

# manual.



**MEDSEAT. UNIVERSAL EXAMINATION AND TREATMENT CHAIR.**  
Instruction manual: Model Series 461 - 474

 **GREINER**

# MEDSEAT

Item No: 4615502

Last updated: 07.03.2024 / Rev.: 13

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## 1 Introduction

With this instruction manual (hereinafter also referred to as the "manual") we would like to provide the user and operator with useful information for safe and proper operation of the MEDSEAT examination and treatment chair (hereinafter also referred to as the "chair").

This manual also describes functions or features that may not be included in your chair.

This manual contains information on the safe use of the chair according to its intended use (see 2.4 Intended use).

Observance of the instructions helps to

- avoid risks.
- reduce downtime.
- reduce ongoing operating costs.
- increase the reliability and service life of the chair.

We reserve the right to make technical changes without notice within the scope of further development of the chair described in this manual.

The original of this manual was written in German. All other languages are translations of this manual.

### 1.1 Validity

This manual applies only to the chair and equipment options supplied by GREINER GmbH (also abbreviated to GREINER).

### 1.2 Manufacturer

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www.greiner-gmbh.de

### 1.3 Note on pictorial representations

The photos / illustrations are general illustrations and may differ from the actual conditions or from the components actually used.

### 1.4 Warranty and liability

Our General Terms and Conditions (GTC) apply in the currently valid version at [www.greiner-gmbh.de](http://www.greiner-gmbh.de).

In the event of a complaint (damage, defects or other reasons for complaint), your authorised specialist distributor is the appropriate contact person. Please provide the data of the type plate (and possibly a photo) (see 1.6 Type plate).

The more accurate and better the data, the better and more targeted the remedy can be provided.
















**NOTE** This chair is not approved for the North American market, especially the United States of America. The distribution and use of the chair in these markets, also through third parties, is prohibited by the manufacturer.

### 1.5 Service manual

A service manual can be provided on request. This supports the service technicians of the authorised specialist distributors or other qualified personnel commissioned by the operator in the maintenance or repair of the chair.

## 1.6 Type plate

The type plate of the chair is located either at the rear of the plastic cover of the base part (for electric height adjustment) or at the rear of the cover of the hydraulic pump (for hydraulic height adjustment) (not shown). It contains the following information (see also 9.4 Technical data, if necessary).

Symbol	Meaning	Symbol	Meaning
	Manufacturer address		CE marking
	Product name		Date of manufacture
<b>For:</b>	Customer number or name	<b>V in:</b>	Input voltage/frequency
	Alternating current	<b>I in: max.</b>	Input current
<b>IPX4</b>	IP rating	<b>OP:</b>	Duty cycle
	Indoor application		Applied Part: Type B
	Protection class I		Electrical scrap
	Maximum patient weight	<b>Polster/Cushion:</b>	Cushion colour or type
<b>UDI:</b>	Unique Device Identification		Serial number
<b>Q-Control:</b>	Personnel number		TÜV approval mark
	Follow the instructions		Safety information
	Medical Device		



1. Type plate (example)

Fig. 1 Type plate - plastic cover of the base part

Further type plates can be found on all electrical components.

Type plates are documents that may not be altered or removed.

Damaged or lost type plates must be replaced true to the original.

## 2 Safety

The main objective of the safety instructions is to prevent injury to persons.

In addition, observation of the safety instructions helps to avoid material damage.

As the operator you have purchased a MEDSEAT chair from GREINER GmbH. As a result, you are also responsible for its proper and intended operation.

### 2.1 Signal words

In order to point out dangers, prohibitions and important information, the following signal words and symbols are used in this manual. These must be read and strictly observed.

**DANGER** This signal word indicates an **imminent danger** resulting in **serious injuries**, and in some cases **death**.



**WARNING** This signal word indicates a **potential imminent danger**, which can result in **serious injuries**, and in some cases **death**.



**CAUTION** This signal word indicates a **potential imminent danger**, which can result in **light to serious injuries**.



**NOTE** This signal word indicates a **potential imminent danger**, which can result in **damage to property and the environment**.



Indicates tips for use or other particularly important information when handling the chair.

### 2.2 Device safety

Greiner chairs were built in accordance with the applicable national and international standards and regulations according to the current state of the art.

This chair meets the requirements for safety and functionality. It bears the CE mark, which documents compliance with the basic requirements for medical devices.

The chair described in this instruction has been designed, manufactured and meets the requirements of the Medical Device Regulation (EU) 2017/745 (MDR) of the European Parliament and the Council. According to the classification rules in Annex VIII of the MDR, the chair is an active medical device of risk class I (electrical versions only).

The validity of the declaration of conformity expires if changes are made to the chair by the customer or third parties, e.g. modifications of any kind, use of external accessories, changes to the software, removal of warning and information signs (no claim to completeness).

Due to the chosen robust, interference-proof design of the electrical adjustment devices, the chair is largely tolerant of EMC interference from other electrical equipment operating in the vicinity. Although portable high-frequency communication devices and antennas can have an influence on the chair. These devices must therefore be operated at a distance of more than 30 cm from all parts of the chair.

Despite comprehensive EMC testing in accordance with CISPR11 class B and group 1, it is possible that other devices may be disturbed by the chair.

In such cases, either switch off the chair completely by disconnecting the mains plug or disconnect it from the mains, or, if necessary, keep a larger distance from the disturbed device and change the orientation to each other. If possible, do not use the same outlet.

This applies in particular to the simultaneous use of highly sensitive measuring instruments. Their measurement results may be influenced under certain circumstances.

The chair can be equipped with equipment options on delivery (see **Fehler! Verweisquelle konnte nicht gefunden werden. Fehler! Verweisquelle konnte nicht gefunden werden.**).

If necessary, observe the instruction manuals for the equipment options. For further information, please contact your authorised specialist distributor.

All prohibition, warning and message symbols or instructions on the chair must be observed. The symbols and notes must always be legible and complete. Damaged or lost symbols or notes must be replaced true to the original.

The chair is mainly made of steel tubes or steel profiles. The surfaces are either powder-coated or coated with zinc or chrome.

All surfaces are harmless against skin contact.



### 2.2.1 Safety inspection

#### Legal foundations

Operators of electrically driven chairs for medical use are, in accordance with

- Medical Device Regulation (EU) 2017/745 (MDR)

and the resulting national laws/regulations (e.g. in Germany)

(no claim to completeness)

- Medical Devices Act (Medizinprodukteführungsgesetz - MPDG)
- German Medical Device Operator Ordinance (Medizinprodukte-Betreiberverordnung - MPBetreibV)  
§ 7 Maintenance of medical devices and § 11 Safety inspections
- DGUV Regulation 3 and 4 Accident Prevention Regulation (electrical systems and equipment)

obliged to maintain the safe condition of medical devices throughout the entire period of use. This also includes regular professional maintenance and regular safety checks.

In other countries, outside Germany or the EU, the applicable national regulations must be observed.

GREINER GmbH generally recommends an annual maintenance according to the maintenance table as well as a safety inspection with simultaneous electrical inspection according to IEC 62353 (see service manual).

## 2.3 Personal safety

To avoid errors and to ensure trouble-free operation of the chair, the safety instructions in this instruction manual must have been read and understood completely and must always be made available to the user at all times (in printed or electronic form).

Basic instruction for the user can be given by GREINER GmbH or its authorised specialist distributor at the request of the operator.

Participation in such a training will be certified in a special form with name, date and signature (see 9.5 Proof of instruction).

For the definition or delineation of the groups of persons in this Instruction manual see under 9.6 Glossary.

In other countries, outside Germany or the EU, the applicable national regulations and laws must be observed. In Germany, the provisions of the Medical Devices Act (MPG), the Medical Devices Operator Ordinance (MPBetreibV) and the relevant statutory regulations must be observed.

#### Notes to the operator

- This chair meets all requirements of the Medical Device Regulation (EU) 2017/745 (MDR - Medical Device Regulation) for medical devices.
- Observe your obligations as operator according to the Medical Device Operator Ordinance (MPBetreibV) to ensure a permanently safe operation of this medical device without endangering patients, users and third parties (e.g. in Germany: DGUV Information 203-071 Organisation by the entrepreneur (periodic inspections of electrical systems and equipment)).
- If a patient or user is seriously injured or even killed while using the couch, the operator must report the incident in writing to the national competent authorities.

#### Notes to the user

- In accordance with MPBetreibV, the user must ensure that the chair is functional and in proper condition before using it in medical areas and must observe the Instruction manual.
- The same applies to any equipment options that have been attached to the chair.

#### NOTE

Should any serious incidents occur in connection with the chair, such as serious injuries or even death, inform the responsible authorities in your country!



### 2.4 Intended use

The MEDSEAT chair from GREINER GmbH is a medical chair for use by patients in health facilities such as hospitals, clinics, medical practices, dentists (prophylaxis) and company doctors. It is intended exclusively for use inside buildings and under normal environmental conditions.

The universal MEDSEAT chair has been specially developed for sitting and lying treatments and examinations.

- The maximum patient weight of the chair is 200 kg.
- As a treatment chair for sitting and lying treatments or examinations.
- The chair allows the convenient and comfortable positioning of the patient before, during and after treatment or examination. The user is supported in his or her work with regard to ergonomics and quality.
- The intended users are trained and instructed medical personnel of the relevant department (e.g.: nurses, carers, doctors, assistants, etc.).
- Installation and commissioning by technical personnel of the operator or authorised specialist distributors, if necessary.

#### 2.4.1 Reasonably foreseeable misuse

Reasonably foreseeable misuse can lead to hazards.

Some examples of "reasonably foreseeable misuse" are given below.

(no claim to completeness)

- Use in the vicinity of high-frequency surgical units, MRI units or defibrillators.
- Use in an environment where flammable or explosive gases or vapours (e.g. anaesthetics) are to be expected.
- Overloading of the chair above the specified maximum patient weight.
- Use in the operating theatre.
- Use as operating chair or operating table.
- Use as a work chair.
- Use as a spare hospital bed or spare bed.
- Operation of the chair by patients.
- Improper operation of electrical functions and uncontrolled positioning.
- Outdoor use.
- Use in wet areas, e.g. bathing establishments.
- Use as a climbing aid (ladder).
- Use as a children's toy, e.g. gymnastics or sports equipment.
- Pull on cables to move the chair.
- Disconnect electrical connectors by pulling on the cable.
- Cleaning in washing facility.
- Cleaning with a spray lance of a high-pressure cleaner or water jet.

#### 2.4.2 Contra indicators

There are no known contraindications.

## 3 Commissioning

The chapter commissioning describes the preparation of the chair for use including a final check of the functional safety (see 3.6 Check before commissioning and reassignment).

**TIP** The use of specially trained and instructed service personnel during commissioning is neither necessary nor intended.

### 3.1 Safety instructions for commissioning

Before commissioning the chair, the user must be instructed in the handling of the chair using the instruction manual, having previously read it in detail. In addition, the potential dangers that may occur despite proper operation of the chair must be pointed out in detail.

#### Operator's obligation - instruction

- The operator must observe the respective valid national specifications and legal regulations.
- The operator must ensure that the users are instructed before using the chair.
- The instruction can be given either by an authorised person or an authorised specialist distributor or directly by the manufacturer.

**TIP** If the delegated person of the operator, e.g. the person responsible for medical devices, has been instructed by an authorised person or an authorised specialist distributor or by the manufacturer, we would like to point out that we authorise the person responsible for medical devices of the operator within the scope of the purpose for the instruction of the chair on the basis of training, experience and knowledge.

- The operator must ensure that the instruction manual has been read and understood completely by the users. The operator must disclose the place where the instruction manual is stored and make it accessible at all times.
- The operator must ensure that representative personnel also receive adequate instruction in the operation of the chair.
- The operator must ensure that the chair is operated exclusively by trained users.

