secutex®

Lifting
Protection
Materials

STORAGE-
SYSTEM

secuBlock [Maxi, Midi, Mini]

Eine
Schicht
besser

Table of Contents

1 Introduction

1.1 General Information

Please read this manual carefully before use and keep it for future reference. In case of any uncertainties, contact the manufacturer.

This operating manual has been created by SpanSet secutex to provide detailed information on the safe transport, handling, installation, maintenance, and repair of the product. In this context, "product" and "machine" are to be understood as synonyms. Failure to follow the instructions contained herein may endanger the health and safety of the operator and lead to property damage. It is important that this manual is stored by an authorized person and can be consulted at any time if necessary. This document, or a copy of it, must always be available near the working area of the product/machine. The manual reflects the state of the art at the time of sale. As the manufacturer, we reserve the right to change, supplement, or improve the operating manual. Such changes should not lead to the current publication being considered insufficient. Important sections of the manual and significant instructions are highlighted by symbols, the meanings of which are explained below.

Installers, operators, and maintenance personnel must particularly observe the operating manuals as well as the trade association's documentation.

In the Federal Republic of Germany, the Occupational Health and Safety Ordinance (BetrSichV) must be implemented. Outside of Germany, the specific regulations of the country of operation must be considered. Safety, installation, operation, inspection, and maintenance instructions from this manual must be made available to the relevant personnel.

1.2 Manufacturer Information

Name:	SpanSet secutex	E-mail:	info@secutex.de
Adress:	Am Forsthaus 33 | 52511 Geilenkirchen | Germany	Phone:	+49 (0) 24 51 48 45 73 - 0

1.3 Factory Certificate, Inspection Certificate, and Acceptance Certificate according to DIN EN 10204

Since the product in question does not fall under the Machinery Directive 2023/1230 L 165/1 or other harmonized standards, it is not eligible to bear the CE marking or to present a declaration of conformity in accordance with this directive. However, as the manufacturer, we want to ensure that you, as the operator, receive a high level of safety. Therefore, we assure that we comply with all relevant standards concerning essential safety aspects. This assurance is supported by the corresponding certificates and documentation.

1.4 Copyright

2 Safety

2.1 Safety Information

Most accidents during the operation of technical products result from non-compliance with basic safety guidelines. By identifying potential risks at an early stage, an accident can be prevented before it occurs.

Failure to follow the safety instructions could result in fatal or serious injury. As the manufacturer of the product, it is impossible for us to foresee all potentially dangerous situations. Therefore, the safety instructions in this guide cannot cover all eventualities.

The product must not be used in any way other than as set out in this manual. All safety rules and protective measures applicable to use at the point of use must be observed, including site-specific regulations and protective measures in the workplace.

The information, descriptions and illustrations in this guide are based on information available at the time this guide was written.

2.2 Regulations and guidelines

At the time of development of this product, there were no specific guidelines that were applicable to it. Nevertheless, we have taken into account the relevant laws, regulations and recognized technical standards to ensure and guarantee the safety and protection of the users of this product.

Table 1 European Directives & Regulations

European Regulations	
ProdSG	Product Safety Act
ArbSchG	Occupational Health and Safety Act
BetrSichV	Ordinance on Industrial Safety and Health
TRBS	Technical rules for operational safety

2.3 Duties of Care and Requirements

The requirements for maintaining safety and health protection have been met. However, this safety can only be achieved in practice if all necessary measures are taken. The operator of the product must plan these measures and oversee their implementation. The operator is responsible for the safe operation of the equipment! The operator must ensure that training for the operating and maintenance personnel is provided in a timely manner before any work with or on the product begins.

Persons under the influence of drugs, alcohol or medication that impairs their reactions is not allowed to work with or on the product! The user must have the necessary training and experience, as well as the necessary tools, to be able to work with and on the product. Inexperienced personnel may only work on the product under the supervision of an experienced person. The user must also have adequate physical and mental abilities.

Safety instructions for the product must be strictly followed, as non-compliance can lead to serious injuries or even death. As the manufacturer, we cannot foresee all potential hazards, so the safety instructions in this manual are not exhaustive. No work should be carried out if the relevant information has not been read and understood. The user is responsible for ensuring safety for themselves and others if deviating from the manufacturer's recommended tools, actions, working methods, or techniques.

2.4 Symbols, Bid Signs, and Signal Words

This operating manual is equipped with a large number of mandatory and warning signs that are intended to convey important information and instructions to the user. These symbols are designed to identify potential hazards and take appropriate precautions. However, it is crucial to understand that not all of the symbols included in this guide are relevant or valid for every situation. The application of specific symbols can depend on various factors such as the model, usage, or local regulations. Therefore, it is imperative that the user reads the guide thoroughly and identifies the relevant symbols that apply to their specific situation. In case of ambiguity, it is recommended to contact the manufacturer or authorized professionals for a precise interpretation of the symbols. It should be noted that this guide may not cover all potential hazards or situations. It is the responsibility of the user to evaluate their environment and take appropriate measures to ensure their own safety as well as the safety of others.

Information
This icon indicates important information.

Danger
This symbol warns of an imminent danger to the health and life of people. Ignoring such a warning will result in serious injury, possibly fatal.

Warning
This symbol warns of situations that can potentially endanger people's health and lives. Ignoring such a warning can lead to serious injury, possibly resulting in death.

Warning! Danger from suspended loads
It is forbidden to be under a suspended and/or moving load. This is life-threatening!

Warning! Danger from falling objects
This symbol warns of falling objects. The area must be secured over a large area. Wearing head protection is mandatory!

