load.

Table 6 Classification of engines according to FEM 9.511

Load collective	cubic mean	Runtime class							
		V 0,12	V 0,25	V 0,5	V 1	V 2	V 3	V 4	V 5
		Average daily runtime in hours							
		$\leq 0,25$	$\leq 0,5$	$\leq 1$	$\leq 2$	$\leq 4$	$\leq 8$	$\leq 16$	$> 16$
1	$k \leq 0,5$		1Dm	1CM	1Bm	1Am	2m	3m	4m
2	$0,5 \leq k \leq 0,63$	1Dm	1Cm	1Bm	1Am	2m	3m	4m	5m
3	$0,63 \leq k \leq 0,80$	1Cm	1Bm	1Am	2m	3m	4m	5m	
4	$0,80 \leq k \leq 1,00$	1Bm	1Am	2m	3m	4m	5m		

## Safety

### 2.12 Notes on the protective devices

#### 2.12.1 Overload protection(s)



According to the DIN EN 14492-2 paragraph 5.2.2.1 standard, hoists with a load capacity of more than 1,000kg must have overload protection. All nominal sizes are equipped as standard with an adjustable mechanical direct-acting slip clutch of type 2 and an electrically indirect overload protection. These protect the hoist and the supporting structure from overloading. The mechanical overload protection is set at the factory to approx. 160% of the nominal load in accordance with the above-mentioned standard. The electrical overload protection is set at the factory to approx. 125% of the nominal load in accordance with the above-mentioned standard. In addition, the integrated time delay is also set to 1s according to the above-mentioned standard. This means that a load greater than 1.25 times the nominal load cannot be lifted any further after 1s.



Only persons who are affected by (PLANETA-Hebetechnik GmbH) may discontinue the overload protection(s). The exact steps for the correct adjustment are described in an additional guide.



If a mechanical overload protection device is set incorrectly, it can cause various problems:

- Overload: If the overload protection is set too low, it can trip under normal operating conditions and interrupt operation unnecessarily. This can lead to production downtime and losses.
- Damage to equipment: If the overload protection is set too high, it can cause the machine or equipment to be overloaded. This can cause damage to the equipment that is expensive to repair or replace.
- Safety risk: An incorrectly set overload protection can also pose a safety risk. If the fuse does not trip in time, it can lead to overheating, fires or other dangerous situations.

#### 2.12.2 EMERGENCY STOP function



According to the DIN EN 14492-2 paragraph 5.2.3 standard, hoists must be equipped with an emergency stop function. The emergency stop function is located at the upper end of the pendant button. The function must be available and ready for operation at all times, regardless of the operating mode. By pressing the emergency stop button, the movement and function of the device is immediately stopped by interrupting the energy supply to the drive element.



After pressing the emergency stop button, the operator may not restart the device until a qualified person has satisfied himself that the cause that led to the emergency stop has been eliminated and that there can no longer be a danger from the continued operation of the system.

#### 2.12.3 Lifting and lowering limits



The hoist has two special limiters from the factory, which are called transmission limit switches. These limiters are attached to the ends of the metric spindle, which maps the entire range of motion of the device. On the spindle there are two column wheels in different colors that move linearly along the spindle. If one of the limiters is touched by one of the derailleur wheels, it sends a signal to the motor of the chain hoist to stop it immediately. This will prevent the chain from going beyond the end of the spindle and potentially damaging it. The transmission limit switch therefore serves as a safety device to prevent accidents or damage. It ensures that the chain hoist only works within the intended range and is not overloaded. In addition, it also protects against overload situations, as the motor automatically shuts down when the chain reaches the end of the spindle.



Only persons who are affected by (PLANETA-Hebetechnik GmbH) may set the stroke and lowering limit(s). The exact steps for the correct adjustment are described in an additional guide.

#### 2.12.4 Control and safety module (frequency converter)



The electric chain hoists as well as the electric trolleys are equipped with a frequency converter at the factory. A frequency converter offers several advantages in an electric chain hoist:

- Speed control: With a frequency converter, the speed of the device can be controlled precisely and continuously. This makes it possible to move loads smoothly and in a controlled manner.
- Overload protection: A frequency converter automatically detects overload situations and protects the electric chain hoist from damage. It can adjust the power accordingly or stop operation to prevent overloading.
- Phase monitoring and control: The AC drive can identify, control and monitor the phases. If a phase reversal occurs, it is detected and automatically corrected. In addition, the frequency converter is able to detect phase failures.
- Temperature monitoring: The temperature of the device is continuously monitored by the frequency converter. When the temperature reaches a certain limit, the device will automatically shut down to prevent overheating. This will cause a forced pause.
- Energy efficiency: By using a frequency converter, the energy consumption of the electric chain hoist can be optimized. The inverter adapts the power to the current demand and thus reduces energy loss.
- Smooth start and stop: A frequency converter allows the electric chain hoist to start and stop smoothly, resulting in a longer service life of the components. Slow start-up and braking minimise mechanical stress.
- Flexibility: With a frequency converter, different operating modes can be set, such as different speeds, acceleration and braking ramps, or special motion profiles. This allows the electric chain hoist to be adapted to different applications.
- Low maintenance costs: Due to the precise control and overload protection of the frequency converter, damage to the electric chain hoist is minimized. This reduces maintenance costs and reduces downtime.



Only persons who are affected by (PLANETA-Hebetechnik GmbH) may set the stroke and lowering limit(s). The exact steps for the correct adjustment are described in an additional guide.



Attention: The following points must be observed. Failure to do so can lead to serious hazards:

- Fixed parameter sets may not be changed! If necessary, contact your local customer service or the company (PLANETA-Hebetechnik GmbH) in contact.
- Within the first 5 minutes after the device has been switched off, no maintenance or testing may be carried out! Please wait until the electrical discharge of the capacitors in the frequency converter has occurred.
- Modifications to the wiring of the frequency converter are not permitted.
- No withstand voltage tests or insulation resistance measurements (mega measurement) may be carried out while the AC drive is connected.
- Failure to comply with these regulations could destroy the AC drive and result in serious and material damage or life-threatening personal injury.

#### 2.12.5 electromagnetic spring-applied brake



According to the DIN EN 14492-2 paragraph 5.4 standard, hoists must be equipped with a spring-loaded holding brake. The spring-applied brake is a brake that is actuated by electromagnetic forces and has two friction surfaces. The braking force is generated by compression springs and the braking torque is generated in the de-energized state. The brake is released by electromagnetic forces. The brake is switched via a DC circuit. When de-energized, the brake must be able to safely hold the nominal load. The brake is maintenance-free and designed to last the life of the hoist. To ensure that the brakes deliver sufficient braking torque, the gap between the friction surfaces must be adjusted before the maximum value is reached. When the thickness of the brake plates reaches the minimum, they need to be replaced. Exceeding the maximum gap can result in the brakes not being able to be released, overheating the brake plates and decreasing braking power and durability. This can lead to serious accidents. The spring-applied brake is adjusted at the factory and does not require any subsequent adjustment. If the braking distance is too long, you should be careful not to make any adjustments on your own (PLANETA-Hebetechnik GmbH) to make sure everything is working properly.



Only persons who are affected by (PLANETA-Hebetechnik GmbH) may set the stroke and lowering limit(s). The exact steps for the correct adjustment are described in an additional guide.

### 3.1 General information



Installation and maintenance work may only be carried out by persons who are familiar with it and have been commissioned by the operator to install and maintain it. These persons must be familiar with the relevant accident prevention regulations, such as DGUV 52, DGUV 54, etc., and must have been instructed accordingly, as well as have read and understood the operating and assembly instructions drawn up by the manufacturer.



Devices with a load capacity of up to 1000kg and without power-driven vehicles or hoists must be approved before the first commissioning, e.g. by a qualified person. Equipment with a load capacity of more than 1000 kg or with more than one power-driven crane movement must be approved by an expert before commissioning.



Before assembling and commissioning the device, it is necessary to pay attention to several points:

1. Make sure that the device meets the required technical specifications, such as load capacity, lifting height, pulling force, etc.
2. Inspect the device for possible damage in transit.
3. Immediately after unpacking your device, write down the essential device information such as serial number and hook dimensions in the table provided for this purpose (see cover page).
4. Check the location where you want to install the device. Also, consider the height and access routes for installation.
5. Make sure that there is an on-site statics of the suspension or supporting structure. Depending on the installation location, this includes a protocol for the installation of correctly selected dynamic anchors in concrete ceilings, walls or foundations, or a protocol for the correct tightening of torque connecting screws in steel structures. Otherwise, commissioning of the hoist is not permitted.
6. Make sure that all safety precautions have been taken to prevent accidents. Check that the equipment has the necessary safety features such as emergency stop switches, overload protection, and safety couplings.
7. Make sure that all parts are properly assembled and that all connections are secure and tight.
8. If the appliance is electrically operated, make sure the electrical connection is properly installed and complies with local regulations. Also, check if the power supply is sufficient to run the devices.
9. Before commissioning, perform a thorough inspection of the equipment to ensure that it is working properly. Check all the functions, such as moving in the possible directions of movement and braking to make sure they are working properly.
10. Before initial start-up, remove the bleeding cap of the oil filler or oil drain valve on the top of the housing to avoid under- or overpressure in the gearbox. Be aware that once the vent cap has been removed, the transmission oil may leak out of the electric chain hoist if stored incorrectly. The electric chain hoists are supplied with lifetime lubrication and therefore do not need to be refilled.
11. Make sure that the operators of the equipment have the necessary knowledge and skills to operate them safely. Where appropriate, provide training to ensure operators have the necessary knowledge.

In addition, please note the following points:

12. After hanging/rehanging the device, check that the load chain goes directly off the sprocket and chain guide and has not jammed or knotted in the chain outlet during transport. It is important to emphasize that the chain must always be lubricated.
13. After a storage period of more than two years without a power supply, the voltage of the frequency converter should be slowly increased from 0V to the nominal voltage. This can be done in 2-3 minutes with a variable voltage power supply. Subsequently, the electrolytic capacitor in the main circuit should be activated for one hour of no-load power.
14. Before commissioning after prolonged storage, normal wiring and operation without abnormal phenomena such as interference, overcurrent, motor vibration or speed changes should be ensured.



It is important to follow all safety regulations and guidelines to avoid accidents and injuries. If you are unsure, you should contact the manufacturer or a professional for more information and assistance.



### 3.2 Devices and component installations



In order to carry out the mechanical and electronic installation, as well as assembly of the device, it is necessary to use the extended operating instructions. It is important to note that assembly can only be carried out by professionals with appropriate training and authorization by (PLANETA-Hebetechnik GmbH) may be carried out! (PLANETA-Hebetechnik GmbH) assumes no liability for problems arising from unauthorized installation and assembly.