#### **TIP** Electrical testing before commissioning.

A further electrical inspection of the chair before the first commissioning is not necessary, as the chair has been tested for electrical safety in accordance with EN 60601 (test report in instruction manual) and has left our factory in perfect condition.

In other countries, outside Germany or the EU, the applicable national regulations and laws must be observed. Additional commissioning specifications of the operator must always be observed. In individual cases, a new electrical inspection must be carried out and documented in accordance with IEC 62353 (see service manual).

#### **DANGER** Danger of suffocation from packaging material.



Packaging material is not a toy and must be kept away from babies and small children. In particular, do not pull the plastic bags or sacks over your head or crawl into them.

### 3.2 Installation requirements

The chair is only approved for use in buildings and under normal ambient conditions, or for use in dry rooms (see 9.4 Technical data).

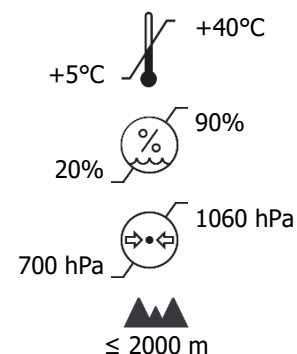
The following environmental conditions must be observed on site.

Operating temperature [C]:

Air humidity [rH] (non-condensing):

Air pressure [hPa]:

Operation at estimated altitude [m]:



## 3.3 Scope of delivery

### Configuration options

There are basically 2 different versions of the MEDSEAT chairs. They differ in the way of the height adjustment. The height adjustment is either operated hydraulically or electrically.

#### TIP

A version with hydraulic height adjustment can never be combined with an electric backrest adjustment and electric synchronous adjustment of backrest and legrest or even a separate electric adjustment of backrest and legrest.

The upper part is always adjusted manually by means of a lockable gas spring. Depending on the model, the leg rest may be adjusted synchronously with the backrest.

The version with hydraulically height adjustment cannot be combined with a mobile base part.

The versions with electrically height adjustment differentiate between manual and electrically backrest adjustment. Depending on the version, the legrest may be adjusted synchronously with the backrest.

An additional electric drive allows separate adjustment of the legrest if necessary.

All electrically driven upper parts can be combined with hands controls in the backrest.

Furthermore, all versions with electrically height adjustment can be combined with a mobile base part.

Every MEDSEAT chair can be equipped with a pivoting seat surface.

This opens up a wide range of configuration options for a MEDSEAT chair.

The chair can be equipped with equipment options (see **Fehler! Verweisquelle konnte nicht gefunden werden. Fehler! Verweisquelle konnte nicht gefunden werden.**).

MEDSEAT	Base part			Upper part		Legrest		Backrest
	Height adjustment			Manually	Electrical	Synchronous	Electrical (separate)	Hand control
	Hydraulic	Electrical	Electrical mobile					
4612050	✓			✓				
4616150		✓		✓				
4716150		✓			✓			
4716158		✓			✓			✓
4616250		✓	✓	✓				
4716250		✓	✓		✓			
4716258		✓	✓		✓			✓
4632000	✓			✓		✓		

MEDSEAT	Base part			Upper part		Legrest		Backrest
	Height adjustment			Manually	Electrical	Synchronous	Electrical (separate)	Hand control
	Hydraulic	Electrical	Electrical mobile					
4616108		✓		✓				✓
4636100		✓		✓		✓		
4636108		✓		✓		✓		✓
4616208		✓	✓	✓				✓
4636200		✓	✓	✓		✓		
4636208		✓	✓	✓		✓		✓
4736100		✓			✓	✓		
4736108		✓			✓	✓		✓
4736200		✓	✓		✓	✓		
4736208		✓	✓		✓	✓		✓
4736118		✓			✓		✓	✓
4736158		✓			✓	✓		✓
4736218		✓	✓		✓		✓	✓
4736258		✓	✓		✓	✓		✓

### 3.4 Packaging

The MEDSEAT chair is packed and shipped as shown below.

The packaging section describes and shows how to unpack the chair and make it ready for operation using the example of a MEDSEAT (4736218).

**TIP** Carry out a visual check of the outer packaging immediately after delivery and before unpacking. Make a written record of any major obvious damage directly on the carrier's delivery note [A] [B]. Later complaints are facilitated by the immediate creation of meaningful photos, if possible in the presence of the delivery driver.



Fig. 2 Shipment packaging

### 3.4.1 Removing the packaging

#### Personnel requirements

- 1 User

#### Required tools and aids

- ✂ Scissors

#### Way of proceeding

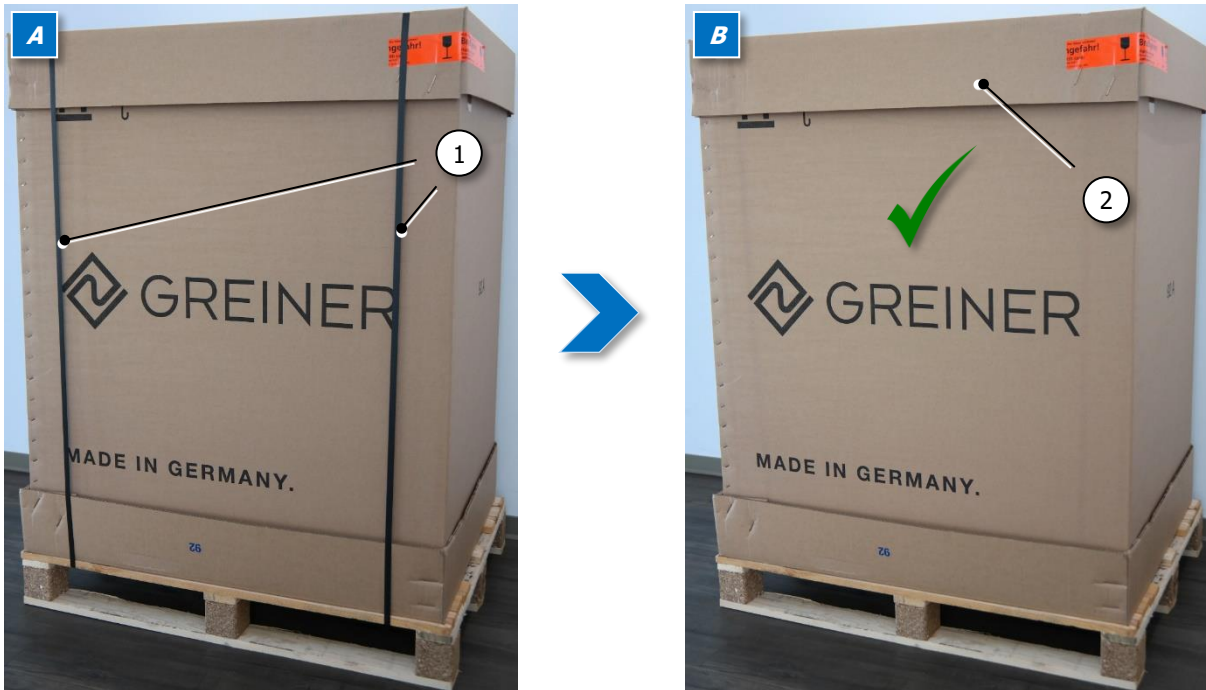


Fig. 3 Removing the tensioning straps

1. Use scissors to cut through the tensioning straps (1) and then remove them [A] [B].



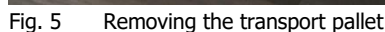
Fig. 4 Removing the packaging material

2. Remove the cardboard lid (2), the outer packaging (3) and the protective film (4) upwards [B] [C] [D].

**NOTE** Do not cut the packaging with a knife or long blade.  
The upholstery material or other parts of the chair could be damaged.



## Way of proceeding



1. Remove the manual (1) and the cardboard box (2) with the headrest [A] [B].
2. Manual with electrical test (test report) [C].
3. Place the mains plug with the mains cable and foot switch on the seat upholstery.
4. Cut and fold down the corners of the cardboard [A].
5. If necessary, lock the upper part (see 4.11 Fixing the upper part). Carefully lift the chair off the transport pallet.  
For this purpose, grip the left and right sides of the seat frame with both hands.
6. Remove the headrest from cardboard box and attach it (see 4.12 Headrests).

The packaging material must be separated according to substance groups and disposed of properly in accordance with national regulations. If you have any queries, please contact your operator, your local municipalities or waste disposal companies (see 8.4 Disposal).



### 3.5 Requirements on the place of operation

For the operation of the chair, an appropriate mains supply and, if applicable, an equipotential bonding connection is required at the place of use.

If this is available and the building's wiring permits it, the chair must always be connected to the equipotential bonding system (see 4.7 Equipotential bonding pin).

### 3.6 Check before commissioning and reassignment

After the commissioning work has been completed, and before any occupation by a new patient, the chair must be cleaned and disinfected (see 6 Cleaning and disinfection).

#### **CAUTION Risk of infection from contaminated chair.**



The chair must be cleaned and then disinfected before the first use.  
This also applies before each use (occupation by a new patient).

A functional check of the chair must be carried out immediately after cleaning and disinfection and before use.

#### **WARNING Risk of injury for patient, user and third parties.**



The chair must be checked for functional safety after first commissioning and every occupation by a new patient.  
It must be ensured that the chair can be used as intended without endangering the patient, the user or third parties.

If the chair is put into operation for the first time or before any occupation by a new patient, the same functional check must be carried out as for recommissioning after storage (see 8.3 Check before recommissioning).

- ☞ General check of the overall condition of the chair for soiling, condition and damage, completeness and legibility of stickers, symbols and instructions, clean if necessary in accordance with the manufacturer's specifications or those of the operator and repair if necessary.
- ☞ Visually inspect the mains cable and plug, foot switch, as well as all other electrical cables and connectors for breakage, proper installation (e.g. strain relief), clamping or friction points etc. and repair if necessary (if available).
- ☞ Functional check of the electrical adjustment devices and the control system. All electric actuators must be operated once up to their end positions. Pay particular attention to changed operating behaviour, unusual noises, speed, smooth running, odours and increased temperature and repair if necessary (if available).
- ☞ Carry out a functional check according to the installed turning lock (locking, freewheel) and repair if necessary.
- ☞ Carry out a functional check according to the used headrest and repair if necessary.
- ☞ Carry out a functional check of the rolling device of the mobile base part and repair if necessary (if available).
- ☞ Carry out a functional check of the manual backrest and synchronous adjustment by means of a gas spring and repair if necessary (if available).
- ☞ Carry out a functional check of the hydraulic height adjustment and repair if necessary (if available).
- ☞ Any defects or damage found must be remedied immediately.  
The chair must not be used before the defects or damage have been remedied.

#### **WARNING Risk of injury due to defective chair.**



The chair must **not** be operated in a defective or faulty condition in which the chair could endanger patients, users or third parties.

A defective or faulty chair must be clearly marked "**DEFECT**". The marking must be done in such a way that the defective condition is clearly identifiable for everyone.

Inform the operator for intensive inspection during repair.

### 4 Operation

The chapter operation describes the functions of the chair and its performance features.

#### Prerequisites for operation

The chair may only be operated and used in accordance with its intended use, the generally recognised rules of technology and the national occupational safety and accident prevention regulations valid at the place of use (see 2.4 Intended use).

In Germany, the provisions of the Medical Devices Act (MPG), the Medical Devices Operator Ordinance (MPBetreibV) and the relevant statutory regulations must be observed.

To ensure safe operation, the following points must be strictly observed.