Warning! Danger of entrapment
Risk of entrapment and cuts on hands and fingers, legs and other limbs. Sufficient personal protective equipment must be worn.

Warning! Danger from obstacles on the ground
There is an increased risk of tripping, falling and injury to legs and other limbs. Always pay attention to your path and remove obstacles if possible.

Use head protection
This sign indicates that a safety helmet must be worn in a certain area. This can be the case, for example, on construction sites or in factories.

Use handguards
This mandatory sign indicates that gloves should be worn in a certain area to ensure protection.

Use protective clothing
This sign indicates that protective clothing must be worn in a certain area. This can be the case, for example, on construction sites or in factories.

Wear hearing protection
This sign indicates that hearing protection must be worn in a certain area to minimize the risk of hearing damage.

Use foot protection
This sign indicates that safety shoes must be worn in a certain area. This can be the case, for example, on construction sites or in factories.

2.5 Personal protective equipment

Appropriate work clothes must be worn for each task. For safety reasons, operators and others in the immediate vicinity of the device 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. In the chapter "Symbols, mandatory signs and signal words" the personal protective equipment that must be worn at least is listed.

2.6 Intended and non-intended uses

2.6.1 Intended uses

The *secuBlock* storage system in the standard "*mini*", "*midi*" and "*maxi*" versions is used for the safe and stable storage of objects and to provide a non-slip surface during transport. Made of special hard foam, the secuBlock is convincing because of its low weight, easy handling and quick readiness for use. As a more flexible system, the secuBlock enables a kind and efficient storage of workpieces, machine components and tools by protecting them reliably from direct contact with the floor, moisture or mechanical damage. Thanks to its *form-fitting design*, several elements can be connected to stable, stackable structures, thus ensuring space-saving storage. In addition to its function as a storage system, the secuBlock makes a major contribution to the safe securing of loads during transportation. It provides a non-slip and stable surface for sensitive or heavy objects and can be used as a spacer or protective underlay between stacked goods. For additional safety, the system can be combined with tension belts, anti-slip mats or specially developed secutex *impact protection mats* made of secuFoam.

Thanks to the *modular system*, the secuBlock can be flexibly adapted to different storage and transport requirements. Because of the use of different connecting elements, the secuBlocks offer a high degree of flexibility in construction. The *single connectors* allow the secuBlocks to be stacked in a targeted manner. This allows the construction of multi-layer, vertical structures that are both stable and adaptable. At the same time, the *double connectors* are able to expand the blocks horizontally – in width or length. This arrangement allows for a flat, extended construction that optimally adapts to specific requirements and spatial conditions. The combination of both connecting elements therefore creates a system that can be configured in more flexible ways both vertically and horizontally and ensures simple and stable assembly. In addition, there are also beveled variants of the secuBlocks that allow round or conical materials such as pipes, rotor blades or aircraft components to be stored safely and stably. The combination of both connecting elements, as well as the special beveled models, creates a system that can be configured in more flexible ways both vertically and horizontally and ensures simple and stable assembly. Its weather-resistant design allows it to be *used* both *indoors and outdoors*. The robust material ensures a high degree of reusability and a long service life. Because it is lightweight, secuBlock is easy to handle and enables quick assembly and disassembly. As a sustainable and versatile solution, it optimizes the storage and transport of valuable or sensitive goods and therefore makes a major contribution to increasing efficiency in logistics and production processes.

Summary of key points:

- Safe and stable storage.
- Storage of workpieces, machine components and tools.
- Protection against contact with the floor, moisture and mechanical damage.
- Space-saving stacking because of the form-fitting connection.
- Supports load securing during transportation.
- Non-slip and stable surface for sensitive or heavy objects.
- Use as a spacer or protective mat between stacked goods.
- Combination with tension belts, anti-slip mats or secutex secuFoam storage mats to increase safety.
- Modular and flexible construction kit.
- Adaptation to various storage and transport requirements.
- Single and double connectors for stable and adaptable structures.
- Beveled variants for specific applications.
- Weather resistant and sustainable.
- Suitable for indoor and outdoor use.
- Robust, reusable material with a long service life.
- Lightweight construction for easy handling, quick assembly and disassembly.
- Optimization of logistics and production processes.
- Efficient solution for the safe storage and protection of sensitive goods.
- Makes a major contribution to process optimization in warehousing and transport.

2.6.2 non-intended uses

Non-intended use of the secuBlock can lead to significant restrictions in functionality, a shortened lifespan or even safety risks for people and goods. In particular, improper use occurs when the secuBlock is loaded beyond its constructive and material limits. This applies, for example, to exceeding the maximum allowable weight load or an uneven, punctual load, which can lead to deformation or damage. The secuBlock is designed exclusively as a storage and security system and must not be used as a load-bearing or load-bearing element, such as a support or substructure for machines. In the transport area, non-intended use is given if the secuBlock is used without additional safety measures such as tensioning belts or anti-slip mats, although these are necessary. Equally problematic is the application on slippery, uneven or unstable surfaces, which impair stability and favor slipping or tipping of the stored objects. Unsecured and/or incorrect stacking of secuBlock elements can also lead to dangerous situations. Unsuitable environmental conditions can negatively affect the material properties of the secuBlock. In particular, this includes use in areas of extreme heat or direct exposure to flames, because high temperatures can damage the material structure. Likewise, use in aggressive chemical environments is problematic because chemicals can attack the material and reduce the adhesion of the surfaces. These include, for example, acids, bases, certain alcohols, ketones, highly polar organic solvents, and aromatic hydrocarbons. Another form of non-intended use is the manipulation or misuse of the secuBlock. Unauthorized cutting, drilling or mechanical processing of the elements can impair their stability and endanger safety. Likewise, misuse as a seat, step or improvised work platform is not allowable because the secuBlock is not designed for this. Use as impact protection or a crumple zone in safety-critical areas also constitutes improper use.
Finally, disregarding the manufacturer's instructions also constitutes non-intended use. If the generally recommended storage and security methods are not followed or the secuBlock is combined with untested and incompatible security systems, this can significantly impair its functionality. In addition, the manufacturer's instructions regarding load capacity, temperature resistance and chemical resistance must always be observed to ensure safe and efficient use.