In the case of electrical assembly/installation, the following steps are required:

- Connection to the power grid,
- connection of the control switch,
- Adjustment of the transmission limit switches,
- Adjustment of electronic overload protections,
- setting the parameters of the frequency converter,
- Adjusting the brake

In the case of mechanical assembly/installation, the following steps are required:

- prepare and assemble the device suspension,
- Prepare and assemble the hook harness or hook block,
- Pull in or change the load chain,
- prepare and assemble the load chain end stop,
- Install chain accumulator,
- Establish a connection to the chassis,
- Adjustment of the mechanical overload protection,
- Activate the gearbox ventilation,
- Establish a connection to the chassis,
- Lubrication.

It is important to follow these steps carefully and according to the instructions in the owner's manual to ensure proper installation and assembly.



Warning of injuries due to assembly errors

Improper installation can lead to serious personal injury and/or property damage! This work may therefore only be carried out by authorised, instructed personnel who are familiar with the operation of the equipment, in compliance with all safety regulations:

- Before starting the work, ensure sufficient freedom of assembly.
- Secure work and hazardous areas.
- Wear protective clothing!
- Be careful with open, sharp-edged components! Injury!
- Pay attention to order and cleanliness in the workplace. Store equipment or attachments and tools that are not needed in such a way that the risk of falling is excluded.
- Assemble components professionally. Comply with the prescribed bolt tightening torques. Improperly fastened components can fall and lead to significant injuries.
- Attach the device only to the intended attachment points.
- Only carry out the installation if all the requirements for the installation site are met.

#### 4.1 Operational environments



Electric chain hoists as "solo devices" or in combination with a monorail chassis can be used in various areas and environments to lift and transport heavy loads efficiently and safely.

Here are some examples of typical applications:

- Machinery Industry: Electric chain hoists are used in the machinery industry to lift and transport heavy machine parts or tools.
- Plastics Industry: Electric chain hoists are used in the plastics industry to move large plastic containers or molds.
- Metal and steel processing: Electric chain hoists are used in the metal and steel processing industry to lift and transport heavy metal plates, steel beams, or other metal parts.
- Woodworking: Electric chain hoists are used in the woodworking industry to lift and transport heavy logs or wooden panels.
- Agriculture: Electric chain hoists can help move heavy loads such as feed bags, agricultural machinery, or animal transport cages.
- Construction: Electric chain hoists are used on construction sites to lift and transport materials such as concrete blocks, steel beams, or building materials.



In addition, there are extended areas of application for electric chain hoists in specialized industries, which can be implemented on request:

- Automotive industry: Electric chain hoists are used in the automotive industry to lift and transport heavy components such as engines or car bodies.
- Chemical & Pharmaceutical: Electric chain hoists are used in the chemical and pharmaceutical industries to safely move chemical drums, containers, or other heavy loads.
- Food industry: Electric chain hoists are used in the food industry to move heavy containers of food or ingredients.
- Entertainment Industry: Electric chain hoists are used in the entertainment industry to lift and move stage elements such as lighting equipment or backdrops.
- Wind and hydropower: Electric chain hoists are used in the wind and hydropower industry to lift and assemble heavy components of wind turbines or turbines.

#### 4.2 Operating conditions



Electric chain hoists as "solo devices" or in combination with a monorail chassis should be installed in a covered room if possible. When installed outdoors, they protect them from adverse weather conditions such as rain, snow, hail, direct sunlight, dust, etc. In humid environments, combined with greater temperature fluctuations, the functions are endangered by the formation of condensation.



The following general conditions of use must be strictly adhered to in order to maintain the safety of equipment and people. Failure to comply with these conditions may result in significant damage to the device and may even result in serious injury to any person. It is therefore essential to respect these conditions. Special conditions of use can be agreed with the manufacturer on a case-by-case basis.

- Ambient temperature: -20°C to +45°C
- Humidity: max. 85% relative humidity
- Barometric Pressure: 800hPa to 1.10hPa (0m to max. 1,000m a.s.l.)

#### 4.3 Delivery condition and scope of delivery



The electric chain hoist and the monorail trolleys are usually delivered ready for use. In addition, lifting speed, acceleration and deceleration ramp can be parameterized for specific applications if required. To do this, you will definitely need the separate programming instructions. The actual scope of delivery may differ from the information and notes described here as well as the pictorial representations in the case of special designs, the use of additional ordering options or due to the latest technical changes. If you have any questions, please contact the manufacturer.

#### 4.4 Device Features



The electric chain hoist and the electric monorail trolleys are equipped with an intelligent frequency converter control, which offers the user a variety of advantages.

Here are some examples of these benefits:

- Infinitely variable speed control, sensitive pick-up and positioning of loads, smooth start-up and deceleration, low-vibration operation, smoothing of start-up and current peaks, acceleration and braking ramps ensure low load vibrations, direction of rotation monitoring, automatic shutdown in case of overload, integrated temperature monitoring, integrated overheating protection, phase and short-circuit monitoring.

Additional benefits, e.g.:

- Operating hours counter of total runtime, operating hours counter of total duty cycle, diagnostic interface for service wake-up.

4.5 Type plate(s)



A nameplate with product-specific information is attached to the device.  
The nameplate may differ from the image below.

Electric chain hoist	Rolling trolley	Electric trolley
<div><p><b>PLANETA</b>  Bitte Handbuch beachten! Please read manual!!</p><p><b>ELEKTROKETTENZUG   ELECTRIC CHAIN HOIST</b></p><p>Typ / Baujahr (Type / Year)</p><p>Serien-Nr. (Serial-No.)</p><p>Tragfähigkeit / FEM (Capacity / FEM)</p><p>Hubgeschwindigkeit (Lifting speed)</p><p>Betriebsspannung (Voltage)</p><p>Motorleistung (Motor power)</p><p>Isol. Kl. / Schutzart (Insu.class / Prot.class)</p><p>Kettentyp (Type of chain)</p><p>PLANETA-Hebetechnik GmbH, Resser Str. 17, 44653 Herne, Germany, +49 (0) 2325 9580-0, www.planeta-hebetechnik.de</p><p> </p></div>	<div><p><b>PLANETA</b>  Bitte Handbuch beachten! Please read manual!!</p><p><b>ROLLFAHRWERK   MANUAL TROLLEY</b></p><p>Typ / Baujahr (Type / Year)</p><p>Serien-Nr. (Serial-No.)</p><p>Tragfähigkeit / FEM (Capacity / FEM)</p><p>PLANETA-Hebetechnik GmbH, Resser Str. 17, 44653 Herne, Germany, +49 (0) 2325 9580-0, www.planeta-hebetechnik.de</p><p> </p></div>	<div><p><b>PLANETA</b>  Bitte Handbuch beachten! Please read manual!!</p><p><b>ELEKTROFAHRWERK   ELECTRIC TROLLEY</b></p><p>Typ / Baujahr (Type / Year)</p><p>Serien-Nr. (Serial-No.)</p><p>Tragfähigkeit / FEM (Capacity / FEM)</p><p>Geschwindigkeit (Move speed)</p><p>Betriebsspannung (Voltage)</p><p>Motorleistung (Motor power)</p><p>Isol. Kl. / Schutzart (Insu.class / Prot.class)</p><p>PLANETA-Hebetechnik GmbH, Resser Str. 17, 44653 Herne, Germany, +49 (0) 2325 9580-0, www.planeta-hebetechnik.de</p><p> </p></div>

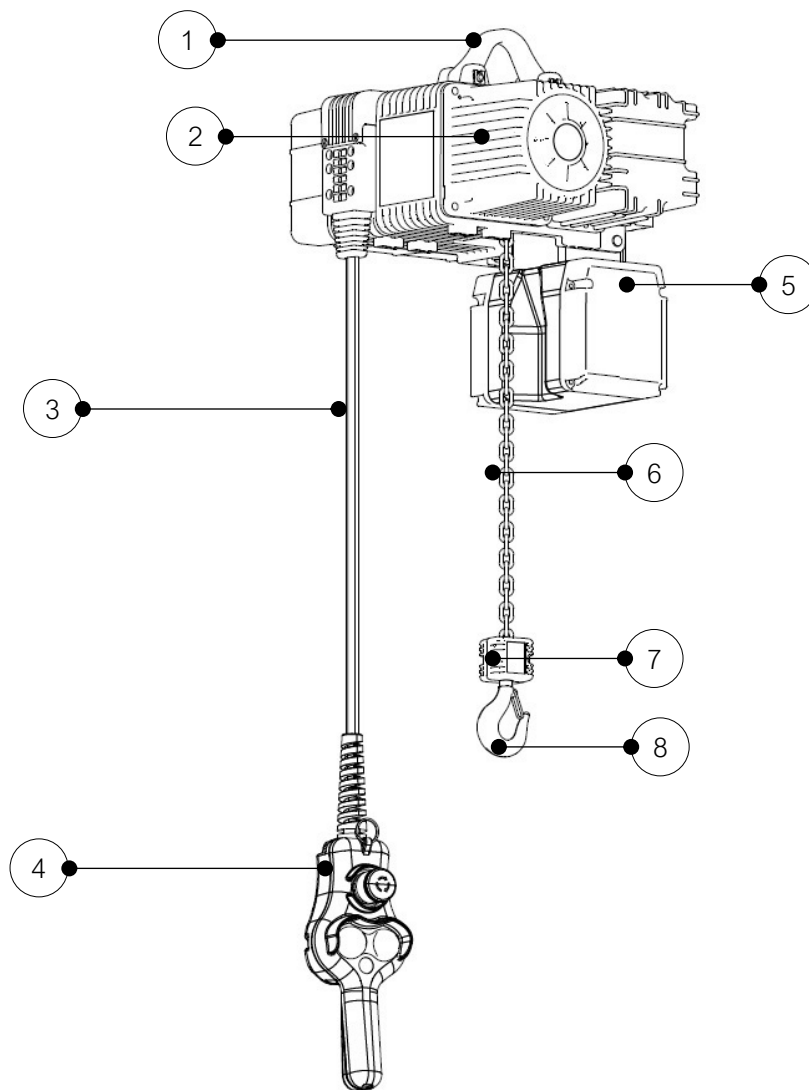
\*Nameplates serve as a template and may have graphic variations



In accordance with DIN EN 14492-2 Chapter 7.3 and the Machinery Ordinance, all electric chain hoists and monorail trolleys must have a permanently affixed marking in a clearly visible place with the following information:

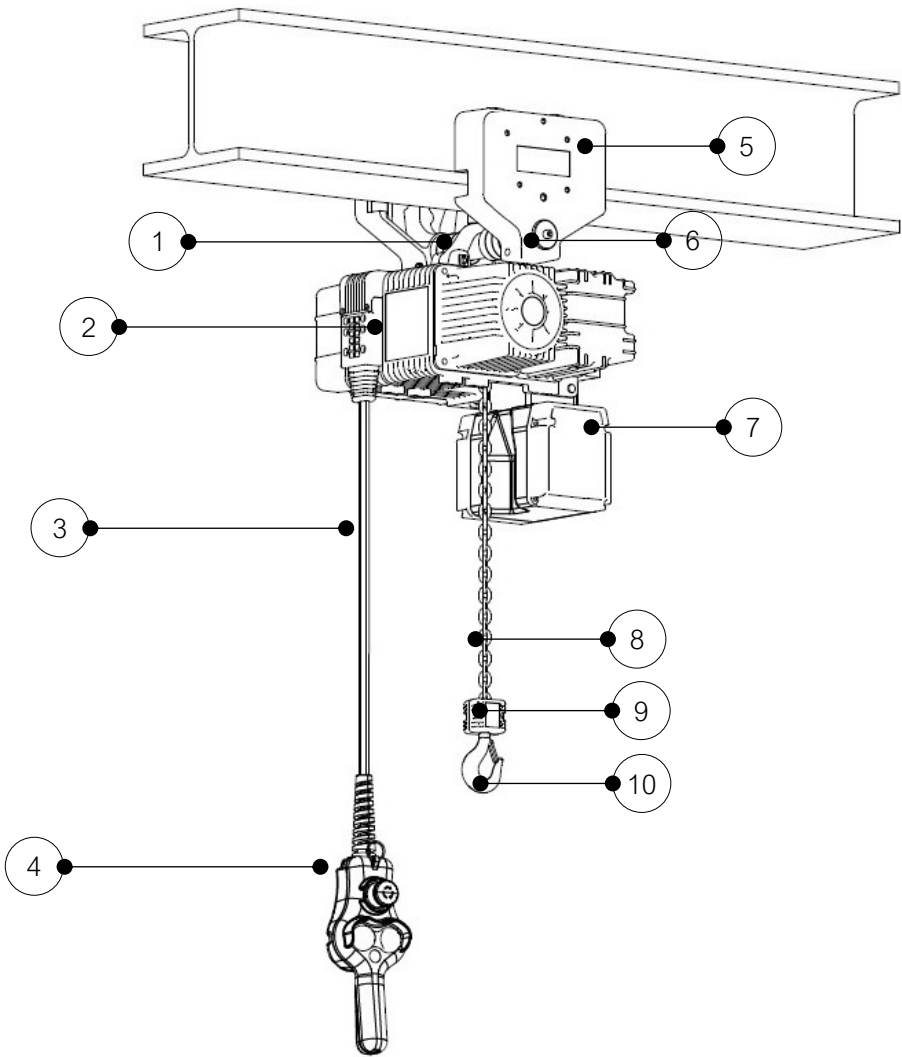
- name and address of the manufacturer;
- serial or type designation;
- Serial number;
- Year of construction;
- load capacity on the hoist and at the lower bottle;
- Operating mode classification of the hoist;
- dimensions and quality of the load-bearing equipment (chains);
- connection conditions for the power supply;
- Nominal lifting speed;
- Nominal mowing speed;
- operating temperature limits;

## PITCH PF



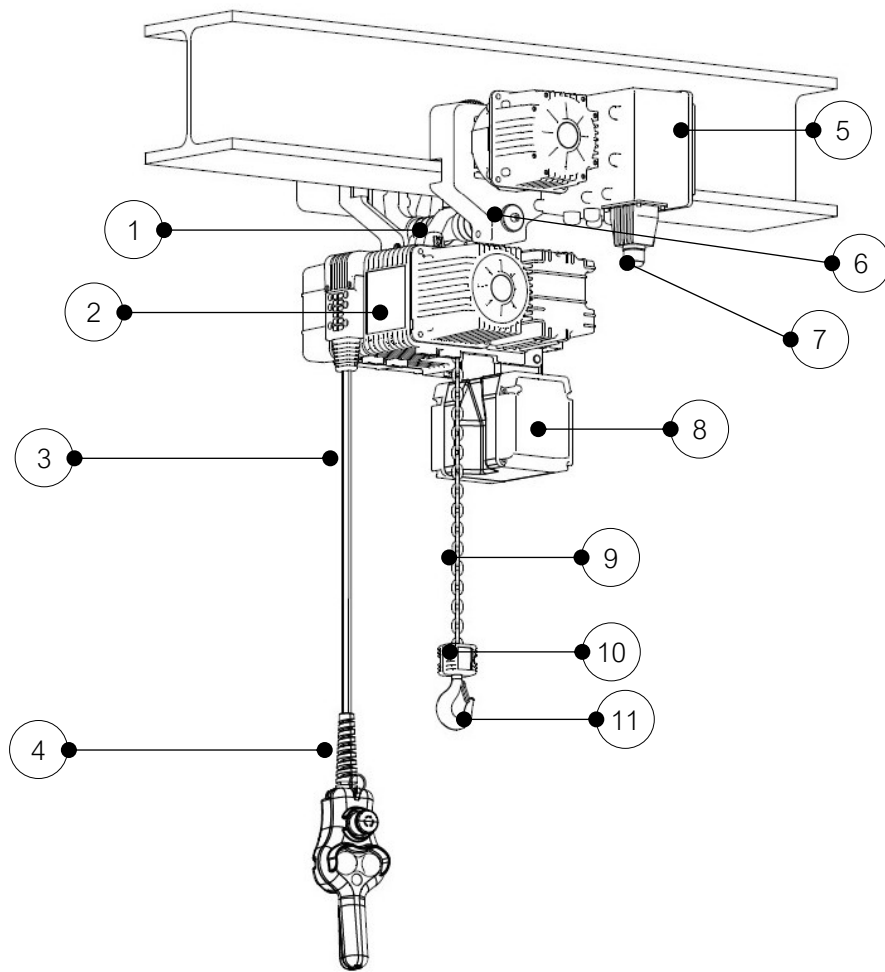
Pos.	Designation	Pos.	Designation
1	Suspension	5	Chain case
2	Electric chain hoist housing	6	Load chain
3	Control cable	7	Pivot
4	Control switch	8	Load hook with hook jaw safety device

PITCH PF with rolling trolley



Pos.	Designation	Pos.	Designation
1	Suspension	6	Support bolt
2	Electric chain hoist housing	7	Chain case
3	Control cable	8	Load chain
4	Control switch	9	Pivot
5	Landing gear	10	Load hook with hook jaw safety device

## PITCH PF with electric trolley



Pos.	Designation	Pos.	Designation
1	Suspension	7	Power supply
2	Electric chain hoist housing	8	Chain case
3	Control cable	9	Load chain
4	Control switch	10	Pivot
5	Trolley	11	Load hook with hook jaw safety device
6	Support bolt		

#### 4.7 Specifications and Dimensions



Thank you for purchasing our product! We want to make sure you have all the information you need to get the most out of the product. Please note that the technical data of your purchased product can be found in the test book and/or in the technical data sheet. Due to the large number of variants and possible configurations, it is unfortunately not possible for us to list all technical data in the operating instructions. The test book and/or technical data sheet provide you with detailed information about the performance, functions and specific characteristics of your product. There you will find, for example, information on power consumption, maximum load capacity or compatibility with other devices. If you have any questions about your product or need more information, we recommend that you contact your retailer directly.

##### 4.7.1 General basic data on the electric chain hoist

Type	Specification
Suspension design:	Suspension eye or fire hook
Load capacity:	125kg up to 32.000kg
FEM/ISO group:	M3(1Bm) - M6 (3m)
Lifting height:	Standard 3m
Shear:	1/1 to 8/2
Load chain diameter: (Short link round steel chain 3dn).	4x12mm to 16x45mm
Chain box:	standard available
Load chain number:	1 to 2
Lifting speed:	0,6/0,1 m/min up to 16/4 m/min
Operating voltage:	3PH / 400V / 50Hz
Internal control circuit:	10 VAC
Control system:	frequency controlled, with soft start including monitoring control unit
Motor power:	0.2kW to 11kW
Duty cycle:	ED 65% (360c/h)
Overload protection:	Slipping clutch (located behind the brake)
Overload monitoring:	electronic, factory preset to 110-125% SWL
Hoist limit switch:	Gear limit switch
Thermal fuse:	standard available
Operation:	2-stage / emergency stop as standard
Protection class according to ISO/EN 60529:	IP66
Ambient temperature:	-20 to +45°C

##### 4.7.2 General basic data for the monorail trolley

Type	Specification
Design:	Rolling trolley or electric trolley
Load capacity:	1200kg till 13000kg
FEM / ISO group:	M5(2m)
Travel speed*:	16/4 m/min to 20/5 m/min
Wheel material:	Nylon or steel
Operating voltage:	3PH / 400V / 50Hz
Internal control circuit:	10 VAC
Control:	frequency controlled, with soft start including monitoring control unit
Motor power:	0,15kW to 2x0.6kW
Duty cycle:	ED 65% (360c/h)
Degree of protection according to ISO/EN 60529:	IP54
Ambient temperature:	-20 to +45°C

\* only applies to electric trolleys

## Product description

### 4.8 Dimensions of the suspensions

Table 7 Suspension dimensions

Suspension type	Compatibility	Width b [mm]	Height h <sub>1</sub> [mm]	Internal Dimensions h <sub>2</sub> [mm]
Eyelet (Standard)	PF 02 PF 03 PF05	20	12	43
Eyelet (Standard)	PF 10 PF 12	28	18	57
Eyelet (Standard)	PF 16 PF 25	28	23	69
Eyelet (Standard)	PF 32 PF 40	28	23	81
Eyelet (long)	PF 03 PF 03 PF 05	20	12	76
Eyelet (long)	PF 10 PF 12	28	18	71
Eyelet (long)	PF 16 PF 25	28	23	100
Eyelet (long)	PF 32 PF 40	28	23	109



The table dimensions are theoretical dimensions without tolerances. The flame-cut parts may have permissible tolerances due to the manufacturing process.



Max. wear of the eyelet: 5%

#### 4.8.1 Hook Dimensions

Table 8 Hook Dimensions

Hook designation	Jaw width g [mm]	Hook Ground Ø [mm]	Hook width b [mm]	Hook height h [mm]
GSN-010	22	28	13	17
GSN-020	27	34	18	22
GSN-05	34	43	37	31
GSN-1	40	48	43	37
GSN-1.6	45	56	46	48
GSN-2.5	50	63	52	58
GSN-4	56	71	68	73
GSN-8	80	100	92	99



The table dimensions are theoretical dimensions without tolerances.

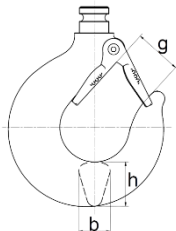
The forged support or load hooks may have permissible tolerances due to the manufacturing process. We would like to remind you to enter the values g, b and h in the fields provided before the first commissioning.

These recorded values are the initial values for the subsequent periodic tests.



Max. permissible expansion of the hook: 10%

Max. wear of the hook: 5%





## 4.8.2 Chain Dimensions

Table 9 Chain Dimensions

Dimensions	Diameter $d_n$ [mm]	Chain pitch $1t$ [mm]	Chain pitch $11t$ [mm]
4,0 x 12,0	4,0	12,0	132,0
5,2 x 15,0	5,2	15,0	165,0
6,0 x 18,0	6,0	18,0	198,0
7,2 x 21,0	7,2	21,0	231,0
9,0 x 27,0	9,0	27,0	297,0
11,3 x 31,0	11,3	31,0	341,0
13,0 x 36,0	13,0	36,0	396,0
16,0 x 45,0	16,0	45,0	495,0



The table dimensions are theoretical dimensions without tolerances.