- Before using the chair, the user must familiarise him- or herself with the contents of this manual and observe the safety instructions for the individual points of danger.
- The chair must be cleaned first and then disinfected (see 6 Cleaning and disinfection) before commissioning and before any further use (occupation by a new patient). A functional check must then be carried out afterwards (see 3.6 Check before commissioning and reassignment).
- The chair does not have an EMERGENCY STOP command device. Access to the mains plug must therefore be guaranteed at all times in order to allow the deactivation of the chair in an emergency situation by disconnecting the mains plug.
- Avoid mechanical stress on the mains cable or plug. Do not crush or trap the mains cable anywhere. Carry out an immediate visual check after each mechanical load on the mains cable or plug.
- Tighten all handwheels, clamping levers and clamping screws etc., including those on accessories, before use.
- Due to the widely differing stresses, operating conditions and frequencies at the place of use, the setting by the manufacturer of a central specification for the frequency of safety inspections does not make sense. In accordance with the Medical Device Operator Ordinance (MPBetreibV), the operator must specify the test period for the safety inspection on the basis of a risk assessment (see 2.2.1 Safety inspection).

#### 4.1 Safety instructions for operation

When adjusting the chair, ensure that there are no limbs of the patient, user or other persons, especially children playing between the lower and upper sections, as well as between the back or armrest(s) or the leg section and the floor, which could be trapped and injured. Pets should generally be kept away from the chair and no other objects should be stored under the chair. **Ensure that the chair does not get caught on walls or furniture.**

##### **DANGER** Risk of injury due to unintentional movements of the chair.



The chair is not intended for unsupervised use by children or handicapped persons. In such situations, always ensure that the operating lock is activated as long as there is no trained user on site. (see 4.5 Activating / deactivating the operating lock)

The chair may only be occupied by one person at a time.

The maximum patient weight must not be exceeded and must be evenly distributed on the seating surface. Do not sit or rest on the backrest upholstery, the legrest upholstery, the arm support or the foot support.

##### **CAUTION** Risk of falling or injury if seating position is set too high.



In order to avoid or reduce injuries caused by falling, we recommend (except when carrying out care measures on the patient) moving the chair to the lowest position. This generally applies when manoeuvring the chair (see 4.15 Manoeuvring) and in particular when sitting down and standing up of the patients (see 4.16 Sitting down and standing up of the patients).

When operating other devices on or near the chair, that are equipped with cables, air hoses or similar, make sure that these lines cannot get trapped in the moving parts of the chair or be damaged in any other way.

##### **WARNING** Risk of injury due to the use of unsuitable accessories.



Only original accessories from GREINER GmbH may be used. The attachment of accessories from other manufacturers (e.g. fixing belts etc.) lies within the responsibility and duty of care of the operator.

### 4.2 Structure

The structure of the chair is shown here using the example of a MEDSEAT (4622000) with hydraulic height / manual backrest adjustment and a rotatable seat surface as well as a fixed foot support with a foldable step plate (equipment option).



Fig. 6 Structure of the chair - hydraulic height / manual backrest adjustment and rotatable seat surface

The structure of the chair is shown here using another example of a MEDSEAT (4736218) with 3 electric adjustment drives for height / backrest adjustment and a separately adjustable legrest as well as a mobile base part.



1. Foot support
2. Legrest upholstery
3. Seat upholstery
4. Armrest
5. Backrest upholstery
6. Headrest
7. Hand control
8. Turning lock - both sides
9. Equipotential bonding pin
10. Rolling device
11. Mains cable
12. Foot switch

Fig. 7 Structure of the chair - 3 electric adjustment drives and mobile base part



### 4.3 Basic position

If patients want to sit down on or get up from the chair, as well as before manoeuvring, the chair must be brought into the basic position.

- Move the seat height all the way down (see 4.9 Height adjustment).
- Raise the backrest completely (see 4.10 Backrest and synchronous adjustment).
- Swivel the arm supports downwards (see 4.8 Armrests).
- Lock the upper part (see 4.11 Fixing the upper part).
- If necessary, swivel the leg section all the way down (see 4.10 Backrest and synchronous adjustment).
- If necessary, fold in the foot support completely (see 4.14 Foot support (foldable)).
- If necessary, move the rotatable seat surface to the middle position (see 4.13 Rotatable seat surface).
- If necessary, retract the rolling device on the mobile base part (see 4.15 Manoeuvring).



Fig. 8 Basic position (hydraulic)



Fig. 9 Basic position (electrical)

### 4.4 Flat position

For treatment, patients can be brought completely into a flat position, regardless of the seat height.

- The seat height remains unchanged (see 4.9 Height adjustment).
- Lower the backrest to a flat position (see 4.10 Backrest and synchronous adjustment).
- Swivel the arm supports downwards (see 4.8 Armrests).
- If necessary, swivel the leg section all the way up (see 4.10 Backrest and synchronous adjustment).
- If necessary, fold in the foot support completely (see 4.14 Foot support (foldable)).
- If necessary, move the rotatable seat surface to the middle position (see 4.13 Rotatable seat surface).



Fig. 10 Flat position (hydraulic)



Fig. 11 Flat position (electrical)

### 4.5 Activating / deactivating the operating lock

The activation or deactivation of the operating lock (electrical versions only) is described here. For the activation or deactivation of the operating lock up to the delivery date in September 2015 (Software Ver. 1.0 and 1.1) (see service manual).

Activating the operating lock prevents the chair from moving accidentally or unintentionally.

**TIP** After disconnecting the mains plug and then plugging it back in, the chair remains in its previous operating status. This means, for example, that the operating lock was activated before disconnecting the mains supply, so the operating lock remains activated even after the mains supply has been restored. The control unit remembers the current operating status.

#### Activating the operating lock

1. To activate the control lock, press the button on the foot control (1) for seat height reduction (2) 3 times within 2 seconds or, if applicable, press both buttons on the hand control (3) for seat height adjustment (Up (4) - Down (5)) simultaneously and hold for approx. 5 seconds.
2. A short beep signals the activation of the operating lock.

#### Deactivating the operating lock

1. To activate the control lock, press the button on the foot control (1) for seat height reduction (2) 3 times within 2 seconds or, if applicable, press both buttons on the hand control (3) for seat height adjustment (Up (4) - Down (5)) simultaneously and hold for approx. 5 seconds.
2. A short beep signals the deactivation of the operating lock.

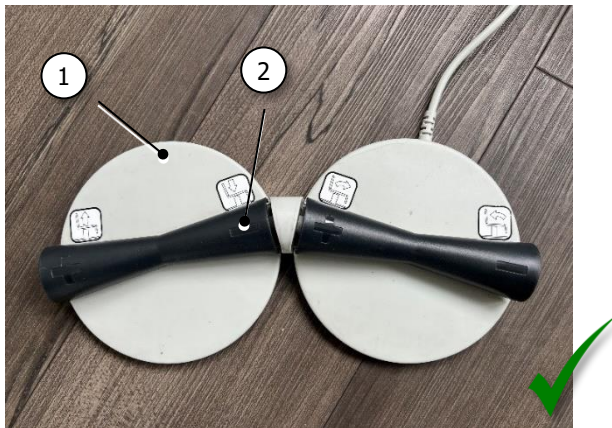


Fig. 12 Activating / deactivating the operating lock at the foot switch



Fig. 13 Activating / deactivating the operating lock at the hand control

### 4.6 Duty cycle

The maximum duty cycle of the electrical chair functions is indicated on the type plate and in the technical data (see 1.6 Type plate and 9.4 Technical data).

**NOTE** 10 % 2 min. / 18 min. means that each electrical adjustment may be operated continuously for a maximum of 2 minutes and then a pause of 18 minutes is required (overheating protection).

**TIP** The chair is equipped with a self-resetting thermal protection device, which prevents an overload of the control unit or the adjustment drives. The chair is automatically switched off in the event of overloading.

If the maximum duty cycle of two minutes is exceeded several times or for an extended period of time, the electrical adjustment functions are temporarily unavailable. The chair has been adjusted again once it has cooled down sufficiently.

### 4.7 Equipotential bonding pin

The equipotential bonding cable connects the connection pin (1) on the chair to the connection on the wall strip. To do this, place the plug completely onto the corresponding connection pin against the noticeable resistance. To remove, simply disconnect the plug.

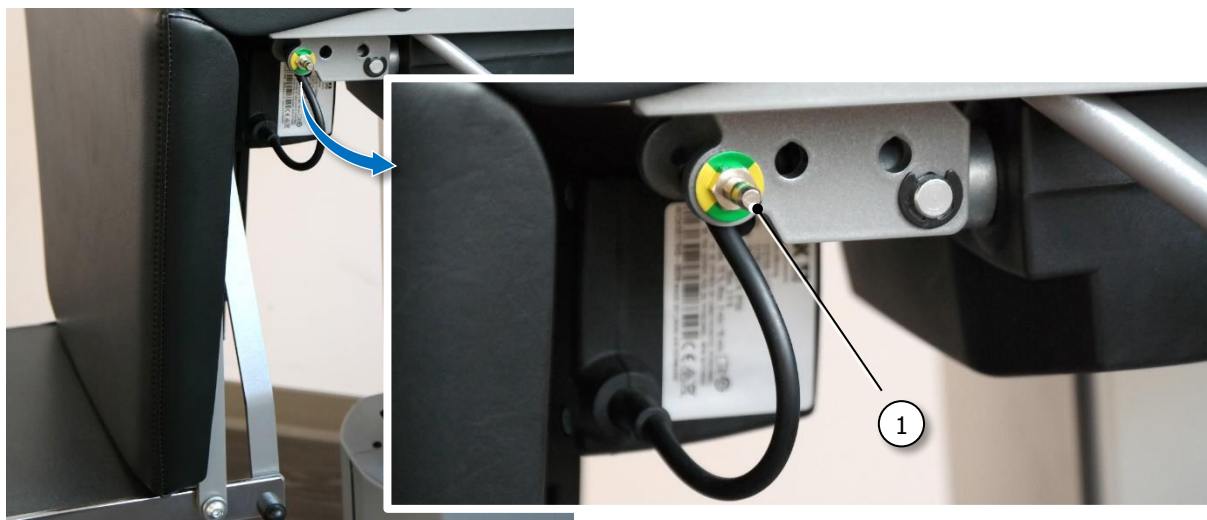


Fig. 14 Equipotential bonding pin

### 4.8 Armrests

#### Folding up and lowering

Guide the armrest (1) by hand until it reaches the end position (when folding up and lowering). Always hold the armrest when lowering and do not let it fall freely. The arm supports are made of integral foam.

**TIP** The left and right armrests can be adjusted independently of each other.



Fig. 15 Armrests



### 4.9 Height adjustment

**NOTE** The patient's forearms must be in a normal position on the arm supports.

#### Hydraulic versions - adjusting the seat height

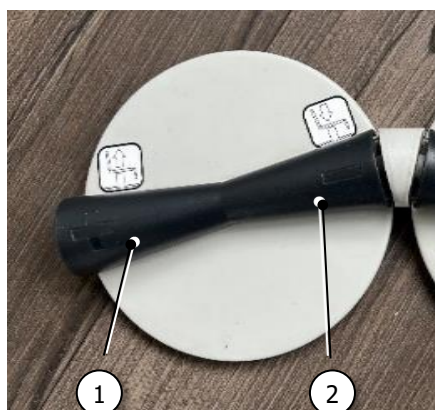
To adjust the seat height, operate the pump lever (1) with the foot until the desired position of the upper part of the chair (2) is reached. To lower the upper part of the chair, press the pump lever fully through and hold it pressed until the desired seat height is reached.



Fig. 16 Height adjustment - hydraulic versions

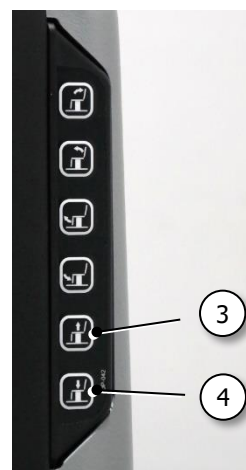
#### Electrical versions - adjusting the seat height

- The drives run as long as the buttons are pressed.
- Each adjustment stops if more than one button is pressed simultaneously.