Summary of key points

- Improper loading and use
- Exceeding the maximum allowable weight load
- Point or uneven loading that causes deformation or damage
- Use as a load-bearing or load-bearing element
- Misuse in the transport area
- Use without the necessary safety measures (e.g. tensioning straps, anti-slip mats)
- Use on slippery, uneven or unstable surfaces
- Unsecured stacking without fixing or fall protection
- Unsuitable environmental conditions
- Use in areas of extreme heat or direct exposure to flames
- Use in aggressive chemical environments
- Storage or use in high-traffic areas with high mechanical loads
- Manipulation or misuse
- Unauthorized cutting, drilling or mechanical processing
- Misuse as a seat, step or work platform
- Use as impact protection or crumple zone
- Disregard of manufacturer's specifications
- Non-compliance with generally recommended storage and securing methods
- Combination with untested or incompatible securing systems
- Disregard of manufacturer's instructions regarding load capacity, temperature resistance and chemical resistance

2.7 Hazards according to DIN EN ISO 12100

The following hazards can occur when handling the device.
Please note that the following types of hazards and examples of device handling 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.

2.7.1 Mechanical, physical, ergonomic and other hazards

Various hazards may arise when handling the storage systems. Some of the most important hazards are listed below:

- Crushing and shearing points: When stacking or positioning secuBlock elements, hands or fingers may be crushed.
- Risk of falling or tipping over: Blocks that have been stacked incorrectly or in an unstable manner can fall over and injure people or damage transported goods.
- Breakage or deformation: Overloading can lead to material fatigue or sudden failure, causing stored loads to move uncontrollably.
- Slip hazard: Incorrect placement of the secuBlock on smooth or sloping surfaces can cause the load to slip.
- Electrostatic charge: Depending on the material and the environment, the secuBlock can become electrostatically charged, which can cause problems in areas at risk of explosion.
- Incorrect posture or overloading: When carrying several secuBlock elements at the same time, the total weight can quickly become too much for the muscles. In addition, limited visibility can increase the risk of accidents by overlooking obstacles or uneven surfaces.
- Improper handling: Incorrect techniques when transporting or placing the blocks can lead to back or joint problems.
- Chemical exposure: Contact with certain chemicals (e.g. solvents or oils) can degrade the material and affect slip resistance or stability.
- Weathering: Extreme temperatures or UV radiation can make the material brittle and thus reduce the safety of the product.
- Fire hazard: If the material is combustible or flammable, it can pose an additional hazard in areas at risk of fire.
- Unintended use: If the secuBlock is misused as a seat, step or load-bearing element, there is a high risk of accident.
- Use without securing: If the necessary securing methods (e.g. tension belts or anti-slip mats) are not used, the load may move uncontrollably.
- Use on unstable surfaces: Inadequately secured placement can cause the entire construction to tip over or slip away.

The above-mentioned dangers are only examples of potential risks when handling the secuBlock and do not claim to be complete. A detailed risk assessment taking into account the respective operating conditions is mandatory. To avoid accidents or damage, all safety-related factors must be checked and the intended use must be consistently followed. The *responsibility* for *creating* such a *risk assessment* lies with the *operator or user*, because only they know the specific conditions on site. Factors such as loads, environmental conditions and individual work processes cannot be recorded in a generalized way and so there must be an evaluation by the user themselves. The information provided here is used only as a general guide and does not replace an independent risk assessment. So it is essential that the operator analyzes all safety-related aspects and implements appropriate protective measures to ensure safe use of the secuBlock.

2.8 Residual risks

2.8.1 General residual risks

When handling the product, 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.
- 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: Regular training for employees to educate them about potential hazards and provide them with the necessary knowledge and skills to prevent risks.
- 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 mitigation measures.

It is important that all employees are actively involved in the identification and mitigation of residual risks. A holistic approach to safety can minimise residual risks and ensure a safe workplace.

2.8.2 General types of residual risks

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

- Accepted risks: These are risks that are considered acceptable due to their low probability or low 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 occur for which no specific safety precautions have been taken.
- Human error: Despite training and guidance, human error can occur, whether due to negligence, inattention, or misjudgment. This can lead to residual risks, as not all employees always act correctly.
- Technical defects: Although devices, products, etc. are regularly maintained and checked, there is always a risk of technical defects or failures that can lead to residual risks.
- External influences: External factors such as weather conditions or natural disasters 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. The best thing to do is to take all possible measures to mitigate risk and continuously train and sensitize employees to keep the residual risk as low as possible.