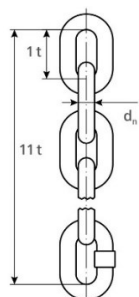
The forged load chains may have permissible tolerances due to the manufacturing process. We would like to remind you to enter the values  $d_n$ ,  $1t$  and  $11t$  in the fields provided before the first commissioning.

These noted values are important for subsequent periodic inspections.



Max. external elongation of a limb  $>3\%$ , this corresponds to an internal elongation of  $5\%$

Max. wear of a link at one point  $>10\%$



### 5.1 General Protective Measures and Rules of Conduct

General requirements for operation with the device:

- **Training:** The operator should have undergone appropriate training that familiarizes him with the basic knowledge of how to handle the equipment safely. This training can take place, for example, as part of vocational training or training.
- **Experience:** In addition to training, practical experience in the use of the device is also important. The operator should already have experience and be familiar with the various functions and controls of the device.
- **Sense of responsibility:** The operator should be aware of his responsibility and observe the safety regulations and measures when operating the device. This includes, for example, wearing personal protective equipment and adhering to the prescribed load limits.

It is important to note that the exact requirements and requirements for operating such a device may vary depending on the country and area of use. It is therefore advisable to find out about the rules and regulations in force before operating.

#### 5.1.1 Before operating the device

Before operation, the following steps must be carried out by the operator:

1. Inspect the device for visible damage or wear. If damage is detected, it should be repaired before use.
2. Checking the working environment for obstacles or hazards that could interfere with the safe operation of the equipment. Obstacles should be removed and sources of danger eliminated.
3. Checking the load to be lifted or pulled for weight, size and stability. The device may only be used for loads for which it is designed.
4. Checking the attachment points of the device to ensure that the device is stable and secure.
5. Verification of the proper lubrication of the load chain.
6. Preparation of the device's controls and safety devices to ensure that they are working properly and are easily accessible.
7. Instructing other people working in the vicinity of the equipment about the planned use and the safety precautions that need to be taken.
8. Perform a final visual check of the device and work environment to ensure that everything is ready and that there are no obvious hazards.

Only after these steps have been completed and the operator is sure that the device is working properly and can be used safely, the actual operation can begin.

#### 5.1.2 While operating the device

During operation, it is imperative that you pay attention to and take into account the following points. Failure to observe these points may result in damage to the device or injury:

1. When moving loads, a minimum distance of 0.5m to parts in the surrounding area must be maintained.
2. The maximum permissible load capacity of the hoist must be observed.
3. Before lifting, slack load-bearing equipment must first be tensioned.
4. Load-bearing equipment must be guided in such a way that it can run in and out unhindered.
5. Loads must always be lifted from a standstill at the lowest available lifting speed.
6. The attached load must always be attached to the centre of mass. Swinging, rocking or an inclined pull is prohibited.
7. The attached load must not be left hanging for a long period of time.
8. Secondary safeguards must be used to hold loads over persons with lifting equipment in accordance with DGUV V54.

Please note that the above examples are only excerpts during the uses and do not fully cover all possible scenarios. They are only intended as a guide to give you an overview of potential risks. It is important to emphasize that the responsibility for the safe use of the above-mentioned devices lies with the user or operator.

## 5.2 Correct slinging of loads

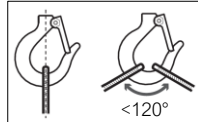
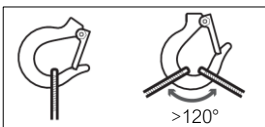

To sling a load correctly, the following steps should be followed:



1. check the load capacity of the sling: make sure that the sling is suitable for the load and has the required load capacity. Check the sling for damage or wear.
2. Select the correct anchor point: Identify the appropriate anchor point on the load. This may be a special anchor point designed for the purpose or a stable part of the load that has the required load capacity.
3. use the correct sling: select the appropriate sling for the load. This can be a lifting strap, chain, rope or other sling. Make sure the sling meets the requirements of the load and is properly marked.
4. Secure the sling properly: Make sure that the sling is properly placed around the anchor point and secured. Make sure that the sling is not twisted or kinked and that it is tight.
5. Check that the sling is secure: Before lifting the load, check that the sling is correctly attached and securely seated. Also check that all connections and fixings are properly tightened.
6. Lift the load carefully: Lift the load slowly and in a controlled manner to avoid sudden shifting or tipping. Make sure that the load remains stable and does not swing.
7. Monitor the load during transport: Monitor the load during transport to ensure that it remains safe and stable. Look for signs of damage or looseness of the sling.



It is important that these steps are followed carefully to ensure safety when slinging loads. In case of uncertainty or complex loads, it is advisable to consult a professional.

Permitted use		
<ul style="list-style-type: none"><li>✓ The load is on the centre line of the hook and or the internal angle is less than 120°.</li></ul>		
Unauthorised use		
<ul style="list-style-type: none"><li>✗ The load or the sling is not hanging in the correct position.</li><li>✗ The angle is more than 120°.</li><li>✗ The jaw safety device cannot close.</li><li>✗ The tip of the hook is loaded.</li></ul>		

## Operation

### 5.3 Operation

#### 5.3.1 Using a control switch or radio control



Stationary electric chain hoists or electric chain hoists in combination with monorail electric trolleys can be operated via various control elements. Two types of control cylinders and radio controls are available for this purpose. The first control bottle, type Charlie (first picture from left), is specially designed for use on solo electric chain hoists. With it, only vertical movements are possible in order to reliably lift and lower loads. The second control bottle, type Mike (second picture from left), also offers the option of controlling a monorail electric chassis. This allows linear travel movements along the steel beam to be implemented in addition to the vertical lifting operations. For fully electric crane systems, where all movements are to be force-controlled, an extended control cylinder is required. This allows the movement in all directions (lifting operations, movement along the crane runway and movement along the crane bridge). Alternatively, a radio control can be used in all the applications mentioned (both pictures on the right). This offers the decisive advantage that it is cordless and can therefore be used from different positions. This means that the operator always has an optimal view of the loaded load, which ensures precise and safe control. However, it should be noted that the use of a radio control always requires an acoustic warning signal to alert everyone in the vicinity to the activation of the device. More detailed descriptions of the radio controls can be found in the corresponding operating instructions.



Certain work and activities are not permitted when handling the device, as they may be associated with dangers to life and limb and can cause permanent damage to the device, e.g.:

1. Unsafe routing of the load (e.g. oscillation).
2. Guide trailing loads over people.
3. Pull or drag attached loads at an angle.
4. Tear off stuck or jammed loads.
5. Exceed maximum permissible load and permissible load dimensions.
6. Leave suspended loads hanging unattended.
7. Deflect the load-bearing equipment over edges.
8. Use the carrying equipment as a carrying sling.
9. Drop loads into the flaccid load.
10. Improperly mechanically load the control switch.
11. Operating control switches improperly frequently (tap mode).
12. The transport of persons is not permitted.
13. Manipulation of mechanical and electrical equipment.

## 6 Storage and transport

### 6.1 General information



When storing the device, the following points should be taken into account:

1. Location: The storage location should be dry, well ventilated and away from direct sunlight. Moisture can cause corrosion, while direct sunlight can weaken the materials.
2. Cleanliness: Equipment should be cleaned before storage to remove dirt, dust, and other contaminants. This prevents corrosion and increases the service life of the equipment.
3. Safety: The device should be stored safely to avoid accidents or damage. It should be stored on sturdy and secure shelves or racks to prevent it from tipping over or falling. In addition, care must be taken to ensure that the bleeding screw points upwards in electric chain hoists to prevent possible oil leakage.
4. Packaging: Ideally, the device should be stored in a closed package.
5. Maintenance: Before storage, the device should be serviced to ensure that it is in perfect condition. This may include checking consumables, topping up lubricants, or replacing damaged parts.
6. Labeling: The device should be clearly labeled for easy identification and accessibility. This makes it easier to store and access the device when needed.
7. Documentation: It is important to document all relevant information about the device, including maintenance logs, repairs, and inspections. This allowed for better tracking and planning for future deployments.
8. Training: People responsible for storing the equipment should have the proper training and knowledge to ensure that the equipment is stored properly and does not pose a hazard.



It is important to follow the manufacturer's specific instructions and, if necessary, take additional precautions to ensure the safety and longevity of the winches, hoists and towing equipment.

### 6.2 General information about transport



The electric chain hoist is supplied as a complete construction with the necessary support frames (for larger tonnages) for transport. The electric chain hoist must be lashed in a suitable way for transport. Before lifting the electric chain hoist, it must be established that the device can be lifted in a safe way. Settling must always take place on a flat and stable surface. After unpacking, make sure that the load chain is tagged and sealed. Check that the load chain comes directly off the sprocket and the chain guide and has not jammed or knotted up in the chain outlet during transport.

### 7.1 Maintenance personnel



The maintenance of equipment or machines may only be carried out by qualified persons. The exact requirements for qualification may vary depending on the type of equipment and the legal requirements. Typically, individuals should have the following skills and knowledge:

- Professional competence: The persons should have the necessary specialist knowledge and skills to be able to carry out the maintenance work professionally.
- Experience: It is an advantage if the people already have experience in maintaining similar equipment or machinery.
- Training and certifications: Depending on the type of equipment or machinery, specific training or certifications may be required to be allowed to perform maintenance.
- Knowledge of safety regulations: People should be familiar with the applicable safety regulations and observe them when carrying out maintenance work.

It is the employer's responsibility to ensure that only qualified persons are contracted to carry out maintenance. This can be ensured through internal training, external training or the commissioning of external specialists.

### 7.2 Maintenance



Maintenance is the umbrella term for all work steps that are intended to ensure the functionality of machines and systems. Maintenance therefore includes inspection, servicing and repair. This also includes work steps such as improvement and weak point analysis. The entire maintenance process is regulated by DIN 31051.

#### 7.2.1 Inspection



Inspection is a part of maintenance and refers to the regular inspection of a machine to ensure its proper condition, functionality and safety. Components, assemblies and equipment are examined for signs of wear, visual inspections are carried out and actual values are compared with target values. The goal is to determine the progress of wear and tear and determine the reasons for it. The inspection, also known as periodic testing, is carried out by a qualified person at predefined intervals, depending on environmental influences and machine utilization. The results of the inspection have consequences for the further handling and use of the plant.

#### 7.2.2 Maintenance



During maintenance, work takes place on the machine. The target state is restored. Maintenance work is intended to delay the progression of wear and tear or, in the best case, to prevent it altogether. All actions taken should be recorded in a protocol. Regularly carried out and documented maintenance maintains the warranty claim and increases the resale value of a machine or system. Normally, the interval between two maintenance is one year.