Foot switch

1. Seat height - up
2. Seat height - down



Hand control on the backrest

3. Seat height - up
4. Seat height - down

Fig. 17 Height adjustment - electrical versions

## 4.10 Backrest and synchronous adjustment

**NOTE** For versions with synchronous adjustment, the leg section is also adjusted together with the backrest.  
The patient's forearms must be in a normal position on the arm supports.

### Manual versions - lowering and raising the backrest

The backrest (1) can be continuously lowered and raised manually as required. Press the release lever (2) and adjust the backrest as desired. Always guide and support the backrest with the other hand to avoid sudden and unwanted movements. After releasing the release lever, the backrest is automatically fixed again.

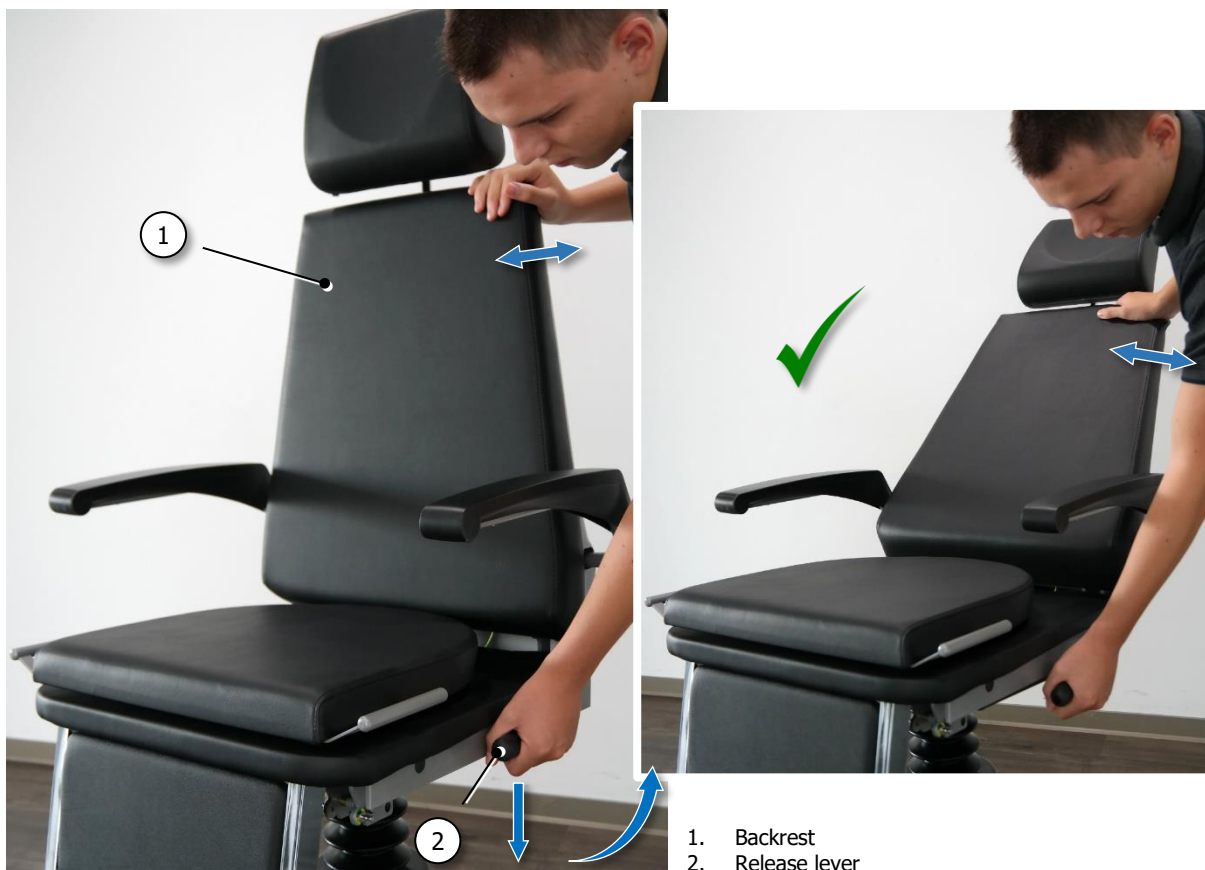
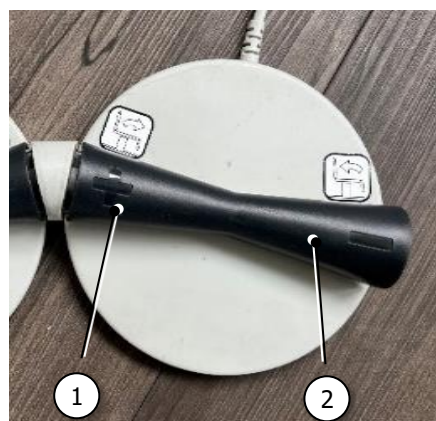


Fig. 18 Backrest and synchronous adjustment - manual versions

### Electrical versions - lowering and raising the backrest

- The drives run as long as the buttons are pressed.
- Each adjustment stops if more than one button is pressed simultaneously.

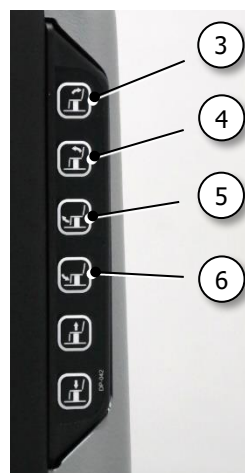


#### Foot switch

##### TIP

In the version with 3 electric adjustment drives, the leg section is adjusted synchronously with the backrest.

1. Backrest - up
2. Backrest - down



#### Hand control on the backrest

##### TIP

In the version with 3 electric adjustment drives, the leg section can be adjusted separately on the hand control.

3. Backrest - down
4. Backrest - up
5. Leg section - up
6. Leg section - down

Fig. 19 Backrest and synchronous adjustment - electrical versions

### 4.11 Fixing the upper part

**NOTE** The patient's forearms must be in a normal position on the arm supports.

#### Hydraulical versions - turning the upper part of the chair

**TIP** With hydraulic versions, the upper part of the chair can always be turned through a full 360°.

To fix the upper part (1) of the chair, pull the pump lever (2) upwards with the upper part of the foot. To release the turning movement, tap the pump lever briefly with your foot.

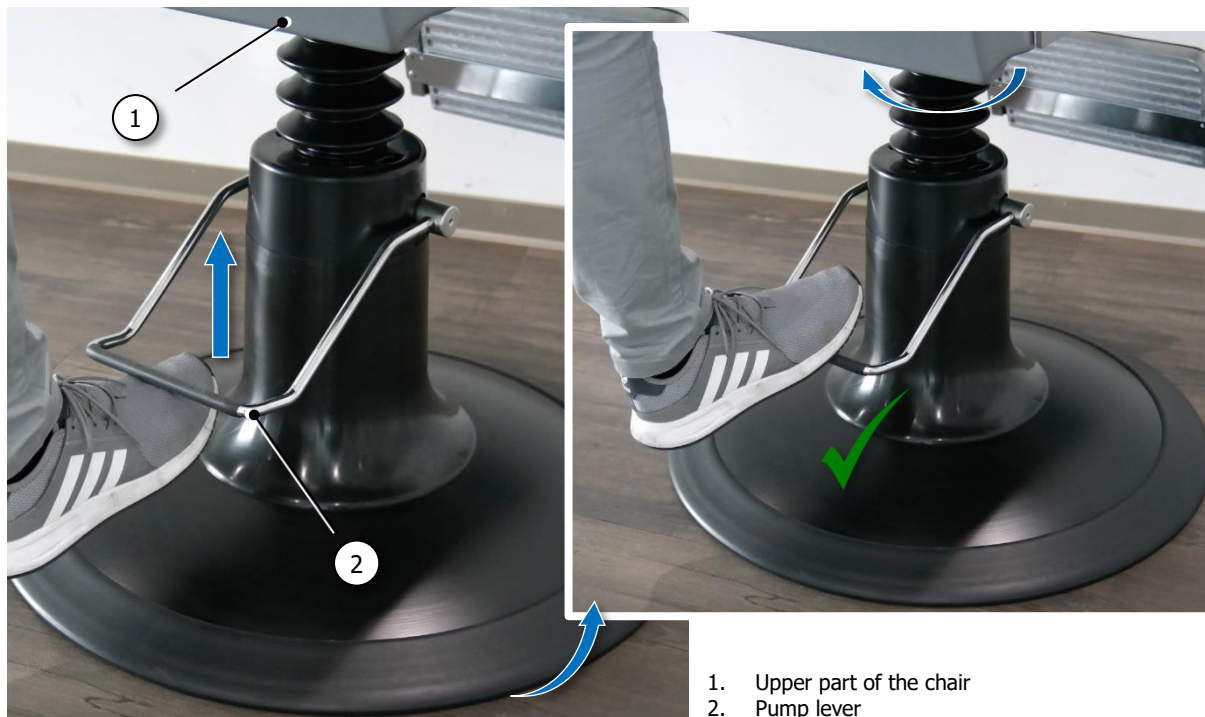


Fig. 20 Fixing the upper part - hydraulic versions

#### Electrical versions - turning the upper part of the chair

**TIP** In versions with electric height adjustment and manual backrest and synchronous adjustment (without manual control on the backrest), the upper part of the chair can always be turned through a full 360°. For all other electrical versions, the turning is limited by stops.

To release the turning movement of the upper part (1) of the chair, the clamping lever (2) must be pressed down. The upper part of the chair is fixed again by fully pulling the clamping lever upwards.



Fig. 21 Fixing the upper part - electrical versions



### 4.12 Headrests

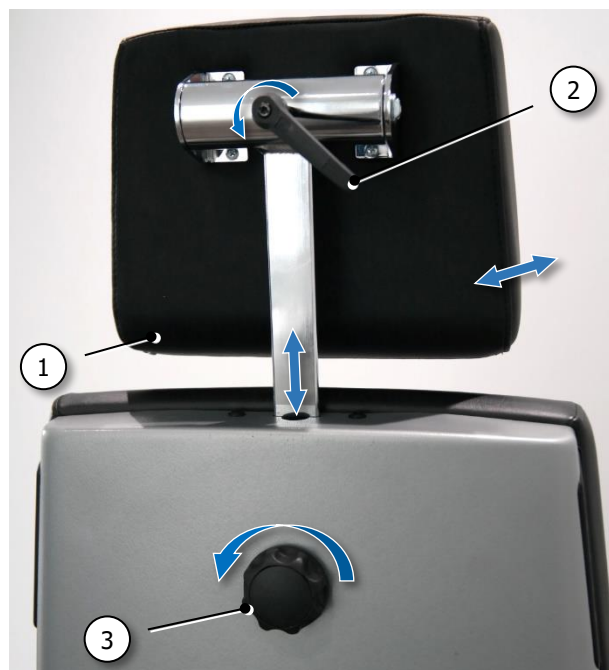
Each chair has a headrest and can be supplemented with additional headrests with exchangeable upholstery by using the Quick Assist.

#### Headrest Ergo - adjusting the inclination

The inclination of the headrest upholstery (1) is continuously adjustable. Loosen the clamping lever (2) and adjust the upholstery as desired, then retighten the clamping lever.

#### Headrest Ergo - adjusting the height

The height of the entire headrest is continuously adjustable. Loosen the handwheel (3) and pull out or push in the headrest, then retighten the handwheel.



