INSTRUCTION MANUAL

GENIUS EYE – GENIUS EYE PRO OPERATING TABLE

DESIGNED, ENGINEERED AND MANUFACTURED SINCE 1980
MADE IN GERMANY

www.brumaba.com

BRUMABA
OPERATING TABLE SYSTEMS

THANK YOU

The product you purchased is a comfortable and versatile operating table, which can either be hydraulically adjusted to the required position using the manual control or the optional foot control. The patient can be positioned automatically and appropriately thanks to the division of the table top.

INFORMATION REGARDING THE INSTRUCTION MANUAL

This instruction manual enables a safe and efficient handling of the operating table. The instruction manual is an integral part of the operating table and must be kept in the direct vicinity of the operating table and be available to the staff at all times.

The staff members must read this instruction manual carefully and understand it prior to beginning any work. BRUMABA customer service is available in the event of any questions. A prerequisite for a safe operation is adhering to all indicated safety precautions and instructions in this instruction manual.

Furthermore, the local occupational health and safety regulations and general safety regulations for the application area of the operating table apply.

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CUSTOMER SERVICE

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INCIDENT REPORTING

Any severe incidents that occurred in connection with this product must be reported to the manufacturer and the responsible authority of the Member State.

TECHNICAL DATA

Refer to the separate data sheet "Technical data GENIUS EYE and GENIUS EYE PRO Operating Table“

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This instruction manual was created by: BRUMABA

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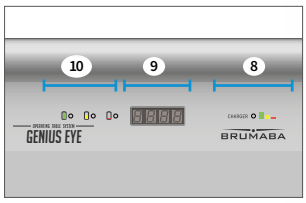