#### 7.2.3 Restoration



If a defective component is discovered and replaced during maintenance work, this is a repair measure. The target state, i.e. perfect, functional operating behaviour, is restored. Through inspections and maintenance, the machine is observed, cared for and wear is inhibited. After a certain period of time, however, even when a machine is used as intended, wear-and-tear damage often occurs. Repairs must be carried out immediately after the damage has been discovered. The defective parts are either repaired or replaced, depending on the situation and costs. Entire assemblies can also be replaced. At the end of the day, operability and functional safety must be restored. All repair measures must also be entered in the maintenance log.

#### 7.2.4 Spares



Damaged components that need to be replaced due to wear and tear or faulty conditions during maintenance or repair should be replaced by a qualified person. Only original fasteners, spare parts and accessories according to the manufacturer's spare parts list are to be used. Only these parts are covered by the warranty. Any liability of the manufacturer is excluded for damage caused by the use of non-original parts and accessories.



Incorrect or faulty spare parts can lead to damage, malfunction or total failure of the device.



If you have any questions or order spare parts, please have the factory or order number (test book, load plate on the device) ready. Providing this data ensures that you receive the correct information or the required spare parts.

### 7.3 Legal framework



In Germany, inspections on machines are carried out by qualified personnel. The exact requirements and qualifications for inspection personnel may vary depending on the type of machine and the specific regulations. The legal basis for carrying out inspections on machinery in Germany is set out in various laws and regulations, including:

- Industrial Safety Ordinance (BetrSichV): The Industrial Safety Ordinance regulates the safety and protection of employees when using work equipment, which also includes machinery. It contains general requirements for the testing and maintenance of machinery.
- Technical Rules for Operational Safety (TRBS): The TRBS provide recommendations and information on the implementation of the Industrial Safety Ordinance. They contain, among other things, information on the requirements for inspection personnel and their qualifications.
- Employers' liability insurance associations (BGV): The employers' liability insurance associations issue regulations to ensure the safety and health protection of employees in certain sectors or areas of activity. These regulations may also include requirements for inspection personnel.

The specific requirements for inspection personnel may vary depending on the type of machine. In some cases, special training or certification may be required to be allowed to conduct inspections. It is recommended to consult the relevant regulations and technical rules in order to determine the specific requirements for inspection personnel. In addition, the manufacturer's specifications and recommendations can also contain important information on the qualifications of inspection personnel.



**Attention:** In order to be allowed to test electronic components, the person qualified to test must either have completed vocational training in electrical engineering or have another sufficient electrotechnical qualification. Suitable vocational training includes, for example, electronics technician in various disciplines or a degree in electrical engineering.



If an inspection check is not performed or is performed incorrectly, various negative consequences can occur. Here are some possible impacts:

- Security risks: If these checks are not performed or are flawed, potential security risks may be missed or not addressed. This can lead to accidents, injuries or damage.
- Operational disruptions: Periodic inspections can also be used to identify and remedy potential failures or malfunctions at an early stage. If these tests are not performed or are faulty, failures or malfunctions may occur, which may affect operations and lead to production losses or delays.
- Legal consequences: In some industries, periodic inspections are required by law. If these checks are not carried out properly, it can lead to legal consequences, such as fines, liability, or even criminal prosecution.
- Costs: If periodic inspections are not performed or are faulty, additional costs may be incurred. This can be caused, for example, by repairs, spare parts or the loss of production time.



During an inspection of equipment, various aspects are examined to ensure that the equipment is functioning properly and complies with applicable safety standards. The exact examinations may vary depending on the type of device and the specific requirements, but in general, the following points are checked:

- Visual inspection: Checks if the device is externally damaged, such as cracks, deformations or signs of wear.
- Functional test: The hoist is tested for its functionality by loading and moving it. This involves verifying that all parts are working properly and that there are no unusual noises or vibrations.
- Load Capacity Testing: The maximum load capacity of the hoist is checked to ensure that it meets the required standards. This can be done by load testing or by checking the manufacturer's specifications.
- Inspection of safety devices: All safety devices of the hoist are checked to ensure that they are working properly. These include, for example, overload protection, brakes and safety hooks.
- Checking the instruction manual and marking: It is checked that the hoist is provided with an up-to-date instruction manual and the necessary markings.

It is therefore extremely important to carry out regular inspections to ensure safety, prevent damage and ensure smooth operation. If any damage or defects are found, appropriate repairs or replacements should be carried out before the device is used again. These checks should be carried out in accordance with the manufacturer's recommendations and applicable regulations.

## Maintenance

### 7.4 Inspection and maintenance interval



The intervals for inspections and maintenance of the device depend on the duration of use and the operational stress. As a rule, short, regular inspections and maintenance are recommended to ensure the proper functioning of the device and to detect possible problems at an early stage. For some equipment, an annual inspection may be sufficient, while others may require maintenance every six months or even more often. National law and regulations must be complied with in any case. In addition, regular maintenance such as lubricating moving parts, checking wear parts, and cleaning the device should also be performed. The following information is provided as a guideline.

Table 10 Types of use of the device

Types of use	
Normal use / operation:	Use with randomly distributed loads within the nominal load limit or with uniform loads below 65% of the maximum load capacity for a maximum of 15% of the operating time.
Difficult use / operation:	Application in which the equipment is operated within the nominal load limit and which goes beyond normal use.
Tough use / operation:	Application in which the equipment is operated under normal or difficult conditions with abnormal operating conditions.

Table 11 Intervals depending on the type of use of the device

Intervals depending on the type of use	
Daily Inspection:	by the operator or other designated persons prior to daily operation.
Frequent Inspection:	by the operator or other specified persons at intervals determined by the following criteria: <ul style="list-style-type: none"><li>• Normal use: monthly</li><li>• Difficult operation: weekly to monthly</li><li>• Hard work: daily to weekly</li></ul> There is no need to keep records.
Periodic inspection:	by designated persons at intervals determined by the following criteria: <ul style="list-style-type: none"><li>• Normal use: annually</li><li>• Difficult assignment: every six months</li><li>• Hard work: quarterly</li></ul> Records shall be kept for the continuous assessment of the condition of the equipment.



## 7.5 Inspection &amp; Maintenance Plan

## 7.5.1 Daily Inspection

Object	Review of the complaint
Markings	Nameplates must be present and contain all relevant information in accordance with the applicable standard
Enclosures & Protective Covers	Enclosures and protective covers must be present and must not be severely damaged by mechanical or thermal influences that prevent further protection or the functioning of the device.
Chain Accumulator	The chain accumulator must be present and must not be severely damaged by mechanical or thermal influences that prevent further protection or the functioning of the device.
Verbindungselemente	All fasteners such as screws, nuts, pins, cotter pins, etc. must be present and must not be damaged by mechanical or thermal influences that impede or prevent the operation of the device. Check all existing bolt connections for the corresponding torque values.
Braking system	The brake must hold the attached load safely and permanently. The brake must not make any abnormal noise. The opening and closing of the brake must be audible acoustically. When the EMERGENCY STOP BUTTON is pressed, the brake must immediately stop the movement.
Load hook and hook jaw safety	The hook mouth safety device must be in place. Load hooks and hook jaw safety devices must not be severely damaged by mechanical or thermal influences that impede or prevent their function and safe operation. The hook must be able to rotate freely and be able to close the hook mouth safely cleanly. The wear limit of the load hook must be taken into account in accordance with the operating instructions.
Load chain and load chain end stop	The load chain and the load chain end stop must not be severely damaged by mechanical or thermal influences that impede or prevent the safe operation of the equipment. This includes inadmissible deformations, cracks, wear, expansion, twisting, lack of chain lubrication, temperature damage, corrosion, etc. The wear limit of the load chain must be taken into account in accordance with the operating instructions.
Transmission limit switches	The motor must stop the movement as soon as the hook end positions are reached.
Control Switch & Radio Control	The pictograms of the directions of movement of the control switch or radio control must correspond to the actual movements.



In the case of frequent inspections, the same checks must be carried out as in the case of daily inspection. In addition, the following inspections must be carried out.

Object	Review of the complaint
Device suspension	The equipment suspension (flame-cut part and retaining bolts) must not be severely damaged by mechanical or thermal influences that impede or prevent its function and safe operation. The wear limit of the equipment suspension must be taken into account in accordance with the operating instructions.
Load chain	The load chain must be checked regularly for contamination or heavy abrasion. In addition, the load chain must be lubricated with the appropriate lubricant in accordance with the Lubrication chapter.
Control cable	The control cable must not be severely damaged by mechanical or thermal influences that interfere with or prevent the safe operation of the equipment. This includes inadmissible deformations, wear, kinks, cracks or abrasion marks. The cable strain relief must be present and shorter than the control line. In addition, the plugs and sockets must be checked.
Power cord	The power cable must not be severely damaged by mechanical or thermal influences that impede or prevent the safe operation of the equipment. This includes inadmissible deformations, wear, kinks, cracks or abrasion marks. In addition, the plugs and sockets must be checked.
Support bolts and spacers (chassis)	Support bolts and spacers must not be severely damaged by mechanical or thermal influences that hinder or prevent the safe operation of the equipment. This includes inadmissible deformations, wear, kinks, cracks or abrasion marks. In addition, the plugs and sockets must be checked. In addition, the alignment to the center of the carrier of the electric chain hoist must be checked.

## 7.5.3 Periodic inspection



In the case of the periodic inspection, the same checks must be carried out as for the daily and frequent inspections. In addition, the following inspections must be carried out.

Object	Review of the complaint
Load chain guide and base plate	The load chain guide must not be severely damaged by mechanical or thermal influences that impede or prevent the safe operation of the device. This includes inadmissible deformations, cracks, breaks, wear, temperature damage, corrosion, etc.
Chain Nut	The chain nut must not be severely damaged by mechanical or thermal influences that hinder or prevent the safe operation of the device. This includes inadmissible deformations, cracks, breaks, wear, temperature damage, corrosion, etc. In addition, the accuracy of fit and the lubrication condition must be checked.
Transmission	The gearbox must not be severely damaged by mechanical or thermal influences that impede or prevent the safe operation of the equipment. This includes inadmissible deformations, cracks, breaks, wear, temperature damage, corrosion, etc. The gearbox must also be checked for leaks and unusual running noises such as rattling, crunching or grinding.
Overload protection	The setting values of the electronic and mechanical overload protection must not be below or exceeded. The setting values can be found in the respective chapters.
Protective Conductor Resistance Measurement and Insulation Measurement	A protective conductor resistance measurement measures the resistance of the protective conductor of an electrical device to ensure that the ground connection is working properly. An insulation measurement measures the insulation resistance between the electrical conductors and the housing of a device to determine whether the insulation is sufficient to prevent breakdowns or short circuits. Both measurements are used to detect and eliminate possible safety risks such as grounding faults or insulation defects at an early stage.
Track and guide rollers	Track and guide rollers must not be severely damaged by mechanical or thermal influences that hinder or prevent the safe operation of the equipment. This includes inadmissible deformations, brittle fractures, wear, temperature damage, corrosion, etc.
Steel beam & trolley buffer	Steel beams and trolley buffers must not be severely damaged by mechanical or thermal influences that hinder or prevent the safe operation of the equipment. This includes inadmissible deformations, brittle fractures, wear, temperature damage, corrosion, paint chipping, etc. The raceway of the steel beam must be free of foreign objects such as dirt and dust.