#### TIP

The position of the clamping lever can be changed by pulling it out. After releasing, the clamping lever engages again automatically.

1. Headrest upholstery
2. Clamping lever (inclination)
3. Handwheel (height)

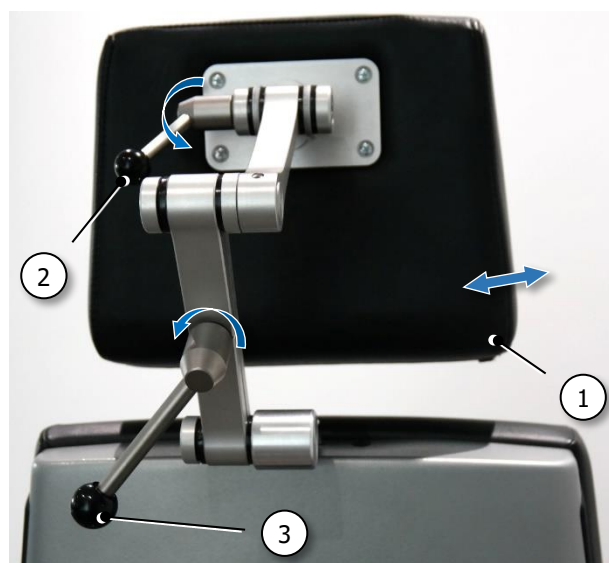
Fig. 22 Headrests - headrest Ergo

#### Headrest Ergo with Vario-double joint - adjusting the inclination

The inclination of the headrest upholstery (1) is continuously adjustable. Loosen the clamping lever (2) and adjust the upholstery as desired, then retighten the clamping lever.

#### Headrest Ergo with Vario-double joint - positioning

The Vario-double joint allows the headrest upholstery to be positioned continuously, very flexibly and quickly. To do this, release the clamping lever (3) and adjust the upholstery as desired. Then tighten the clamping lever again.



#### TIP

Push the headrest bracket fully in and tighten it with the handwheel (not shown).

The position of the clamping levers can be changed by pulling them out. After releasing, the clamping levers engage again automatically.

1. Headrest upholstery
2. Clamping lever (inclination)
3. Clamping lever (positioning)

Fig. 23 Headrests - headrest Ergo with Vario-double joint

### Exchangeable upholstery - replacing with Quick Assist

The Vario-double joint can be supplemented with a Quick Assist (1) (quick coupling). This enables the quick exchange of exchangeable upholstery (2). To release, turn the coupling nut (3) on the Quick Assist counter-clockwise. Remove the mounted exchangeable upholstery. Attach the desired exchangeable upholstery in the correct position. Pay attention to the position of the guide pins (4). To tighten, turn the coupling nut clockwise.

The following exchangeable upholstery items are available:

- Ergo (see 5.6 Exchangeable upholstery - Ergo)
- Full-calotte (see 5.7 Exchangeable upholstery - Full-calotte)
- Half-calotte (see 5.8 Exchangeable upholstery - Half-calotte)

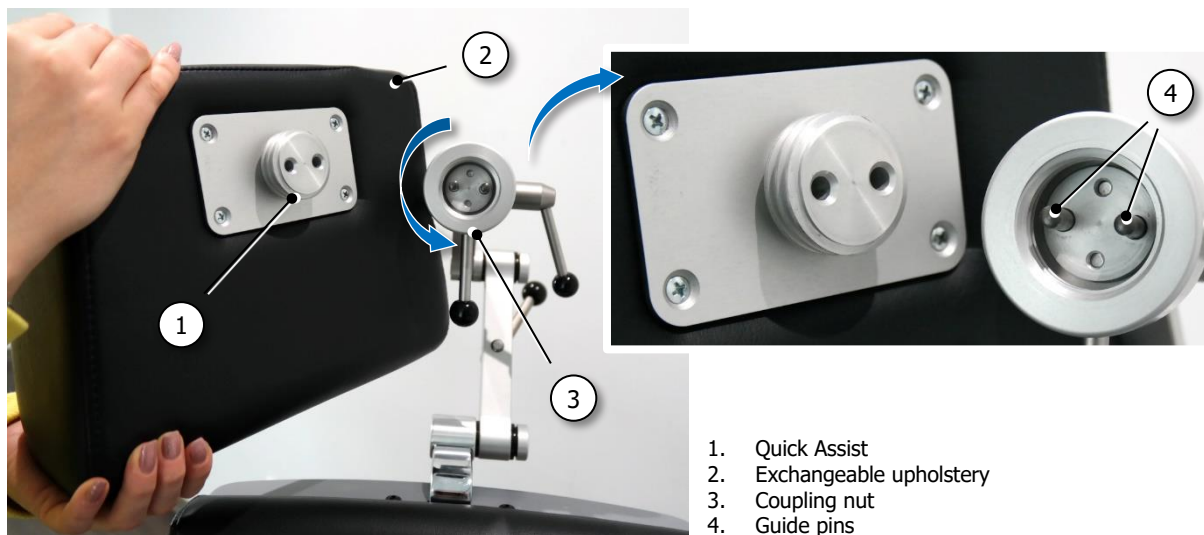


Fig. 24 Headrests - exchangeable upholstery replacing with Quick Assist

### 4.13 Rotatable seat surface

#### Turning

The seat surface (1) can be turned 90° to the right or left from the centre position, as required. Move the seat surface on one of the two handles (2) to the desired position.

The seat surface engages noticeably in the two end positions as well as in the middle position.



Fig. 25 Rotatable seat surface - turning

#### 4.14 Foot support (foldable)

##### Folding out and in (footrest with step plate (foldable) and footrest synchronous with step plate (foldable) only)

The foot support (1) can be folded out and in manually as required. It is used for safe positioning of the patient's feet during treatment. Fold out and in the foot support.

The calf board (2) provides additional support.

##### **CAUTION** Risk of falling or tripping when foot support is folded out.



The foot support must be folded in when the patient sits down or stands up.

This is the only way to ensure that the patients can approach the chair as close as possible with their heels. This gives handicapped patients in particular a feeling of safety when sitting down or standing up. The mechanics of the foot support cannot withstand the loads when sitting down and standing up of the patients (see 4.16 Sitting down and standing up of the patients).

##### Footrest with step plate (foldable)

The structured surface (3) (footrest with step plate (foldable) only) prevents the feet from slipping off accidentally.



Fig. 26 Footrest with step plate (foldable) - folding out and in

##### Footrest synchronous with step plate (foldable)

The sealed surface (4) (footrest synchronous with step plate (foldable) only) makes cleaning easier.



Fig. 27 Footrest synchronous with step plate (foldable) - folding out and in



### 4.15 Manoeuvring

The extension and retraction of the rolling device (mobile base part only) is described here.

The rolling device is only used for manoeuvring (no transportation over longer distances) the unoccupied chair e.g. for cleaning the floor etc. and never for patient transportation.

**CAUTION** Risk of falling or accident through extended rolling device.



Ensure that the chair cannot move on its own.  
Do not move the chair while a patient is still on it.

The chair may only be moved over a solid surface.

**NOTE**

The mechanics of the rolling device cannot withstand the loads when extending and manoeuvring with a patient.

Before moving the chair, it must be brought into the basic position (see 4.3 Basic position).

- Always place the foot switch on the seat upholstery. The cable of the foot switch must not touch or run over the floor, as it is not resistant to being run over. If necessary, the cable of the foot switch must be wound up or hung up. Running over or crushing the foot switch cable will result in damage which can lead to malfunctions.
- Disconnect the mains plug and place it always together with the mains cable on the seat upholstery.

**WARNING** Risk of electric shock / fire and malfunction.



Make sure that the mains cable cannot be overstretched, run over or otherwise damaged. The mains cable must be placed on the seat upholstery and must not touch or run over the floor, as it is not resistant to being run over. If necessary, the mains cable must be wound up or hung up. Running over or crushing the mains cable will result in damage which can lead to electrical hazards and malfunctions.

- The armrests must be folded down into the normal position (see 4.8 Armrests).
- When driving on slopes or inclines, e.g. ramps, a second user must additionally secure the chair at the front due to its weight.

The chair is equipped with four extendable castors.

The rolling device must be retracted every time the chair is parked in order to fix the chair to the floor.



Fig. 28 Manoeuvring



### 4.16 Sitting down and standing up of the patients

Make sure that the patient sits centrally on the seat surface. The patient must not sit on the armrest, backrest or legrest. Do not allow the patient to stand on the foot support with full weight.

If patients want to sit down on or stand up from the chair, it must first be brought into the basic position (see 4.3 Basic position).

According to the built-in turning lock, the upper part of the chair must be locked (see 4.11 Fixing the upper part).

**CAUTION Risk of falling or accident due to insufficiently braked upper part of the chair.**



The upper part of the chair must be locked when the patient sits down or stands up at all times, as this is the only way to prevent the upper part of the chair from turning unintentionally when sitting down or standing up. Turning the unbraked upper part of the chair can lead to serious falls.

When the patient sits down or stands up, the castors of the rolling device (mobile base part only) may have to be retracted in order to fix the chair to the floor (see 4.15 Manoeuvring).

**CAUTION Risk of falling or accident due to insufficiently braked chair.**



If the chair is not being moved, the castors of the rolling device must be retracted at all times, as the chair may be used by patients as a support when sitting down or standing up. Rolling the unbraked chair away can lead to serious falls.

- If necessary, fold in the foot support (footrest with step plate (foldable) and footrest synchronous with step plate (foldable) only) (see 4.14 Foot support (foldable)).

**CAUTION Risk of falling or tripping when foot support is folded out.**



The foot support must be folded in when the patient sits down or stands up. This is the only way to ensure that the patients can approach the chair as close as possible with their heels. This gives handicapped patients in particular a feeling of safety when sitting down or standing up. The mechanics of the foot support cannot withstand the loads when sitting down and standing up of the patients.

- Fold the armrest all the way up if patients want to sit down or stand up sideways (see 4.8 Armrests).
- Provide support as needed.



Fig. 29 Sitting down and standing up of the patients

### 5 Equipment options

Every MEDSEAT chair can be equipped with equipment options.

**TIP** Depending on the type of equipment options, retrofitting (after initial delivery) can range from very simple to quite complex.

#### 5.1 Premium material

The premium upholstery cover material (PREMIUM 461) allows even greater customisation of the chair. Different colour combinations create highlights and give expression to creativity. Please refer to the current color collection for available colors.

#### 5.2 Electrically conductive upholstery cover material

The use of electrically conductive cover upholstery material (EL11) prevents electrostatic charging of the patient or the chair. Only available in black.

#### 5.3 Headrest Ergo

The chair can be ordered with a headrest Ergo (1461100). For handling the headrest Ergo (see 4.12 Headrest).



**TIP**

Of course, a headrest Ergo, in the appropriate cover material and the desired colour, can be re-ordered at any time.

Fig. 30 Headrest Ergo

### 5.4 Headrest Ergo with Vario-double joint

The chair can be ordered with a headrest Ergo with Vario-double joint (1465000). For handling the headrest Ergo with Vario-double joint (see 4.12 Headrest).



Fig. 31 Headrest Ergo with Vario-double joint

#### TIP

The Vario-double joint allows a quick and very flexible adjustment. Of course, a headrest Ergo with Vario-double joint, in the appropriate cover material and the desired colour, can be re-ordered at any time.

### 5.5 Quick Assist (quick coupling)

The Quick Assist (1465005) ensures the use of exchangeable upholstery. The Quick Assist can only be used on the Vario-double joint. For handling the Quick Assist (see 4.12 Headrest).



Fig. 32 Quick Assist (quick coupling)

#### TIP

The Quick Assist can also be retrofitted to the Vario-double joint.