3 Product description

3.1 Scope of application and environmental conditions for the secuBlock storage system

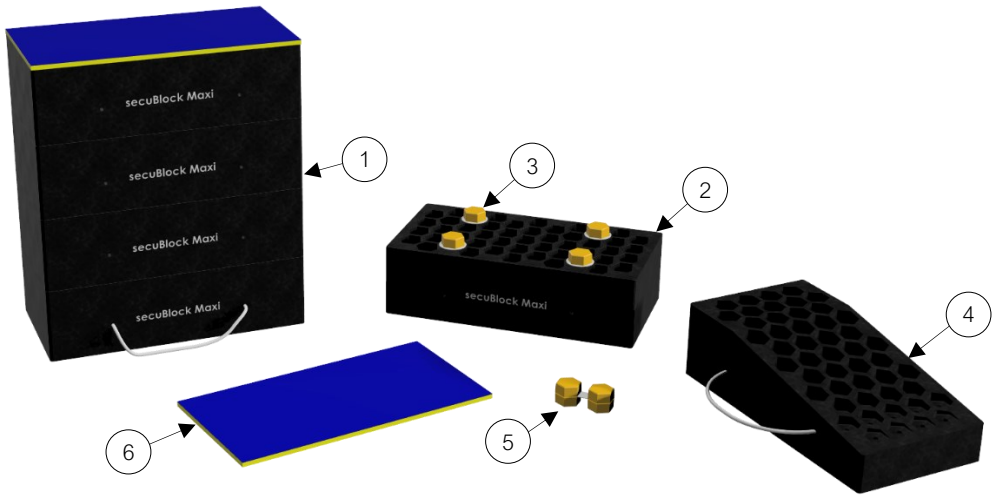
The secuBlock storage system is used in a wide range of industries and offers a reliable solution for the protected storage and safe positioning of a wide variety of components. In *mechanical engineering* and *metalworking*, it serves as a stable storage for stamped, casting or milled parts during production, assembly and maintenance. In the *automotive* and *aerospace industries*, it ensures the secure hold of sensitive components such as body parts, chassis components or aircraft components. The *logistics* and *transport sector* benefits from its non-slip surface, which enables goods to be securely fixed to trucks or containers. The secuBlock system is also appreciated in *workshops* and *maintenance companies*, as it offers gentle storage for spare parts and machine components during repairs. It plays a crucial role, especially in the *wind energy industry*, as it reliably protects large-format and sensitive components such as rotor blades during production, transport and maintenance.

3.2 Exclusion of use

The secuBlock storage system is designed for a defined temperature range. Extreme heat or cold can affect the mechanical properties and should therefore be avoided. While the system is largely impervious to moisture, contact with harsh chemicals or solvents can damage the material structure and must be ruled out. It has been specially developed for static loads and is not designed for driving heavy vehicles or extreme loads at certain points. The high stability in combination with a low dead weight allows for easy handling, while the easy-care surface supports uncomplicated cleaning and contributes to a long service life. The proper use of the secuBlock storage system is the responsibility of the operator. Improper use can affect functionality and compromise security. Detailed information on non-intended uses is listed in the chapter "Improper uses".

3.3 Schematic representations

secuBlock Tower



Pos.	Designation	Pos.	Designation
1	secuBlock Tower (Assembled)	4	secuBlock in wedge shape*
2	secuBlock Element*	5	Double connectors*
3	Single connectors	6	secutex Impact Protection Mat*

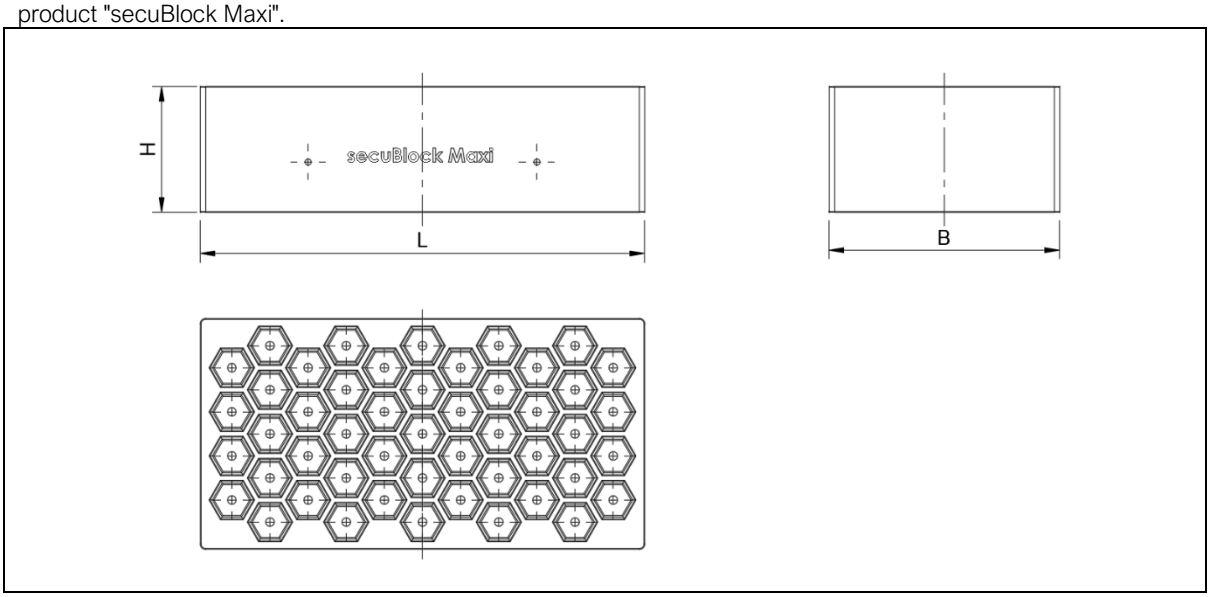
* Optional

** Optional: secuBlock available with carrying handle.

** Optional: secuBlock in wedge shape, optionally available with or without a carrying handle on both sides.

3.4 Technical dimensions

The following technical drawing shows the main dimensions of the secuBlock storage system. Please observe these dimensions carefully when handling and using them to ensure safe and efficient operation. This illustration refers to the product "secuBlock Maxi".