### 8.1 Faults

If there is a malfunction during use with the unit, the following steps should be taken:



1. Immediately stop use and check the cause: Stop use immediately to avoid further damage or accidents. Examine the unit carefully to identify the cause of the malfunction. Check the gears, chain and other components for damage, wear or blockages.
2. Remedy the malfunction and restore functionality: Depending on the type of malfunction, various measures may be necessary. For example, remove foreign objects or dirt that are blocking the unit. If there is wear or damage, parts may need to be replaced or repaired. In the case of serious malfunctions, you should call in a specialist to carry out the repair. Make sure that the unit functions properly after the malfunction has been corrected. Re-check all components to make sure they are properly assembled and in good condition.
3. Safety check: Before using the unit again, carry out a safety check to ensure that it is safe and reliable. Check the load bearing capacity, fixing points and all safety devices.



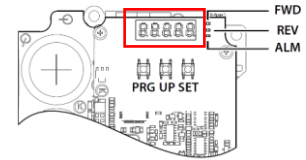
It is important that only trained personnel repair or perform maintenance on the unit to prevent further damage or accidents.

## 8.2 Error messages and correction methods of the frequency converter



If there are errors on the AC drive, the control panel (see display above graphic) displays an error message. In the meantime, the electrical relay is activated, the frequency converter stops the function, and the electric motor stops. The cause of the error message can be determined in detail using the table code. When the errors are resolved, use the following procedure to reset the error:

1. Reset the control panel by operating the dip switches or external control panel (option).
2. Reset errors.
3. Disconnect the power supply for 10 minutes, then plug it back in.



If faults persist after restarting, please contact your authorized dealer or (PLANETA-Hebetechnik GmbH) directly. Unauthorized repair is prohibited!

Table 12 Error code

Error code	Information	Cause of the error	Possible Troubleshooting
-Lu-	DC Bus Undervoltage	At the beginning of the power on and at the end of the power off. Input voltage too low. Improper wiring leads to undervoltage of the hardware.	Turn the device on and off. Check the input voltage. Please check the wiring and wire the inverter properly.
E0001	Inverter Output Overcurrent (Acceleration process)	Improper movement between rotor and motor. Improper engine parameters.	Connect the motor properly. Correctly parameterize motor U00.16-U00.20.
E0002	Inverter Output Overcurrent (Delay Process)	The power of the inverter used is too low.	Inverters with higher power. Please set the correct acceleration and deceleration time U00.01-U00.02.
E0003	Inverter Output Overcurrent (constant speed process)	The acceleration/deceleration time is too short. Vector control without self-optimisation of the motor.	Selbsteinstellung der Elder (U00.22).
E0004	DC Bus Overvoltage (Acceleration process)	Input current is too high. Delay time is too short.	Please check the power supply. Setting the appropriate delay time (U00.02).
E0005	DC Bus Overvoltage (Delay Process)	Improper selection of the braking device.	Correct choice of braking resistor.
E0006	DC Bus Overvoltage (Constant speed Process)		
E0009	Heatsink/fins overheated	Outside temperatures exceed specification. External ventilation of the frequency converter is too low. Fan defective. Temperature sensing circuit failure.	Reduced usage, performance enhancement. External ventilation of the rectifier. Replacing the fans Request customer service.
E0012	Automatic Parameter setting defective	Automatic parameter setting timed out.	Examination of the motor windings. Set the engine parameters correctly (U00.16-U00.20). Request customer service.
E0014	Error in the Current Measurement	Amperage meter defective.	Contact the manufacturer for repair.

Error code	Information	Cause of the error	Possible Troubleshooting
E0015	Input Phase Error	In three-phase input converters, the three-phase input power supply is out of phase.	Check the three-phase input power supply. Request customer service.
E0016	Initial Phase Error	The three-phase output of the converter is interrupted or not in phase. Phase shift on the frequency converter is not correct. Short circuit of inverter output phase	Check the wiring between the converter and the motor. Engine quality maintenance. Request customer service.
E0017	Inverter overloaded	Short acceleration time Engine parameters set incorrectly. Vector control without self-adjustment of motor parameters. Too low mains voltage Engine overloaded.	Acceleration time adjustment (U00.01). Set the engine parameters correctly (U00.16-U00.20). Automatic Parametereinstellung (U00.22). Check the mains voltage. Choosing a suitable converter.
E0019	Engine overloaded	Mains voltage too low. Long-term operation in fine stroke and motors without converter for heavy loads. Engine blocked or overloaded.	Check the mains voltage. Long-term operation in fine stroke and heavy-duty operation, replacement of the frequency converter. Control of load and mechanical transmission.
E0021	Control Board Access Error EEPROM	Error in the memory circuit of the EEPROM control board.	Contact the manufacturer for repair.
E0022	Read/write errors in the external Bedienfeld EEPROM	Error in the memory circuit of the EEPROM control board.	Replacement of the control panel. Contact the manufacturer for repair.
E0023	Error in parameter setting	The difference between the rated motor power and the rated power of the frequency converter is too large. Inappropriate setting of motor parameters	Selection of a motor that matches the power of the converter. Set the engine parameters correctly (U00.16-U00.20).
E0024	Failure of external devices	Error connecting external devices.	Check the connection of external devices.
E0030	Brake failure	Brake contactor does not move. Brake contactor is defective. The brake contactor works normally and has no feedback signal.	Check the brake cable. Replace the brake contactor. Check brake recirculation cables.
E0032	Abnormal failure of the Brake opening	Short-term abnormal opening of the lock. Too high amperage/torque setting of the drain brake.	Adjusting F24.27 (abnormal lock opening switching time). Adjusting the amperage/torque of the drain brake.

### 8.3 Causes of malfunctions and measures



The table below provides a summary of the main disorders and checkpoints for each symptom. Please note that this is not a comprehensive list of all possible faults.

Table 13 Causes of malfunctions and measures

Malfunction	Able cause of error	Test point/s
Device does not switch on	Mains voltage not available	Crane main switch, mains cable, internal cabling,
Device exhibits a fault	Ambient conditions not observed, moisture, water or dust ingress	Electric chain hoist cover, electric monorail trolley cover, control cylinder cover
Device does not move (horizontally / vertically)	Disruption or interruption of the mains or control cable	Kran-Hauptschalter, Mains cable, control cable, control bottle / radio control, internal cabling,
	Gearbox limit switch has tripped	Gearbox limit switch
	Phase error	Mains cable, control cable, control cylinder, motor, internal wiring
	Overload protection has triggered	Frequency inverter / parameters, mechanical slip clutch
	Brake does not release	Control cable, control cylinder, frequency inverter / parameters, brake
Device moves on one side (horizontally / vertically)	Undercutting or interruption of the control cable	Control cable, control cylinder, frequency inverter / parameters
	Dirty running surfaces of the beam	Running surface of the beam
Overtravel of the lifting and or lowering movement is too large or too small	Frequency inverter parameters incorrect	Frequency inverter / parameters of the electric chain hoist
Load sags	Brake does not close properly, mechanical overload protection incorrectly set or worn	Brake, mechanical overload protection, operating instructions, personnel
Overtravel of the lateral movement is too large or too small	Frequency inverter parameters incorrect	Frequency inverter / parameters of the electric monorail trolley
	Attached load is too large or is moved too quickly	Operating instructions, personnel
Load chain wears too much or too quickly, chain jumps	No or insufficient chain lubrication. Due to special operating conditions, the chain is constantly carrying wear-promoting solid dust particles. Pocket sprocket and/or chain guide is worn due to extreme operating conditions or very long service life.	Load chain lubrication, load chain cleaning, maintenance instructions,
Abnormal noises in the chain drive, chain jumps	Chain wear limit exceeded, chain too long, wrong chain used	Load chain, chain guide, maintenance instructions
Abnormal noises on the monorail trolley	Soiled running surfaces of the beam, track width not set correctly, bearings worn out, load attached too large and left hanging for a long time	Running surface of the beam, track width, track and guide rollers, operating instructions, personnel
Load hook does not rotate	Load hooks dirty, internal components broken	Load hook, load hook lubrication, load hook cleaning, operating instructions, maintenance instructions

9.1 Decommissioning and disposal



The device should be taken out of service and/or disposed of if it stops working or is irreparably damaged. This can also be the case if the device is outdated and needs to be replaced with a newer version. It is important that disposal is carried out in accordance with local regulations and laws to avoid environmental damage. In some cases, devices can also be recycled or reused instead of simply throwing them away. When not in use, store the device in a dry place. Please note that only if original spare parts are used can a safe and flawless operation be guaranteed. If you would like to have the device checked or repaired as part of the warranty, we ask you to send the device in its assembled condition. Unfortunately, we can no longer recognise warranty claims when disassembled devices are sent in. Please note that electronic waste, electronic components, lubricants and other auxiliary materials are subject to hazardous waste treatment and may therefore only be disposed of by approved specialist companies. National disposal regulations must be observed with regard to the environmentally sound disposal of the machine. Further information can be obtained from the relevant local authority.



## 10 Documents and Annexes

## 10.1 Spare parts PITCH PF (02 - 63)

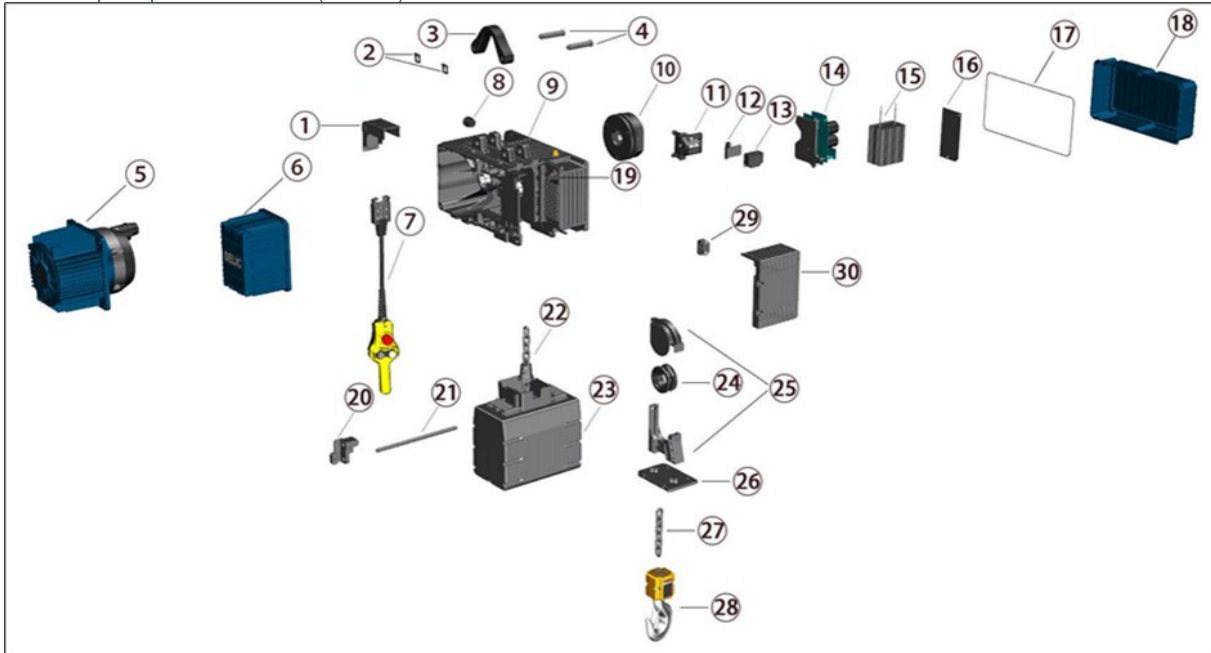


Table 14 Spare Parts PITCH PF (02 - 63)