### 5.6 Exchangeable upholstery - Ergo

The exchangeable upholstery Ergo (1465011) in combination with the Quick Assist (quick coupling) allows quick and easy exchange of upholstery on the Vario-double joint. For handling the exchangeable upholstery Ergo (see 4.12 Headrest).



Fig. 33 Exchangeable upholstery - Ergo

#### TIP

Of course, an exchangeable upholstery Ergo, in the appropriate cover material and the desired colour, can be re-ordered at any time.

### 5.7 Exchangeable upholstery - Full-calotte

The exchangeable upholstery Full-calotte (1465012) in combination with the Quick Assist (quick coupling) enables the quick and easy exchange of upholstery on the Vario-double joint. For handling the exchangeable upholstery Full-calotte (see 4.12 Headrest).



Fig. 34 Exchangeable upholstery - Full-calotte

#### TIP

Of course, an exchangeable upholstery Full-calotte can be re-ordered at any time.  
The exchangeable upholstery Full-calotte can only be supplied in a black colour.

### 5.8 Exchangeable upholstery - Half-calotte

The exchangeable upholstery Half-calotte (1465013) in combination with the Quick Assist (quick coupling) enables the quick and easy exchange of upholstery on the Vario-double joint. For handling the exchangeable upholstery Half-calotte (see 4.12 Headrest).



Fig. 35 Exchangeable upholstery - Half-calotte

#### TIP

Of course, an exchangeable upholstery Half-calotte can be re-ordered at any time.  
The exchangeable upholstery Half-calotte can only be supplied in a black colour.

### 5.9 Foot support with step plate (fixed)

The chair can be ordered with a permanently mounted foot support and fixed step plate (1330900).



Fig. 36 Foot support with step plate (fixed)

#### TIP

Of course, a permanently mounted foot support with a fixed step plate can be re-ordered at any time.  
The calf board can only be supplied in a black colour.

### 5.10 Foot support with step plate (foldable)

The chair can be ordered with a permanently mounted foot support and foldable step plate (1337100). For handling the foldable step plate (see 4.14 Foot support (foldable)).



Fig. 37 Foot support with step plate (foldable)

#### TIP

The foldable step plate makes it easier for patients to sit down and stand up. Of course, a permanently mounted foot support with a foldable step plate can be re-ordered at any time. The calf board and the cover of the step plate can only be supplied in a black colour.

### 5.11 Footrest synchronous

The chair can be ordered with a synchronous footrest (1335000). When the backrest is moved, the footplate moves synchronously with the current position of the backrest. For handling the synchronous footrest (see 4.10 Backrest and synchronous adjustment).



Fig. 38 Footrest synchronous

#### TIP

The sealed surface of the step plate makes cleaning easier. Of course, a synchronous footrest, in the appropriate cover material and the desired colour, can be re-ordered at any time.

### 5.12 Footrest synchronous with step plate (foldable)

The chair can be ordered with a synchronous footrest and foldable step plate (1335500). When the backrest is moved, the step plate moves synchronously with the current position of the backrest. For handling the synchronous footrest with foldable step plate (see 4.10 Backrest and synchronous adjustment and 4.14 Foot support (foldable)).

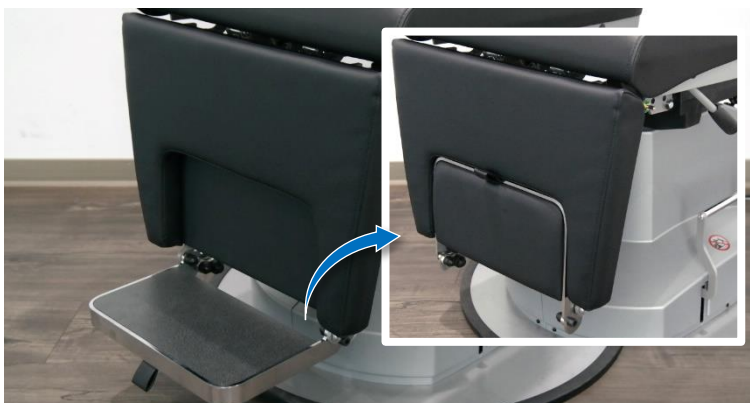


Fig. 39 Footrest synchronous with step plate (foldable)

#### TIP

The foldable step plate makes it easier for patients to sit down and stand up. The sealed surface of the step plate makes cleaning easier. Of course, a synchronous footrest with foldable step plate, in the appropriate cover material and the desired colour, can be re-ordered at any time.



### 5.13 Foot support bracket

The chair can be ordered with a permanently mounted tube bracket for the foot support (1330854).



Fig. 40 Foot support bracket

#### TIP

A non-slip coating prevents the feet from slipping off accidentally.

Of course, a permanently mounted tube bracket for the foot support can be re-ordered at any time.

### 5.14 Podology leg supports

The chair can be ordered with permanently mounted podology leg supports (1337000).

**TIP** The left and right podology leg supports can be adjusted independently of each other.



#### TIP

The individually adjustable podology leg supports provide the user with assistance in his or her work with regard to ergonomics and quality.

Of course, the upholstery of the podology leg supports, in the appropriate cover material and the desired colour, can be re-ordered at any time.

Fig. 41 Podology leg supports

### 6 Cleaning and disinfection

This chapter describes all cleaning and disinfection activities which should be carried out regularly.

To maintain the chair's functionality, the chair should be cleaned and disinfected regularly. Improper cleaning or disinfection may result in danger or damage.

**NOTE** The information in the instructions of the respective detergent or disinfectant manufacturer must be followed.  
The mixing ratio recommended by the manufacturer in the respective instructions must be applied. The specified concentrations should neither be exceeded nor undercut.  
Disregarding these instructions can lead to material damage and possibly personal injury.

**TIP** Before the extensive use of cleaning agents and disinfectants, we always recommend testing the surface compatibility on a non-visible area.  
As a rule, the solutions should be freshly prepared.

**TIP** Do not use a brush and high pressure to clean or disinfect type plates, stickers, symbols and notes.  
Readability must always be guaranteed and compatibility tested over a small area if necessary.

- Cleaning and disinfecting agents must not contain any corrosive or corrosive components.
- They must not contain substances that alter the surface structure or the adhesive properties of the materials.
- The lubricants used on the chair must not be attacked.

**NOTE** The use of unsuitable cleaning agents and disinfectants, the wrong mixing ratio and insufficient care of the chair can cause damage to the surface coating for which GREINER GmbH is not liable.

**TIP** After cleaning and/or disinfection, make sure that no liquid residues remain on the metal parts of the chair (avoid drop formation on edges). Otherwise, corrosion cannot be ruled out in these areas in the long term. If necessary, remove completely with a soft cotton cloth.

**TIP** To avoid degreasing of the piston rods, all electric actuators should be moved to the smallest stroke position before cleaning or disinfection.  
Dry-running piston rods should be greased thinly with industrial Vaseline.



### 6.1 Cleaning

Cleaning and disinfection must be carried out at regular intervals. Please refer to the GREINER upholstery care instructions.

The following times are usually to be observed.

- If required
- After each patient change
- In accordance with the guidelines of the operator's hygiene plan

For regular cleaning of the upholstery we recommend

**CARISMA Cleaning & Care Lotion** from GREINER.

CARISMA is a ready-to-use product for daily use. Please refer to the product information for application and safety instructions. Alternatively, warm, mild soapy water can be used for cleaning.

Depending on the degree of soiling, we recommend cleaning the chair with a damp cloth (microfiber cloth or similar). Oil, grease, sweat, urine and blood must be removed immediately. Use a warm, mild soapy water. A soft hand brush can also be used for stubborn dirt or stains. Do not use excessive amounts of water to clean the chair.



**NOTE** The upholstery materials must be protected from the effects of intense heat and cleaned regularly. Take care that the upholstery are not soaked.

Do not use organic solvents (e.g. petrol, benzene, turpentine, toluene, xylene or acetone etc.), chlorides, polishes, chemical cleaning agents or wax polishes to clean the upholstery. Do not use agents containing oil, grease or alcohol.

The upholstery materials are not resistant to dry cleaning.

Under no circumstances should scouring sponges or cleaning agents containing abrasive particles, abrasives or other blunting substances be used to clean the steel parts.

For cleaning the plastic parts also use a warm, mild soapy water or, if necessary, commercially available plastic cleaner.

Use commercially available plastic cleaners to clean the electrical components.

**NOTE** The chair may not be cleaned in washing facilities, by means of spray lances of a high-pressure cleaner or water jet.

### 6.2 Disinfection

For wipe and spray disinfection, the disinfectants listed in the GREINER upholstery care instructions can be used in their intended concentration.

Please follow the application and safety instructions in the respective manufacturer's product information.

**NOTE** The specified concentrations of the disinfectants should not be exceeded or undershot. Under no circumstances may the user add cleaning agents such as soap or detergents to a disinfectant at his own discretion.

Do not allow the disinfectant to penetrate into the upholstery beyond the prescribed contact time. Disinfectants are aggressive and can change the surface.

**DANGER** Fire and explosion hazard due to wiping / spraying disinfection containing alcohol.

There is a fire and explosion hazard when wiping or spraying disinfectants containing alcohol are used over large areas.

### 7 Troubleshooting

The chapter troubleshooting contains information about possible malfunctions that can be corrected by the user.

**TIP** The use of specially trained and instructed service personnel is neither necessary nor intended for troubleshooting.

#### Safety Instructions for troubleshooting (electrical versions only)

**DANGER** Fatal risk of electric shock.



Under no circumstances may the user attempt to rectify faults in electrical components him or herself.

In the event of a defect, the couch must be disconnected from the mains. Mark the couch as defective and separate it. A new use may only take place after prior, proper repair by specialist personnel.

#### General troubleshooting tips

**TIP** Before each troubleshooting check whether the chair is connected to the mains (mains plug in a live socket).

##### **Voltage test for everyone.**

At the appropriate mains outlet, perform a simple test with another functioning electrical device.

Device works when switched on - mains voltage present.

Device does not function when switched on - no mains voltage present.

A chair connected to the mains with deactivated operating lock is ready for operation and can be moved by pressing buttons (see 4.5 Activating / deactivating the operating lock).

### 7.1 Control unit RESET

The control unit RESET (electrical versions only) is described here. For the control unit RESET up to the delivery date in September 2015 (Software Ver. 1.0 and 1.1) (see service manual).

**TIP** **Checking the operating lock.**

If the MEDSEAT chair can no longer be operated, check the activation of the operating lock first (see 4.5 Activating / deactivating the operating lock).

Fluctuations in the mains voltage or similar can cause the chair to stop functioning and a signal tone being heard. In this case, carry out a "RESET" of the control unit.

**Way of proceeding**

1. Press and hold the button on the foot control (1) to raise the seat height (2) or the two buttons on the hand control (3) to adjust the backrest (up (4) - down (5)) simultaneously. After a short time, a pulsating signal tone will be heard.
2. Continue to press and hold the two buttons until the sound stops.

A "RESET" has been carried out - the chair is ready for operation again.