Variant	Load capacity [kg]	Dimensions LxBxH [mm]	Weight [kg]
secuBlock Maxi	25.000	1,060x550x300	18
secuBlock Midi	10.000	550x310x200	4,2
secuBlock Mini	5.000	330x210x100	0,9

4 Assembly and installation

4.1 General installation instructions for the secuBlock storage system

The assembly and disassembly of the secuBlock storage system is quick and uncomplicated, without the need for tools or special expertise. Thanks to the modular design, a single employee can carry out the assembly in a short time. The individual secuBlocks are securely connected to each other with the enclosed single or double connectors.

4.1.1 Before installation

Proper installation of the secuBlock storage system is essential to ensure safe and stable application. There are several factors to consider before installation, including the substrate, environmental conditions, the condition of the components, and the correct stacking technique and connection of the blocks. The following points provide a structured overview of the most important assembly aspects:

1. Substrate Testing:
   - The substrate must be level, load-bearing and free of impurities.
   - Soft or uneven surfaces can affect stability and must be compensated.
2. Ambient conditions:
   - Installation must only take place within the permissible temperature range.
   - Extreme heat or cold can have a negative impact on material properties.
   - Contact with aggressive chemicals or solvents must be avoided to prevent material damage.
3. Inspection of components:
   - Before installation, all secuBlocks and connectors must be checked for damage or deformation.
   - Defective or incomplete fasteners must not be used, as they could jeopardize stability.
4. Stacking height & stability:
   - The maximum stacking height must be determined even before assembly.
   - Excessive stacking without additional securing is to be avoided.
   - For stacking heights of more than 1,500 mm (five maxi blocks), additional fixation is recommended to prevent tipping over or instability.
5. Connection of the secuBlocks:
   - The connectors must be attached to identical, mirror-image positions.
   - Four connectors must be used per block.
   - The connectors must be fully integrated into the blocks to be connected to ensure a secure connection.

By observing these points, a safe and stable use of the secuBlock storage system is ensured.

4.1.2 Maximum stacking height and stability

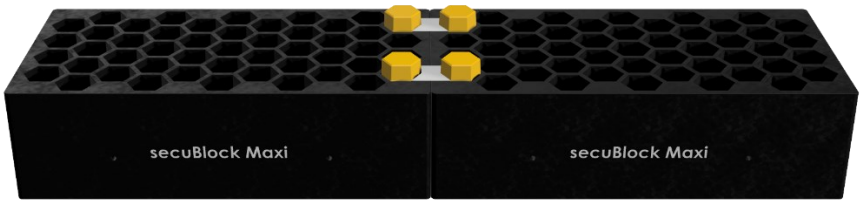
As a manufacturer, we do not specify a fixed maximum stacking height, as this depends on the respective application and the local conditions. However, the operator must ensure that stability is guaranteed at all times and that there is no risk of tipping over. For orientation: The secuBlock variant "Maxi" has dimensions of 1,060 × 550 × 300 mm and has a dead weight of around 18 kg per block. Excessive stacking height can lead to an unstable construction, especially in the case of uneven ground or external influences such as vibrations or wind loads. Vertical stacking of five blocks, for example, results in a total height of 1,500 mm with a total weight of 90 kg (without connector and impact protection mat). From this height, additional protection is strongly recommended. Higher stacks must be carefully checked and, if necessary, secured by mechanical fixations or additional supports.

The operator is responsible for professional installation and stable use of the secuBlock storage system. Failure to comply with safety requirements can lead to instability and hazards.

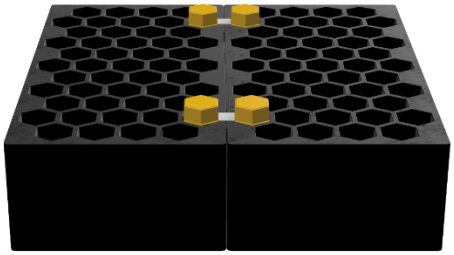
4.1.3 Connection options, permitted and unauthorized installations

The secuBlock storage systems offer exceptional flexibility thanks to their modular principle. As already explained in the chapter "*Intended uses*", this system enables a versatile combination of secuBlocks in different designs, so that constructions can be specifically adapted to spatial and functional requirements. The secuBlocks can be connected to each other in various ways. One option is the *face connection*, in which two blocks are connected via their short sides with a double connector. A *longitudinal connection* is also possible, in which the blocks are fixed over their long sides with a double connector. In addition, there is the possibility *of a vertical connection*, in which the blocks are stacked on top of each other and secured with individual connectors.

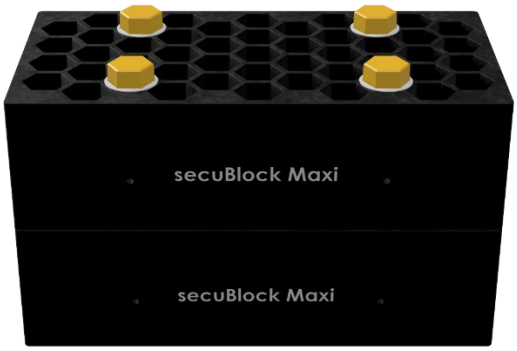
Forehead connection



Longitudinal connection



Vertical connection



However, not every type of connection is allowed. In particular, *nested stacking* is not allowed due to the honeycomb structure of the blocks. Although this form of stacking would be possible without additional connectors, it would not create a firm connection between the individual elements and thus lead to an extremely unstable construction! For this reason, this method is not allowed under any circumstances!