No.	Description	Unit	Quantity
1	Cover of the cable entry (control line)	Part	1
2	Clip	Part	1
3	Suspension	Part	1
4	Suspension fastening bolt	Part	1
5	Electric motor	Part	1
6	Empty enclosures	Part	1
7	Tax incorrectness	Part	1
8	Connector control cable	Part	1
9	Transmission	Part	1
10	Brake	Part	1
11	Limit switch	Part	1
12	Mounting plate	Part	1
13	Brake Rectifier	Part	1
14	Frequency	Part	1
15	Braking Resistance	Part	1
16	Cover plate	Part	1
17	Gasket	Part	1
18	Housing cover electric side	Part	1
19	Power plug	Part	1
20	Adapter attachment chain accumulator	Part	1
21	Fastening bolt chain accumulator	Part	1
22	Chain clamp	Part	1
23	Chain Accumulator	Part	1
24	Drive chain nut	Part	1
25	Chain Guide Set	Part	1
26	Chain guide plate	Part	1
27	Load chain	Part	1
28	Load hook with underhanger	Part	1
29	Power plug attachment	Part	1
30	Cover	Part	1

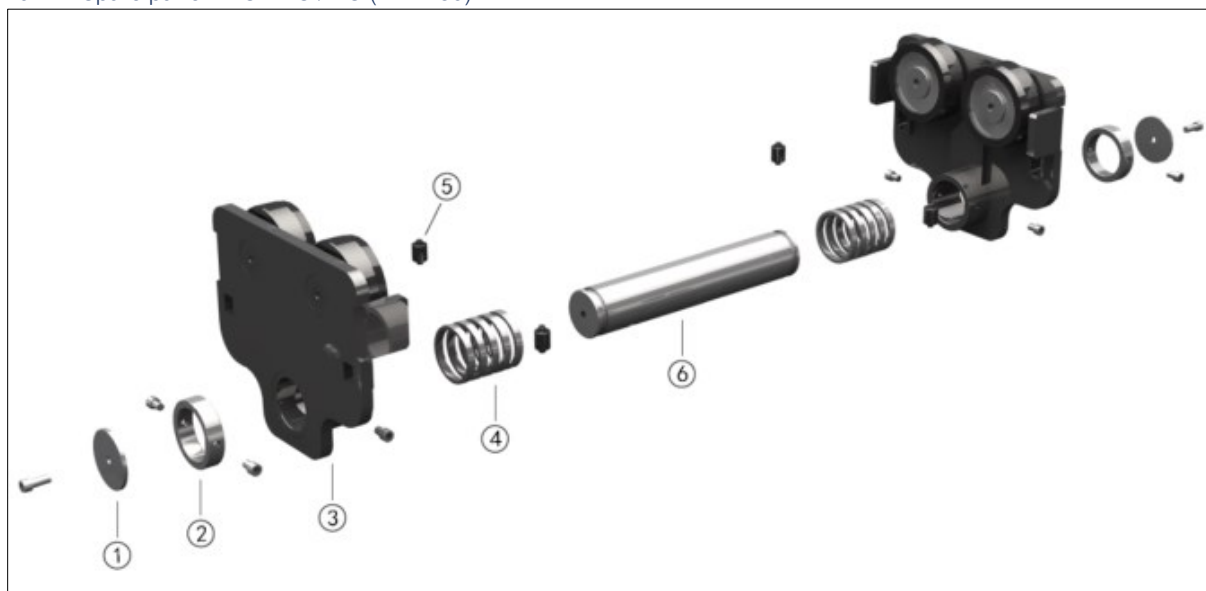


Table 15 Spare Parts PITCH EC / PC (12 - 130)

No.	Description	Unit	Quantity
1	Safety End Plate	Part	1
2	Safety End Sleeve	Part	1
3	Side Plate	Part	1
4	Spacers	Part	1
5	Leading role	Part	1
6	Load-bearing bolts	Part	1

## 10.3 Spare parts PITCH EC / PC (12 - 130)

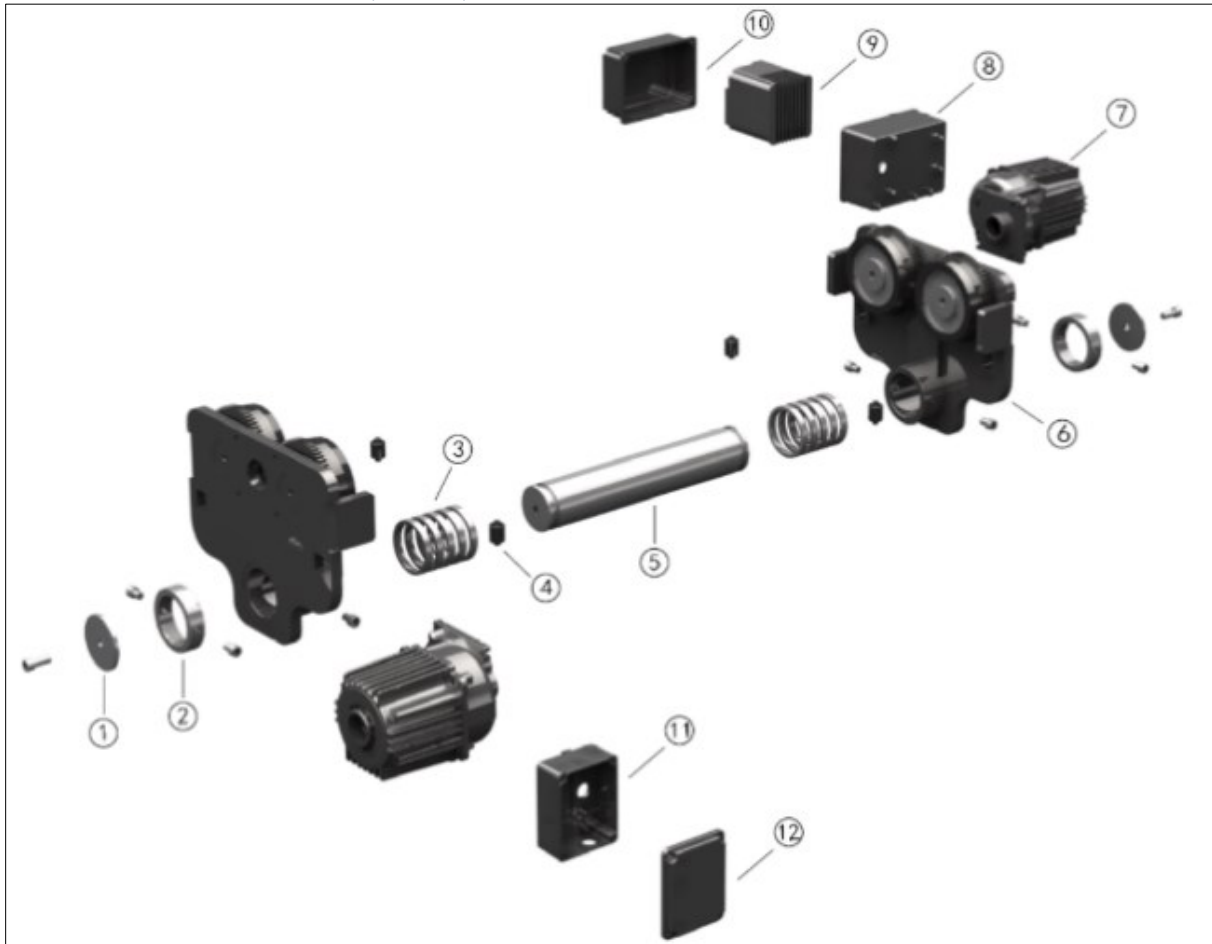


Table 16 Spare Parts PITCH EC / PC (12 - 130)

No.	Description	Unit	Quantity
1	Safety End Plate	Part	1
2	Safety End Sleeve	Part	1
3	Distance piece	Part	1
4	Leading role	Part	1
5	Load-bearing bolts	Part	1
6	Drive Side Plate	Part	1
7	Transmission	Part	1
8	Cover	Part	1
9	Inverter	Part	1
10	Cover	Part	1
11	Cover	Part	1
12	Cover	Part	1



## EU DECLARATION OF CONFORMITY (Original)

*Within the meaning of Regulation (EU) 2023/1230 according to Annex V, Part A and Annex VI Internal Production Control (Module A)*

We hereby declare,

PLANETA-Hebetechnik GmbH on its own responsibility,

that the machine, with the following information, complies with the relevant essential safety and health requirements of EU Regulation 2023/1230 and the relevant harmonised standards in its design, design and design as well as in the version placed on the market by us.

We confirm that the special technical documentation for this complete machine has been prepared in accordance with Annex V Part A. These documents will be made available to the market surveillance authorities via our documentation department upon request. The declaration of conformity loses its validity if changes or additions are made to the machine that have not been agreed with us. Likewise, the declaration expires if the machine is not used in accordance with the use cases described in the operating instructions or if the prescribed periodic inspections are not carried out. It is important to note that this declaration of conformity does not include any assurance of properties. Therefore, the safety instructions and instructions of the product must be carefully observed. The machine below is considered a complete machine if all the components necessary for operation are in place and the machine can be operated properly without any additional modifications or adjustments after assembly at the point of use. Furthermore, the machine must meet all relevant safety requirements and be provided with the necessary compliance documents as well as a mark confirming compliance with the applicable legal requirements. If this is not the case, the declaration of conformity loses its validity.

### Machine Information:

Machines / Product Type:	Electric chain hoist
Machines / Product name:	PITCH PF
Function:	Vertical moving of loads
Serial number:	6000000H001 ... 6999999H999
Carrying capacity:	250kg ... 32.000kg
Year of construction:	2024

The following legal regulations and regulations have been taken into account and complied with:

Regulation (EU) 2023/1230 L165/1	Machinery Product Ordinance
Regulation (EC) No 1907/2006 L136/3	REACH Regulation
RL-2014/53/EU 02014L0053	Radio Channeling Directive*
Directive 2014/30/EU	EMC Directive
Directive 2014/35/EU	Low Voltage Directive**
Directive 2012/19/EU L197/38	WEEE Directive
Regulation 94/62/EC 01994L0062	Packaging Guideline
Regulation 2011-65/EU L174/88	RoHS Directive
FEM 9.683	Selection of hoist and travel motors
FEM 9.751	Power-driven serial hoists; Safety
FEM 9.755	Measures to achieve safe operating periods

\*The listed legislation only applies if the above-mentioned machine contains radio-capable components.