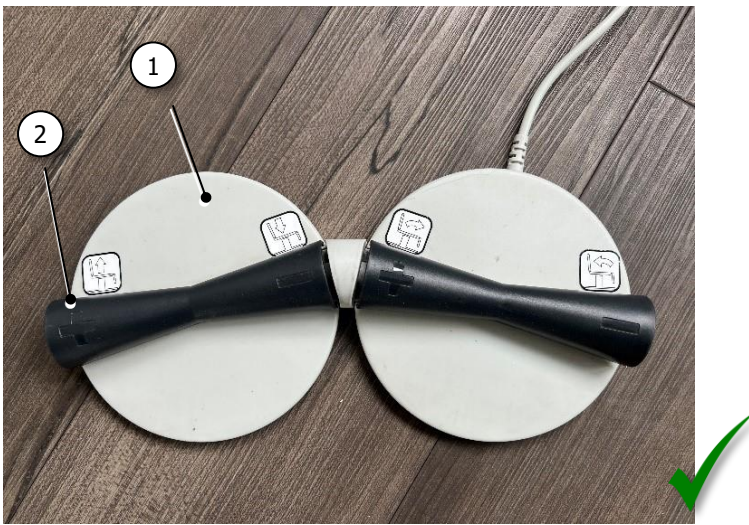


Fig. 42 Carrying out a RESET at the foot switch

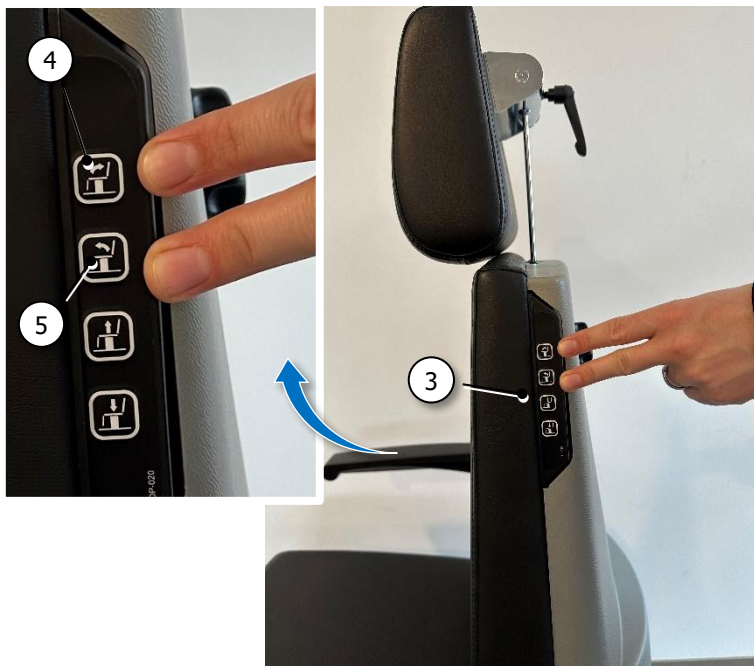


Fig. 43 Carrying out a RESET at the hand control

## 7.2 Troubleshooting table

The following table provides assistance in remedying malfunctions.

Electrical malfunction (electrical versions only)		
Problem	Possible causes	Solution
Chair completely without electrical function.	<ul style="list-style-type: none"> <li>Mains cable not plugged in.</li> <li>Socket without mains voltage.</li> <li>Mains plug not plugged in properly.</li> <li>Defective foot switch, hand control, mains cable or control unit.</li> </ul>	<ul style="list-style-type: none"> <li>☞ Plug in the mains cable.</li> <li>☞ Check socket and fuse box.</li> <li>☞ Check the plug connection of the mains plug.</li> <li>☞ Inform the operator for intensive inspection during repair.</li> <li>☞ If necessary, replace the foot switch, hand control, mains cable or control unit.</li> </ul>
The green power indicator LED on the control unit does not light up. (may only be carried out by service personnel, as the cover of the base part must be removed)	<ul style="list-style-type: none"> <li>Socket without mains voltage.</li> <li>Mains cable or plug defective.</li> <li>Defective control unit.</li> </ul>	<ul style="list-style-type: none"> <li>☞ Use an intact mains socket.</li> <li>☞ Inform the operator for intensive inspection during repair.</li> <li>☞ If necessary, replace the mains cable or control unit.</li> </ul>
Foot switch or/and hand control without function.	<ul style="list-style-type: none"> <li>Operating lock activated.</li> <li>Defective foot switch or/and hand control.</li> </ul>	<ul style="list-style-type: none"> <li>☞ Deactivating the operating lock. (see 4.5 Activating / deactivating the operating lock)</li> <li>☞ Inform the operator for intensive inspection during repair.</li> <li>☞ If necessary, replace foot switch or/and hand control.</li> </ul>
Despite a proper mains supply, operation is not possible.	<ul style="list-style-type: none"> <li>Control unit has switched off due to overheating.</li> <li>Defective control unit.</li> </ul>	<ul style="list-style-type: none"> <li>☞ Max. duty cycle: OP: 2 / 18 min note (see 4.6 Duty cycle)</li> <li>☞ Inform the operator for intensive inspection during repair.</li> <li>☞ If necessary, replace the control unit.</li> </ul>
Actuator only starts briefly, then stops.	<ul style="list-style-type: none"> <li>Actuator overloaded.</li> </ul>	<ul style="list-style-type: none"> <li>☞ Remove overload.</li> <li>☞ Retest.</li> </ul>
The control unit does not respond and a pulsing signal tone sounds when any button on the foot switch or hand control is pressed.	<ul style="list-style-type: none"> <li>Fluctuations in the mains voltage etc. lead to a total failure of the unit.</li> </ul>	<ul style="list-style-type: none"> <li>☞ Carry out a "RESET" of the control unit. (see 7.1 Control unit RESET)</li> </ul>
Potential equalisation does not function properly.	<ul style="list-style-type: none"> <li>Equipotential bonding pin damaged or not present.</li> </ul>	<ul style="list-style-type: none"> <li>☞ Inform the operator for intensive inspection during repair.</li> <li>☞ If necessary, replace the equipotential bonding pin.</li> </ul>

Mechanical malfunction		
Problem	Possible causes	Solution
Turning lock of the upper part does not function properly. (electrical versions only)	<ul style="list-style-type: none"> <li>Braking device incorrectly adjusted.</li> <li>Brake linkage bent or defective.</li> </ul>	<ul style="list-style-type: none"> <li>☞ Let the braking device be adjusted.</li> <li>☞ Inform the operator for intensive inspection during repair.</li> <li>☞ If necessary, replace the braking device or/and the brake linkage.</li> </ul>
Turning lock of the upper part does not function properly. (hydraulic versions only)	<ul style="list-style-type: none"> <li>Clamping on the piston rod of the hydraulic pump defective.</li> </ul>	<ul style="list-style-type: none"> <li>☞ Inform the operator for intensive inspection during repair.</li> <li>☞ If necessary, replace the hydraulic pump.</li> </ul>
Rolling device of the mobile base part does not function properly. (mobile base part only)	<ul style="list-style-type: none"> <li>Rolling device bent or defective.</li> <li>Defective castor(s).</li> </ul>	<ul style="list-style-type: none"> <li>☞ Inform the operator for intensive inspection during repair.</li> <li>☞ If necessary, replace the rolling device or/and the castor(s).</li> </ul>
Manual backrest or synchronous adjustment does not work properly. (manual backrest or synchronous adjustment only)	<ul style="list-style-type: none"> <li>Locking of the gas spring will not be released.</li> <li>Gas spring cannot be blocked.</li> <li>Gas spring has too little force (oil leakage).</li> </ul>	<ul style="list-style-type: none"> <li>☞ Let the bowden cable be adjusted.</li> <li>☞ Inform the operator for intensive inspection during repair.</li> <li>☞ If necessary, replace the gas spring.</li> </ul>
Height adjustment by means of hydraulic pump does not function properly. (hydraulic versions only)	<ul style="list-style-type: none"> <li>Hydraulic oil quantity not sufficient.</li> <li>Defective hydraulic pump.</li> </ul>	<ul style="list-style-type: none"> <li>☞ The refilling of hydraulic oil is not intended.</li> <li>☞ Inform the operator for intensive inspection during repair.</li> <li>☞ If necessary, replace the hydraulic pump.</li> </ul>



### 8 Decommissioning

#### 8.1 Service life

Provided that the intended use, safety inspections and necessary maintenance measures are observed, the service life of the MEDSEAT chair is approx. 7 to 10 years, depending on stress, operating conditions and frequency.

#### 8.2 Storage and transportation

**NOTE** The MEDSEAT chair should only be moved and carefully stored in basic position (see 4.3 Basic position and 4.11 Fixing the upper part).

The mechanics of the rolling device cannot withstand the loads during transportation over long distances (see 4.15 Manoeuvring).

**TIP** The chair must be cleaned and disinfected before storage (see 6 Cleaning and disinfection).  
Store the chair in a dry, well-ventilated room, protected from dirt.  
Furthermore, the chair should preferably be protected from direct sunlight or UV radiation, if necessary by a light-proof foil.

The following environmental conditions must be observed at the storage location or during transportation.

Storage or transportation temperature [C]:



Air humidity [rH] (non-condensing):



Air pressure [hPa]:



Storage at an estimated altitude [m]:



### 8.3 Check before recommissioning

The chair must be cleaned and disinfected before being put back into operation (see 6 Cleaning and disinfection).

**CAUTION Risk of infection from contaminated chair.**



After storage, the chair must be cleaned and disinfected before being put back into operation.

A functional check of the chair must be carried out immediately after cleaning and disinfection and before use (occupation by a new patient).

**WARNING Risk of injury for patient, user and third parties.**



The chair must be checked for functional safety once recommissioning is complete. It must be ensured that the chair can be used as intended without endangering the patient, the user or third parties.

If the chair is recommissioned after storage, the same functional check must be carried out as for the check before commissioning (see 3.6 Check before commissioning and reassignment).

- ☞ General check of the overall condition of the chair for soiling, condition and damage, completeness and legibility of stickers, symbols and instructions, clean if necessary in accordance with the manufacturer's specifications or those of the operator and repair if necessary.
- ☞ Visually inspect the mains cable and plug, foot switch, as well as all other electrical cables and connectors for breakage, proper installation (e.g. strain relief), clamping or friction points etc. and repair if necessary (if available).
- ☞ Functional check of the electrical adjustment devices and the control system. All electric actuators must be operated once up to their end positions. Pay particular attention to changed operating behaviour, unusual noises, speed, smooth running, odours and increased temperature and repair if necessary (if available).
- ☞ Carry out a functional check according to the installed turning lock (locking, freewheel) and repair if necessary.
- ☞ Carry out a functional check according to the used headrest and repair if necessary.
- ☞ Carry out a functional check of the rolling device of the mobile base part and repair if necessary (if available).
- ☞ Carry out a functional check of the manual backrest and synchronous adjustment by means of a gas spring and repair if necessary (if available).
- ☞ Carry out a functional check of the hydraulic height adjustment and repair if necessary (if available).
- ☞ Any defects or damage found must be remedied immediately.  
The chair must not be used before the defects or damage have been remedied.

**WARNING Risk of injury due to defective chair.**



The chair must **not** be operated in a defective or faulty condition in which the chair could endanger patients, users or third parties.

A defective or faulty chair must be clearly marked "**DEFECT**". The marking must be done in such a way that the defective condition is clearly identifiable for everyone.

Inform the operator for intensive inspection during repair.

## 8.4 Disposal

During the construction of the chair, care was taken to ensure that, wherever possible, no composites were used. This design concept allows a high degree of recycling once the chair has reached the end of its service life.

Country-specific disposal regulations must be observed!

### General disposal instructions

#### **CAUTION** Risk of infection from contaminated chair.



The operator must ensure that all components to be disposed of are not infectious or contaminated.

In the event of scrapping, dispose of metal and plastic parts separately and properly.

If you have any queries, please contact your local municipality, local waste disposal company or our service (see 1.2 Manufacturer).

### Disposal of electrical parts (if available)



#### **Labelling of electrical and electronic equipment in accordance with Directive 2002/96/EC (WEEE) and the German Electrical and Electronic Equipment Act (ElektroG)**

The symbol on the product indicates that it must not be disposed of as normal household waste.

- The electrical components used are free of prohibited harmful substances in accordance with the RoHS Directive.