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GENIUS EYE PRO

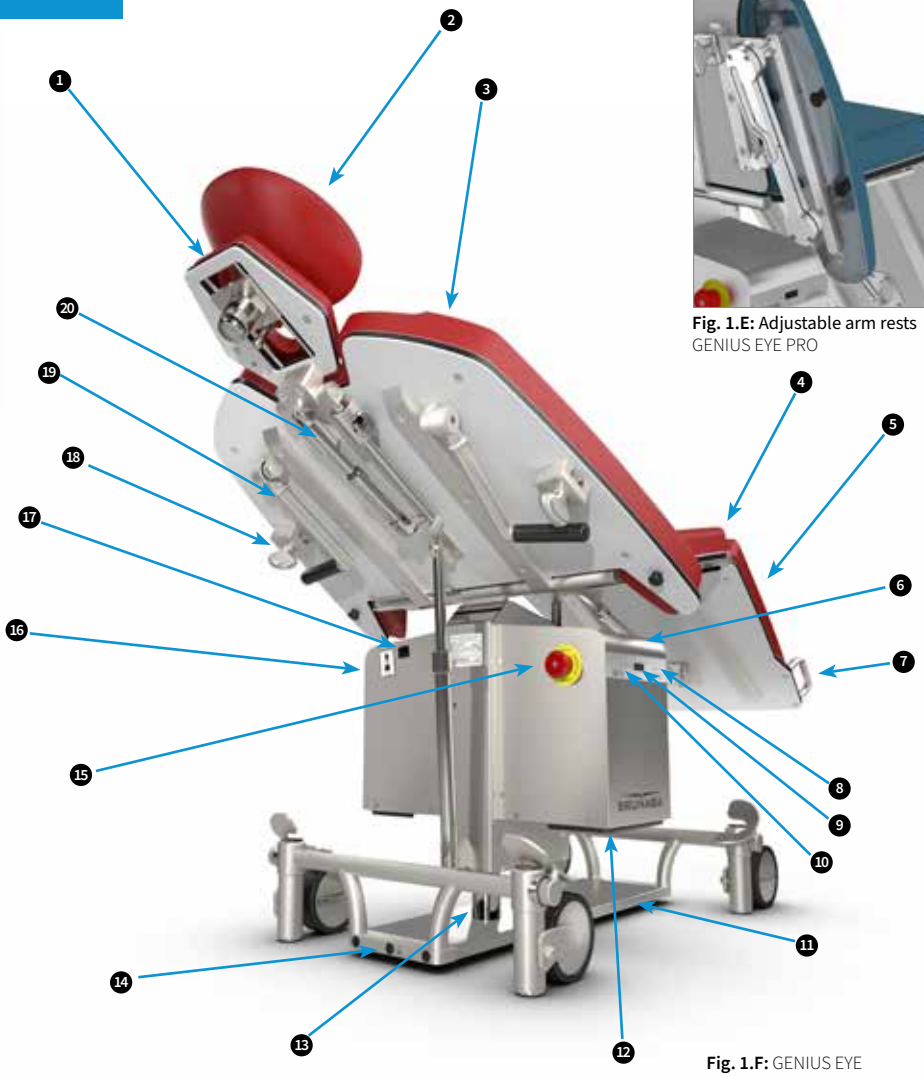

Fig. 1.F: GENIUS EYE

1 Head section
2 Horseshoe-shaped headrest
3 Back section
4 Seat section
5 Foot section
6 Battery case/Power supply housing
7 Transport handles
8 Charge state indicator
9 Error code display
10 Battery charge level indicator (battery version)
11 Base plate with undercarriage 4-Easy-Drive
12 Pressure sensitive safety edge (only for dual telescopic column)
13 Precision column guide (here: optional dual telescopic column)
14 Potential equalization connector
15 Emergency off switch
16 Hydraulic housing
17 Charging cable connection (battery version)
18 Fixed mounting bracket
19 Fold out handles
20 Hydraulic cyclinder

BRIEF DESCRIPTION

The operating table serves accommodating patients during procedures, surgeries, treatments and examinations. The head, back, seat and foot sections are adjusted using the provided manual control or the optionally available foot control. The horseshoe-shaped headrest is adjusted manually. More details: Chapter 3 “Functional description” on page 15.

OP-TABLE	MODEL	OP-TABLE	MODEL
BRUMABA CL GENIUS EYE-STN	Standard telescopic column 525–815 mm, + Padding 55 mm, plug-in-version	BRUMABA CL GENIUS EYE PRO STN	Standard telescopic column 525–815 mm, + Padding 70 mm, plug-in-version
BRUMABA CL GENIUS EYE-DTN	Dual telescopic column 465–895 mm, + Padding 55 mm, plug-in-version	BRUMABA CL GENIUS EYE PRO DTN	Dual telescopic column 465–895 mm, + Padding 70 mm, plug-in-version
BRUMABA CL GENIUS EYE-STA	Standard telescopic column 525–815 mm, + Padding 55 mm, battery version	BRUMABA CL GENIUS EYE PRO STA	Standard telescopic column 525–815 mm, + Padding 70 mm, battery version
BRUMABA CL GENIUS EYE-DTA	Dual telescopic column 465–895 mm, + Padding 55 mm, battery version	BRUMABA CL GENIUS EYE PRO DTA	Dual telescopic column 465–895 mm, + Padding 70 mm, battery version

2. Safety
2.1. Symbols in this instruction manual

This instruction manual uses symbols indicate safety precautions and warnings. The signal words express the degree of risk.

SAFETY PRECAUTIONS

This combination of symbol and signal word indicates a hazardous situation. If these warnings are ignored, this can lead to severe injuries or even death.

This combination of symbol and signal word indicates a hazardous situation. If these warnings are ignored, this can lead to severe injuries or even death.

This combination of symbol and signal word indicates a hazardous situation. If these warnings are ignored, this can lead to minor injuries or adverse effects.

This signal word marks a passage with information that is important but is not connected to a hazardous situation.

SAFETY PRECAUTIONS IN INSTRUCTIONS

Safety precautions can refer to specific, individual instructions. They are integrated into the instruction for the sake of readability while taking action. The aforementioned signal words are used. Example:

➲ 1. Loosen screw.