Nested Connection

5 Utilization

5.1 General protective measures and rules of conduct

The safe handling of the secuBlock storage system requires *qualified* and *instructed personnel* to ensure error-free assembly, handling and use. Before the first use, the staff must receive comprehensive *instruction* from the operator, a supervisor or a competent person. This briefing covers the correct assembly, disassembly and use of the system as well as the possible hazards in the event of improper use.

In addition, employees must be familiar with the manufacturer's assembly instructions and safety regulations. In addition to professional qualifications, *physical aptitude* is also decisive. People working with the secuBlock system must be able to move, assemble and stack the blocks safely. If there are health restrictions that impair strength or mobility, this can lead to a safety risk. Therefore, it is recommended to wear *personal protective equipment*, especially safety shoes, gloves and, if necessary, safety glasses. A high level of security awareness and care is required to ensure the safe use of the system.

Employees must comply with applicable *occupational health and safety regulations* , report unsafe stacking or damaged components immediately, and ensure conscientious operation. In addition, it is the responsibility of the operator to ensure that only trained personnel are entrusted with the installation and use of the system. He must carry out regular safety checks and ensure that the working environment meets the requirements. For the safe and efficient handling of the secuBlock positioning system, general rules of conduct must be observed in addition to the technical and physical requirements. These help to prevent accidents at work, ensure the longevity of the system and ensure trouble-free operation.

As a general rule, *a* visual inspection of the secuBlocks and connectors for damage or wear must be carried out before work begins. Defective or incomplete components must not be used, as they can jeopardize the stability of the entire structure. In the event of uncertainties or visible defects, work must be interrupted immediately and the responsible supervisor must be informed. During assembly, care must be taken to ensure that the secuBlocks are correctly aligned and that the connectors are fully integrated. An improper or uneven connection can impair stability. Likewise, the specified number of connectors per block must not be undercut. When stacking the blocks, excessive stress must be avoided. The secuBlock system is designed for static loads and is not designed for extreme point loads or driving heavy vehicles. The stacking height must be chosen in such a way that stability is guaranteed at all times. If a height of 1,500 mm (five blocks of the Maxi variant) is exceeded, additional safety measures are required.

A *tidy* and *clean workspace* contributes significantly to safety. Contamination, loose components or objects standing around can be tripping hazards and make installation difficult. In addition, the substrate must always be load-bearing and level to ensure even load distribution. Any improper use of the secuBlock system must be avoided. This includes, in particular, climbing or walking on stacked blocks, using damaged components or deliberately exceeding the permissible load limits. If security-related violations are detected, the supervisor or a responsible person must be informed immediately.

6 Maintenance

6.1 Maintenance personnel

The maintenance of products may only be carried out by qualified persons. The exact requirements for qualification may vary depending on the type of products 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 products.
- Training and certifications: Depending on the type of products, specific training or certifications may be required in order to be allowed to carry out 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.

6.2 Maintenance

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

6.2.1 Inspection

Inspection is a part of maintenance and refers to the periodic inspection of a product 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 recurring testing, is carried out by a qualified person at predefined intervals, depending on environmental influences and product utilization. The results of the inspection have consequences for the further handling and use of the facility.

6.2.2 Service

Servicing involves work being carried out on the product. The target condition is restored. Servicing should delay or, in the best case, completely prevent wear. All measures carried out should be recorded in a protocol. Regularly performed and documented servicing maintains the warranty claim and increases the resale value of a machine or system. As a rule, the interval between two services is one year.

6.2.3 Restoration

If a defective component is discovered and replaced during maintenance work, it is a repair measure. The target state, i.e. a flawless, functional operating behavior, is restored. Through inspections and maintenance, the product is observed, cared for and wear is inhibited. After a certain time, however, even when a product is used as intended, wear and tear-related damage often occurs. The repair must take place immediately after the damage has been determined. The defective parts are either repaired or replaced, depending on the circumstances and costs. Entire assemblies can also be replaced. In the end, the operability and functional reliability must be restored. All repair measures must also be entered in the maintenance log.

6.2.4 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. The warranty is only assumed for these parts. 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 product.

If you have any questions or order spare parts, please have the factory or order number (test book, marking on the product) ready. Providing this data ensures that you receive the right information or the spare parts you need.

6.3 Legal framework

In Germany, inspections of equipment are carried out by qualified personnel. The exact requirements and qualifications for inspection personnel may vary depending on the type of equipment and specific regulations. The legal basis for conducting inspections in Germany is laid down in various laws and regulations, including:

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

The specific requirements for inspection personnel can vary depending on the type of equipment. 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 to determine the specific requirements for inspection personnel. In addition, the manufacturer's information and recommendations can also contain important information about the qualification of the inspection personnel.

If an inspection is not carried out or is carried out incorrectly, various negative consequences can occur. Here are some possible effects:

- Security risks: If these checks are not performed or are incorrect, potential security risks can be missed or not addressed. This can lead to accidents, injuries or damage.
- Operational disruptions: Recurring inspections can also be used to identify and rectify potential failures or malfunctions at an early stage. If these tests are not performed or are faulty, failures or malfunctions can occur that can 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 done properly, it can lead to legal consequences, such as fines, liability, or even criminal prosecution.
- Costs: If recurring checks are not carried out or are incorrect, additional costs may be incurred. This can be caused, for example, by repairs, spare parts or loss of production time.

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

- Visual inspection: It is checked if the product is externally damaged, such as cracks, deformations or signs of wear.
- Functional testing: The product is tested for its functionality by loading and moving it. This checks that all parts are working properly and that there are no unusual noises or vibrations.
- Safety equipment inspection: All equipment safety equipment is checked to ensure that it is working properly.
- Inspection of the operating instructions and labeling: It is checked that the product is provided with an up-to-date operating 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 detected, appropriate repairs or replacements should be carried out before the product is used again. These checks should be carried out in accordance with the manufacturer's recommendations and the applicable regulations.