- For environmental reasons, old electrical appliances must be disposed of separately in accordance with the Electrical and Electronic Equipment Act (ElektroG) and the European WEEE Directive.
- GREINER products are designed in such a way that electrical components such as motors, control units, switches, cables etc... can be removed without great effort. You will help the environment and comply with the legal requirements if you remove the electrical components and take them to a recycling centre, for example. Alternatively, you can return the electrical components or the entire product to GREINER, DAP Pleidelsheim. (see 9.3 Return delivery / repair order). We will then take care of proper disposal. However, it is necessary to enclose a document proving that the returned product is a GREINER product. A photo of the type plate, a copy of the delivery note or similar is sufficient for this purpose. In addition, a declaration on the hygiene status must be enclosed. For further information, please refer to our General Terms and Conditions at [www.greiner-gmbh.de](http://www.greiner-gmbh.de).

### Disposal of batteries (if available)



Pb

- Batteries that are no longer usable must be disposed of properly in accordance with the Battery Ordinance and should never be disposed of with household waste.
- If you have any queries on waste disposal, please contact your local municipality, local waste disposal company or our service (see 1.2 Manufacturer).

### Disposal of gas springs/hydraulic units (if available)

Gas springs and hydraulic units are mainly made of metal and can be recycled after the oil contained within them has been drained.

Gas springs must be depressurised in accordance with the manufacturer's instructions before disposal or draining of the oil. These details are available on request from the corresponding gas spring manufacturer (see type plate or manufacturer label). For the correct procedure for the disposal (recycling) of Stabilus gas springs, see [www.stabilus.com](http://www.stabilus.com).

#### **CAUTION** Danger of injury to the eyes or face, risk of injury due to trapping



Due to the high internal pressure, suitable measures for personal protection must be taken before degassing (eye and face protection, covering the degassing opening, etc.).

When the gas springs are removed, there is a risk of trapping when the release mechanism is activated by sudden movement of the piston rod.


















#### **Environmental protection**

- Before disposal, the oil must be drained and disposed of properly.

## 9 Appendix

## 9.1 Explanation of symbols

The following symbols are used in this manual, on the chair and its components or parts.

Symbol	Meaning	Symbol	Meaning
	TÜV approval mark		Safety information
	Follow the instructions		RoHS label
	Environmental protection		Electrical scrap
	No domestic waste		Date of manufacture
	Manufacturer		Serial number
	Product name		Applied Part: Type B
	Indoor application		Maximum patient weight
	Protection class I		

## 9.2 Ordering spare parts

If required, a spare parts list can be provided on request (see 1.2 Manufacturer).

**NOTE** To ensure functional reliability and to maintain warranty claims, only original spare parts from GREINER GmbH may be used.

## 9.3 Return delivery / repair order

Returns of medical devices, whether used or unused, may have come into contact with infectious agents or hazardous substances and are therefore generally regarded as "contaminated returns". This applies until the sender can prove that they are not infectious or contaminated.

Medical devices must be sent in their packaging only. Ensure that a "Declaration of Hygiene Status" is attached to the outside of the packaging. The accompanying documents must show that the medical device has been properly disinfected.

Medical devices must be disinfected before repair. The operator or client is responsible for execution and credible proof.

For further information, please refer to our General Terms and Conditions at [www.greiner-gmbh.de](http://www.greiner-gmbh.de).

**CAUTION Risk of infection from contaminated chair.**



For all returns or repair orders, the sender or operator must ensure that the corresponding medical devices are neither infectious nor contaminated.

## 9.4 Technical data

### Dimensions and weights

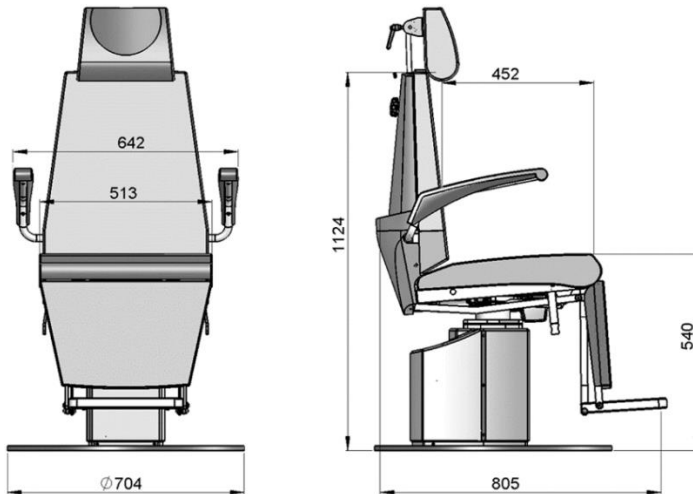


Fig. 44 Dimensions

Seat width:	51 cm
Seat depth:	45 cm
Overall depth in basic position depending on the model:	70 - 80 cm
Overall width:	70 cm
Length of the lying surface in flat position without the legrest:	135 - 145 cm
Length of the lying surface in flat position with the legrest:	194 - 204 cm
Entrance height (hydraulically operated version):	54 cm
Entrance height (electrically operated version):	58 cm
Height adjustment (hydraulically operated version):	20 cm (54 - 74 cm)
Height adjustment (electrically operated version):	30 cm (58 - 88 cm)
Swivel range with 1 electric drive in the upper part:	approx. 330°
Swivel range with 2 electric drives in the upper part:	approx. 280°
Empty weight of the chair depending on the model (hydraulically operated version):	approx. 55 - 63 kg
Empty weight of the chair depending on the model (electrically operated version):	approx. 90 - 109 kg
Maximum patient weight hydraulic:	200 kg
Maximum patient weight electric:	220 kg

### Electrical data

Protection class I:



Application Part Type B (special protection against electric shock):



Protection type:

IPX4

### Control unit [CB6]

Bus version:

OpenBus™

Number of channels depending on version:

1 - 3

Mains connection [U in]:

110 - 240 V AC, 50/60 Hz

Current consumption [I in]:

max. 2 - 4 A

Total current [I out]:

max. 8 A

Current per channel [I out]:

5.5 - 8 A

OP = duty cycle <sup>1)</sup>:

10 % max. 2 min / 18 min

Isolating transformer:



Thermal fuse element:



### Actuators

Rated voltage [U in]:

24 V DC

Current consumption [I in] depending on version:

3.9 - 7 A

1) Duty cycle 10 % max. 2 minutes continuous use followed by 18 minutes not in use.  
Failure to do so may result in a malfunction.



## 9.5 Proof of instruction

## Form for proof of instruction MEDSEAT



Fig. 45 Proof of instruction MEDSEAT

**Type of instruction**

- ☐ Initial instruction
- ☐ Repeated instruction


**Instruction by**

- ☐ Manufacturer
- ☐ Authorised person of the authorised specialist distributor
- ☐ Authorised representative of the operator
- ☐ Other \_\_\_\_\_

**Instruction for**

- ☐ User
- ☐ Authorised representative of the operator
- ☐ Authorised person of the authorised specialist distributor
- ☐ Service personnel of the operator
- ☐ Service personnel of the authorised specialist distributor

**Device data** (see 1.6 Type plate)

<b>Manufacturer</b> 	<b>GREINER GmbH</b> Wettestraße 1 74385 Pleidelsheim / Germany	<b>Product name</b> <div style="border: 1px solid black; padding: 2px;">REF</div>	<b>MEDSEAT</b>
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## Form for proof of instruction MEDSEAT

**The following points, which are particularly relevant, must be clearly emphasized during the instruction.**

- ⚠ The maximum patient weight is 200 kg for the hydraulic version and 220 kg for the electric version.
- ⚠ Do not sit or rest on backrest upholstery, legrest upholstery, arm support or foot support - danger of tipping over. This must be expressly pointed out to patients.
- ⚠ Patients may sit down or stand up only when the chair is in the basic position - risk of accident.  
The foot support is only for placing the feet, not for sitting down or standing up.  
On models with mobile base parts, the castors must be retracted (release lever vertical) - risk of accident due to sudden rolling away when sitting down or standing up and when leaning against it.
- ⚠ Models with a mobile base part must not be moved or relocated while a patient is sitting on the chair.  
When moving, secure the mains and foot switch cables against being run over - risk of electric shock / damage.
- ⚠ In the case of unattended chairs, always activate the operating lock - risk of injury by jamming limbs. This is particularly relevant in corridors and unoccupied rooms - playing children.  
Never deactivate the operating lock for children or handicapped persons.
- ⚠ When making electrical adjustments, always pay attention to the immediate danger area - danger of jamming.  
A sufficient distance to furniture, walls, window ledges etc. must be maintained - risk of damage.
- ⚠ The mains plug must always be accessible - EMERGENCY STOP.
- ⚠ Use potential equalization - danger of deviating or even wrong measured values when using electronic medical devices on patients despite electromagnetic compatibility (EMC).
- ⚠ Not for use in potentially explosive areas on models with electrical equipment - danger of explosion. The control unit and the drives of the chair are not explosion-proof.
- ⚠ Do not clean in washing facilities or with a high pressure cleaner - risk of electric shock / damage. Electrical components are splash-proof only.
- ⚠ The users will be shown all functions of the chair during the instruction - explicitly point out danger points.
- ⚠ Maintenance periods or deadlines for safety inspections by the operator must be observed.  
Never continue to use a defective chair. The chair must be clearly marked as "DEFECT". Inform the operator of any need for repairs.

### Instructor

The instructor confirms with his or her signature that the corresponding participants have been instructed by him or her in the use of the medical device in accordance with the instruction manual.

Last name		First name	
Company / Department			
<b>Date / Place:</b>		<b>Stamp / Signature:</b>	

### Participant

The participant confirms with his or her signature that the content of the instruction has been understood.

Last name		First name	
Company / Department		Signature	
Last name		First name	
Company / Department		Signature	
Last name		First name	
Company / Department		Signature	
Last name		First name	
Company / Department		Signature	

## 9.6 Glossary

The following groups of persons and terms are defined in this glossary.

### **Operator**

Under the German Medical Device Operator Ordinance (also abbreviated as MPBetreibV), the operator of a medical device is any natural or legal person who is responsible for the operation of the health facility in which the medical device is operated or used by its employees.

An operator (e.g. hospital, dialysis centre, hospital, hospital management, medical practice, company doctor etc.) can be the legal owner of the MEDSEAT chair, as well as have actual control over it. The operator is responsible for the safe operation of this medical device.

### **User**

Under the MPBetreibV, the user is the person who uses a medical device on the patient.

Users (e.g. medical specialists, nurses, doctors, assistants, nursing staff, caregivers etc.) are persons who are authorised by their training, experience or instruction to operate the chair independently or to carry out their work with it, or who have been instructed in the handling of the chair. Furthermore, they can recognise and avoid possible dangers and assess the clinical condition of the patient.

### **Patient**

A patient is a person who is ill, in need of care or handicapped and who is placed on this chair.

### **Service personnel**

Service personnel (e.g. service technicians, specially trained employees of a service support point, customer service employees of GREINER GmbH etc.) are persons who are authorised to carry out maintenance or repair work beyond that performed by the user. They are entitled to carry out the necessary maintenance or repair work on their own responsibility on the basis of their training, experience or through further instruction. They can identify and avoid any hazards that may occur during maintenance or repair work.

### **Healthcare facility**

Under the MPBetreibV a health facility is any facility, body or institution, including rehabilitation and care facilities, in which medical devices are professionally operated or used by medical personnel, persons in the nursing profession or other authorised persons.









## we design quality.

Agreeably health-promoting seating has motivated us since 1922. For decades we have been making high-quality, technically sophisticated examination and treatment chairs within the medbest range. Our innovative devices for universal use in clinics, medical practices and company doctors are all made in Germany. Our quality commitment is verified by an independently audited quality assurance system: GREINER is certified under DIN EN ISO 9001 and 13485.



# GREINER

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