➲ 2. CAUTION! Danger of getting fingers caught under the lid!
Close lid carefully.

➲ 3. Tighten screw.

TIPS AND RECOMMENDATIONS

ⓘ This symbol highlights useful tips and recommendations as well as information for an efficient and smooth running operation.

ADDITIONAL IDENTIFIERS

The following identifiers are used to highlight instructions, results, lists, references and other elements in this instruction manual:

IDENTIFIER	EXPLANATION
➲	Step-by-step instructions
➔	Results of steps
	References to sections of this instruction manual and further applicable documents
●	Lists without a determined order
[Keys]	Control elements (e. g. keys, switches), display elements (e. g. signal lights)
„Display“	Screen elements (e.g. buttons, assignment of function keys)

2.2. Purpose

The operating table solely serves conducting procedures, surgeries, treatments and examinations on people. The operating table can only be used in the rooms intended for that purpose.

The operating table can only be used for patients with a maximum weight of 250 kg (551 lbs.). Only BRUMABA accessories are permitted to be used with the operating table.

Please observe that the operating table can only be used within professional healthcare facilities.

Observing all information in this instruction manual is also an integral part of the purpose. Any use beyond the purpose or any other type of use is deemed misuse.

Danger due to misuse!

- **Never use the operating table for any purposes other than those described above.**
- **Never use the operating table for heavier patients.**
- **Only use BRUMABA accessories with the operating table.**

A misuse of the operating table can lead to dangerous situations.

2.3. Staffing requirements

Risk of injury if staff is not sufficiently qualified!

- **Only allow qualified staff members to carry out all tasks.**
- **Keep unqualified staff away from the operating table.**

If unqualified staff members work on the operating table or remain in the danger zone of the operating table, risks, which can lead to severe injuries and significant material damage, can arise.

The following staff qualifications are listed in this instruction manual for the different areas of operation:

Instructed medical professionals

Medical professionals are trained in the specific area of operation in which they work. Medical professionals are familiar with the content of all regulations, guidelines and standards, which apply for a safe use of the device, and can implement the requirements stated therein.

Furthermore, medical professionals can safely carry out tasks they are assigned based on an instruction in connection with this instruction manual as well as their medical training and experience and can independently recognize, assess and prevent possible dangers to themselves or the patient.

Additionally, medical professionals were also trained by BRUMABA or by a retailer authorized by BRUMABA in handling the operating table. The content of this training program also includes the functions of the operating table and the accessories.

Medical professionals have the expertise required for the respective area of application of the device and in particular, diligently adhere to all hygiene regulations for medically used rooms and the use of medical devices.

Manufacturer or authorized service technician

Certain tasks can only be carried out by qualified BRUMABA staff members or by service technicians authorized by BRUMABA. Other staff is not authorized to carry out these tasks. Please contact our customer service, to have the necessary work taken care of.

Only individuals from whom can be expected that they will carry out their tasks in a reliable manner can be permitted as staff. Individuals whose responsiveness is compromised, e.g. due to drugs, alcohol or medication, are not authorized.

Please observe the specific applicable regulations regarding age and occupation at the place of use when selecting staff.

UNAUTHORIZED PERSONS

Mortal danger for patients and unauthorized persons due to risks in the danger and work zone!

- **Only allow the tasks to be carried out by individuals qualified to do so.**
- **Keep unqualified individuals out of the work area.**

Unqualified individuals cannot assess the risks in handling the device and expose themselves and others to the risk of severe or fatal injuries.