\*\* Directive 2014/35/EU is complied with in accordance with Chapter 1.5.1 of Regulation (EU) 2023/1230 with regard to its protection objectives.

The following harmonised standards have been taken into account and complied with:

DIN EN ISO 12100:2011-03	Safety of machinery - General Design Principles Risk Assessment and Risk Mitigation
DIN EN ISO 20607:2019-10	Safety of machinery – Operating Instructions General Design Principles
DIN EN 14492-1:2010-06	Cranes– Power-driven winches and hoists

Place and date on which the declaration of conformity was issued:

Resser Str. 17 | 44653 Herne | Germany, 10.01.2025

By proxy Matthias Klawitter  
(Managing Director)

## 10.5 Declaration of Conformity of a complete Machine



## EU DECLARATION OF CONFORMITY (Original)

*Within the meaning of Regulation (EU) 2023/1230 according to Annex V, Part A and Annex VI Internal Production Control (Module A)*

We hereby declare,  
PLANETA-Hebetechnik GmbH on its own responsibility,  
that the machine, with the following information, complies with the relevant essential safety and health requirements of EU Regulation 2023/1230 and the relevant harmonised standards in its design, design and design as well as in the version placed on the market by us.

We confirm that the special technical documentation for this complete machine has been prepared in accordance with Annex V Part A. These documents will be made available to the market surveillance authorities via our documentation department upon request. The declaration of conformity loses its validity if changes or additions are made to the machine that have not been agreed with us. Likewise, the declaration expires if the machine is not used in accordance with the use cases described in the operating instructions or if the prescribed periodic inspections are not carried out. It is important to note that this declaration of conformity does not include any assurance of properties. Therefore, the safety instructions and instructions of the product must be carefully observed. The machine below is considered a complete machine if all the components necessary for operation are in place and the machine can be operated properly without any additional modifications or adjustments after assembly at the point of use. Furthermore, the machine must meet all relevant safety requirements and be provided with the necessary compliance documents as well as a mark confirming compliance with the applicable legal requirements. If this is not the case, the declaration of conformity loses its validity.

### Machine Information:

Machines / Product Type:	Monorail trolley
Machines / Product name:	PITCH EC / PC
Function:	Horizontal movement of loads
Serial number:	6000000E001 ... 6999999E999 & 6000000P001 ... 6999999P999
Carrying capacity:	125kg ... 13.000kg
Year of construction:	2024

The following legal regulations and regulations have been taken into account and complied with:

Regulation (EU) 2023/1230 L165/1	Machinery Product Ordinance
Regulation (EC) No 1907/2006 L136/3	REACH Regulation
RL-2014/53/EU 02014L0053	Radio Channeling Directive*
Directive 2014/30/EU	EMC Directive
Directive 2014/35/EU	Low Voltage Directive**
Directive 2012/19/EU L197/38	WEEE Directive
Regulation 94/62/EC 01994L0062	Packaging Guideline
Regulation 2011-65/EU L174/88	RoHS Directive
FEM 9.683	Selection of hoist and travel motors
FEM 9.751	Power-driven serial hoists; Safety
FEM 9.755	Measures to achieve safe operating periods

\*The listed legislation only applies if the above-mentioned machine contains radio-capable components.

\*\* Directive 2014/35/EU is complied with in accordance with Chapter 1.5.1 of Regulation (EU) 2023/1230 with regard to its protection objectives.

The following harmonised standards have been taken into account and complied with:

DIN EN ISO 12100:2011-03	Safety of machinery - General Design Principles Risk Assessment and Risk Mitigation
DIN EN ISO 20607:2019-10	Safety of machinery – Operating Instructions General Design Principles
DIN EN 14492-1:2010-06	Cranes– Power-driven winches and hoists

Place and date on which the declaration of conformity was issued:

Resser Str. 17 | 44653 Herne | Germany, 10.01.2025

By proxy Matthias Klawitter  
(Managing Director)

## EU DECLARATION OF INCORPORATION(Original)

*Within the meaning of Regulation (EU) 2023/1230 in accordance with Annex V, Part B and  
Annex VI Internal Production Control (Module A)*

We hereby declare,  
PLANETA-Hebetechnik GmbH on its own responsibility,  
that the machine, with the following information, complies with the relevant essential safety and health requirements of  
EU Regulation 2023/1230 and the relevant harmonised standards in its design, design and design as well as in the  
version placed on the market by us.

We confirm that the special technical documentation for this incomplete machine has been prepared in accordance  
with Annex V Part B. These documents will be made available to the market surveillance authorities via our  
documentation department upon request. The declaration of conformity loses its validity if changes or additions are  
made to the machine that have not been agreed with us. Likewise, the declaration expires if the machine is not used in  
accordance with the use cases described in the operating instructions or if the prescribed periodic inspections are not  
carried out. It is important to note that this declaration of conformity does not include any assurance of properties.  
Therefore, the safety instructions and instructions of the machine must be carefully observed. The machine below is  
considered an incomplete machine according to Machinery Regulation 2023/1230 if it does not contain all the  
components necessary for operation and requires additional modifications or adjustments after assembly at the point  
of use in order to be able to operate properly. In addition, the machine is considered incomplete if it does not meet all  
relevant safety requirements and does not have the necessary CE marking confirming compliance with the applicable  
legal requirements.

### Machine Information:

Machines / Product Type:	Electric chain hoist
Machines / Product name:	PITCH PF
Function:	Vertical moving of loads
Serial number:	6000000H001 ... 6999999H999
Carrying capacity:	250kg ... 32.000kg
Year of construction:	2024

The following legal regulations and regulations have been taken into account and complied with:

Regulation (EU) 2023/1230 L165/1	Machinery Product Ordinance
Regulation (EC) No 1907/2006 L136/3	REACH Regulation
RL-2014/53/EU 02014L0053	Radio Channeling Direktive*
Directive 2014/30/EU	EMC Directive
Directive 2014/35/EU	Low Voltage Directive**
Directive 2012/19/EU L197/38	WEEE Directive
Regulation 94/62/EC 01994L0062	Packaging Guideline
Regulation 2011-65/EU L174/88	RoHS Directive
FEM 9.683	Selection of hoist and travel motors
FEM 9.751	Power-driven serial hoists; Safety
FEM 9.755	Measures to achieve safe operating periods

\*The listed legislation only applies if the above-mentioned machine contains radio-capable components.

\*\* Directive 2014/35/EU is complied with in accordance with Chapter 1.5.1 of Regulation (EU) 2023/1230 with regard to its protection objectives.

The following harmonised standards have been taken into account and complied with:

DIN EN ISO 12100:2011-03	Safety of machinery - General Design Principles Risk Assessment and Risk Mitigation
DIN EN ISO 20607:2019-10	Safety of machinery – Operating Instructions General Design Principles
DIN EN 14492-1:2010-06	Cranes– Power-driven winches and hoists

The commissioning of the incomplete machine will be prohibited until the incomplete machine complies with the  
provisions of EU Regulation 2023/1230 and the EC declaration of conformity according to Annex V Part A is available.

Place and date on which the declaration of conformity was issued:

Resser Str. 17 | 44653 Herne | Germany, 10.01.2025



By proxy Matthias Klawitter  
(Managing Director)

## 10.7 Declaration of Conformity of an incomplete Machine

**EU DECLARATION OF INCORPORATION(Original)**

*Within the meaning of Regulation (EU) 2023/1230 in accordance with Annex V, Part B and  
Annex VI Internal Production Control (Module A)*

## Machine Information:

Machines / Product Type:	Monorail trolley
Machines / Product name:	PITCH EC / PC
Function:	Horizontal movement of loads
Serial number:	6000000E001 ... 6999999E999 & 6000000P001 ... 6999999P999
Carrying capacity:	125kg ... 13.000kg
Year of construction:	2024

The following legal regulations and regulations have been taken into account and complied with:

Regulation (EU) 2023/1230 L165/1	Machinery Product Ordinance
Regulation (EC) No 1907/2006 L136/3	REACH Regulation
RL-2014/53/EU 02014L0053	Radio Channeling Directive*
Directive 2014/30/EU	EMC Directive
Directive 2014/35/EU	Low Voltage Directive**
Directive 2012/19/EU L197/38	WEEE Directive
Regulation 94/62/EC 01994L0062	Packaging Guideline
Regulation 2011-65/EU L174/88	RoHS Directive
FEM 9.683	Selection of hoist and travel motors
FEM 9.751	Power-driven serial hoists; Safety
FEM 9.755	Measures to achieve safe operating periods

\*The listed legislation only applies if the above-mentioned machine contains radio-capable components.

\*\* Directive 2014/35/EU is complied with in accordance with Chapter 1.5.1 of Regulation (EU) 2023/1230 with regard to its protection objectives.

The following harmonised standards have been taken into account and complied with:

DIN EN ISO 12100:2011-03	Safety of machinery - General Design Principles Risk Assessment and Risk Mitigation
DIN EN ISO 20607:2019-10	Safety of machinery – Operating Instructions General Design Principles
DIN EN 14492-1:2010-06	Cranes– Power-driven winches and hoists

The commissioning of the incomplete machine will be prohibited until the incomplete machine complies with the provisions of EU Regulation 2023/1230 and the EC declaration of conformity according to Annex V Part A is available.

Place and date on which the declaration of conformity was issued:

Resser Str. 17 | 44653 Herne | Germany, 10.01.2025

 \_\_\_\_\_

By proxy Matthias Klawitter  
(Managing Director)

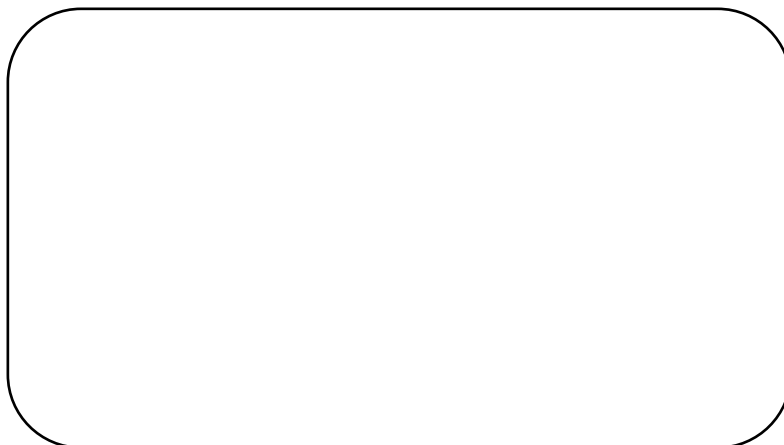
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