6.4 Inspection and maintenance interval

The time intervals for inspections and maintenance of the product depend on the duration of use and the stress of use. Typically, short, regular inspections and maintenance are recommended to ensure the proper functioning of the product and to detect potential problems early. For some products, an annual inspection may be sufficient, while others may need maintenance every six months or even more often. National law and regulations must be complied with in any case. In addition, regular maintenance should also be carried out, such as lubricating moving parts, checking wear parts, and cleaning the product. The following information serves as a guideline.

6.4.1 Types of application

Normal use / operation: refers to the average number of deployments for which the product is designed. This means that the product will work reliably for a longer period of time with regular use.

Difficult use / operation: refers to a higher than normal number of deployments for which the product is designed. This may mean that the product is used more frequently or more intensively than usual, which can lead to faster wear and possibly a shortened life of the product.

Tough use / operation: refers to an extremely high number of uses, for which the product is not necessarily designed. This can mean that the product is being used beyond its limits and may fail or be damaged prematurely. In such cases, it is advisable to choose a product that is specifically designed for heavy-duty use to ensure optimal performance and durability.

6.4.2 Time intervals depending on the type of operation

Daily Inspection: by the operator or other designated persons before daily operation.

Frequent inspection: by the operator or other designated persons at intervals determined by the following criteria:

- Normal use: monthly
- Difficult use: weekly to monthly
- Tough use: daily to weekly

Records must be kept for the ongoing condition assessment of the product.

Periodic inspection: by designated persons at intervals determined by the following criteria:

- Normal use: annually
- Difficult use: every six months
- Tough use: Quarterly

Records must be kept for the ongoing condition assessment of the product.

6.5 Inspection and maintenance plan

As part of our efforts to ensure the safety and functionality of the product, we would like to provide you with important information about the minimum test criteria for the periodic tests. These test criteria are intended as a guideline and should be carefully considered during each recurring audit to minimise potential risks.

6.5.1 Visual and functional inspections

As part of the periodic inspection, the relevant components must be subjected to a visual and functional inspection. Since this product does not fall under the Machinery Ordinance and therefore there are no specific legal test requirements, we follow basic test procedures to ensure safe and long-term use. The visual inspection includes a general inspection of the product, paying particular attention to material fatigue, cracks, dents, cuts or other visible damage. Should such defects be identified, it is at the discretion of the operator whether the product can continue to be used safely or must be replaced. In addition, a functional test must be carried out to ensure that the secuBlocks can be used properly. It is necessary to check whether the blocks can be stacked stably and securely, whether the connectors are correctly seated in the honeycomb structure and whether the material on top of them does not cause any permanent deformations. These periodic inspections must be carried out by persons who are familiar with the product and know its correct handling and functioning. In order to ensure complete traceability, the tests carried out should be documented at regular intervals and recorded in an inspection report.

Key test features:

6. Visual inspection:
    - Inspection for material fatigue, cracks, dents, cuts or other damage
7. Testing:
    - Safe stacking of secuBlocks
    - Correct position of the connectors in the honeycomb structure
    - No permanent deformations due to material lying on top
8. Persons carrying out the work:
    - Tests must be carried out by persons familiar with the product
9. Documentation:
    - Regular logging of the tests carried out

7 Troubleshooting and fault rectification

Fault analysis and troubleshooting of secuBlock storage systems can be an essential part of maintenance and helps to ensure their reliable and safe use at all times. Problems in the application of these systems can be due to various causes, often due to simple mechanical influences, natural wear and tear or improper handling.

7.1 Possible causes of errors

Plastic *deformations* or *considerable damage* as a result of external influences can affect the honeycomb structure of the secuBlocks to such an extent that the connectors no longer engage properly or fall out. As a result, a secure connection and stacking of the secuBlocks is no longer guaranteed. Cracks, fractures or deformations of the honeycomb structure are particularly critical, as they can severely limit the accuracy of fit of the connectors. Likewise, severely deformed or damaged connectors can lead to them no longer gripping securely in the honeycomb structure and remaining in position. Mechanical wear or improper loading of the connectors can significantly impair their functionality and jeopardize the stability of the entire system. In addition, *external influences* such as *heavy contamination* by dirt, dust or lubricants can negatively affect the fasteners and the honeycomb structure of the secuBlocks. Deposits or residues can prevent the connectors from snapping into place precisely or reliably holding their position, which means that the stability of the stack is no longer ensured. Other potential sources of error are *material fatigue* due to long-term stress, which can lead to a weakening of the honeycomb structure and connectors. *Missing* or damaged *connectors* also pose a risk, as they prevent a secure connection of the secuBlocks. In addition, *improper handling* – for example due to incorrect stacking, uneven load distribution or incorrect insertion of the connectors – can have a negative impact on functionality and stability. External *environmental conditions* such as extreme temperatures, UV radiation or high humidity can also damage the material in the long term and change its mechanical properties. This can lead to reduced resilience and increased susceptibility to damage.

Summary:
In order to ensure the safe use of the secuBlocks, regular inspections should be carried out in order to identify and eliminate the following possible sources of error at an early stage:

- Damage to the honeycomb structure due to deformations, cracks or fractures
- Defective or deformed connectors that no longer grip correctly
- Contamination from dirt, dust or lubricants that prevent the connectors from snapping into place
- Material fatigue due to long-term stress
- Missing or damaged connectors that affect the connection of the secuBlocks
- Improper handling leading to faulty joints and stacking
- External weather influences that damage the material in the long term

Consistent monitoring and maintenance can minimise potential risks and ensure the long-term functionality of the secuBlocks.

7.2 Troubleshooting, troubleshooting and avoidance

Correct troubleshooting and troubleshooting of secuBlock storage systems requires a structured approach to efficiently identify and resolve the root causes of problems. Here are the essential steps for error analysis and elimination:

7.2.1 Identification of the cause

10. Visual inspection: Start with a thorough visual inspection of the entire system to detect any obvious damage such as cracks, dents, deformations, or loose parts. In particular, check the honeycomb structure and connectors for signs of wear or damage.
11. Function test: Check whether the secuBlocks can be stacked correctly and whether the connectors properly engage with the honeycomb structure. Look for signs of blockages or loose connectors that no longer stay securely in place.
12. Contaminants: Check for dirt, dust, or lubricants that could interfere with the locking or connection of the secuBlocks.
13. Operating conditions: Consider environmental influences, such as extreme temperatures or high humidity, that could negatively affect the material or functionality of the system.

7.2.2 Troubleshoot issues

1. Cleaning: If contamination is detected, clean the secuBlocks and connectors thoroughly. Use appropriate cleaning agents that do not damage the material. Make sure to clean the honeycomb structures and connectors thoroughly as well.
2. Replacement of damaged components: If cracks, breaks, or significant deformations are detected in the honeycomb structures or connectors, these components must be replaced to restore the functionality of the system.
3. Checking the connectors: In the case of defective or deformed connectors, they should either be replaced or repositioned. Make sure that the connectors engage correctly in the honeycomb structure and that there is no room for manoeuvre.
4. Material strength testing: If there are signs of material fatigue or changes due to external influences, the affected material should be checked for strength and replaced if necessary.

7.2.3 Avoidance of future disruptions

1. Regular maintenance: Implement a maintenance schedule that includes regular inspections and cleanings of the secuBlock storage systems. This helps to detect wear or damage at an early stage and to take measures in good time.
2. Employee training: Ensure that all people working with the secuBlock storage system are sufficiently trained to ensure correct handling and use. Improper use may result in premature wear or damage.
3. Optimize operating conditions: Check the operating conditions of the system, especially ambient temperatures and humidity, and adjust them to prevent damage from extreme influences. Also make sure that the secuBlocks are not overloaded.
4. Documentation of the measures: Record all inspections, cleaning measures, replacement procedures and repairs carried out in a maintenance log. This ensures a traceable history of the work carried out and helps to plan future maintenance cycles.
5. Error reports: Document errors and malfunctions in detail to identify possible patterns and take preventive measures.

8 Spares

8.1 General information on the procurement of spare parts

Spare parts that become necessary due to wear and tear or damage to components should be replaced by replacing the affected components with original spare parts. These original parts can be purchased directly from (SpanSet secutex) can be ordered. Please contact your contact person and provide the production number of the device in question in order to identify and order the correct spare parts.

9 Storage and transport

9.1 General information on storage

When storing storage systems, it is crucial to observe several essential points in a logical order to ensure their safety, durability and functionality. First of all, the storage location should be chosen carefully. It must be dry, well ventilated and protected from direct sunlight, as moisture and constant sunlight can weaken or attack the materials. Before storage, a thorough visual inspection of all components is required. This includes checking for wear and tear, replacing damaged parts, as well as cleaning to ensure it remains in perfect condition. After maintenance, the storage system should be stored safely and stably on suitable shelves or racks to prevent it from tipping over or falling. Clear labeling is also important as it facilitates identification and access, allowing for efficient storage and later use. It is equally important to document all relevant information about the product. Finally, the people responsible for storage should be sufficiently trained and have the right knowledge to ensure that the storage system is stored correctly and safely, without posing a danger to the environment or employees.

9.2 General information on the transport of storage systems

Proper transportation of storage systems is critical to prevent damage to the product as well as accidents. The following are the necessary steps that should be taken before, during and after transport.

9.2.1 During internal transport

When transporting storage systems internally, safe handling is important to prevent damage and injury. Due to the very low dead weight, up to two positioning systems can be transported by one person without physical exertion. This can be done either via the hand straps or by stacking them on top of each other. However, if several are transported at the same time, the use of suitable aids such as hand carts or forklifts is necessary. During transport, it should be continuously checked that the transport route is free of obstacles and sources of danger.

9.2.2 During external transport

The external transport of storage systems requires careful preparation and execution to avoid damage. First of all, the packaging should be checked and, if necessary, supplemented with a film to protect the surface of the secuBlock. During loading, care must be taken to ensure that the product is placed safely and stably on the loading area. Stable loading areas or safety mechanisms prevent slipping or tipping over while driving. Clear labelling of the packaging with handling instructions also contributes to safe transport.

10 Decommissioning and disposal

10.1 Decommissioning and disposal

The product should be taken out of service and/or disposed of when it no longer works or is irreparably damaged. This may also be the case when the product is obsolete 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 harming the environment. In some cases, products can also be recycled or reused instead of simply throwing them away. When the product is not in use, store it in a dry place. Please note that safe and error-free operation is only guaranteed when using original spare parts. If you wish to have the product checked or repaired under warranty, please send it in an assembled state. Unfortunately, we cannot accept any guarantee claims for products sent in disassembled form. Please note that electronic scrap, electronic components, lubricants and other auxiliary materials are subject to hazardous waste treatment and may therefore only be disposed of by authorised specialist companies. The national disposal regulations must be observed for the environmentally friendly disposal of the machine. Further information can be obtained from the relevant local authority.

11 Notes