2.4. Danger zones

AREAS WITH THE RISK OF CRUSHING OR JAMMING BODY PARTS

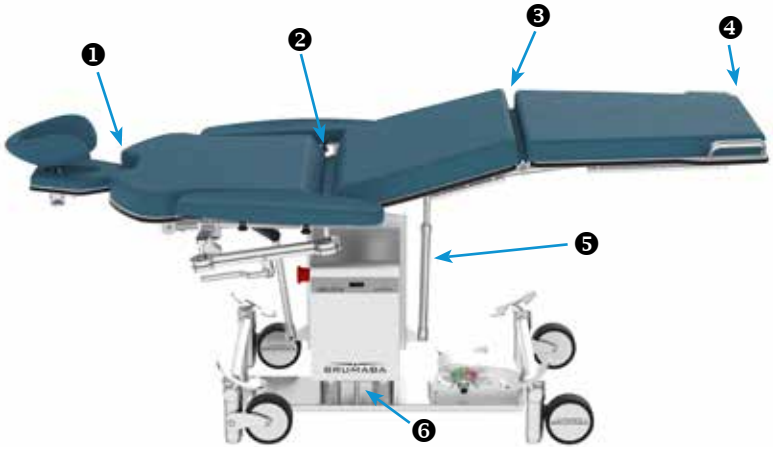

Fig. 2.4.A: Overview danger zones GENIUS EYE

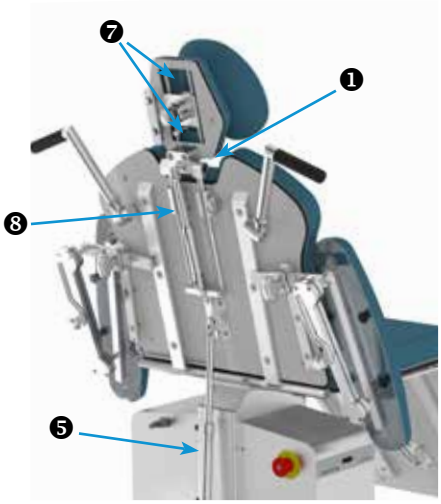

Fig. 2.4.B: Overview danger zones GENIUS EYE

Fig. 2.4.C: Overview danger zones GENIUS EYE PRO

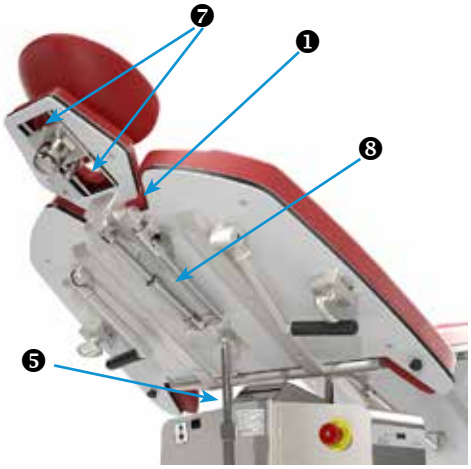

Fig. 2.4.D: Overview danger zones GENIUS EYE PRO

1 Between head and back section
2 Between back and seat section
3 Between seat and foot section
4 Between foot section and floor
5 Between cylinder and telescopic column
6 Between base plate and telescopic column
7 Between bracket for horseshoe-shaped headrest and head section
8 Between cylinder and back section greater risk of crushing or jamming body parts

WARNING!

There is a risk of injuring body parts such as skin, fingers or feet, when adjusting the operating table. At the same time, particularly dangerous areas are the cylinders (Fig. 2.4.ABCD/5), where the distance to other components becomes smaller depending on the direction of movement. Additional dangerous areas are the head section and the horseshoe-shaped headrest (Fig. 2.4.ABCD/1 und Fig. 2.4.ABCD/7). If screws are not tightened, these can fall into the guide rail and in doing so, injure fingers.
There is also the risk of body parts being crushed between the padding; particularly on the edges (Fig. 2.4.ABCD/1, /2 und/3).
Attached accessories can also create additional crushing and jamming points.

2.5. Safety devices
2.5.1. Position of the safety devices

Fig. 2.5.1.A: Position of safety devices

1 Emergency off switch “Emergency off switch!” see below
2 Error code display for error monitoring “Error monitoring” on page 9
3 Pressure sensitive safety edge “Pressure sensitive safety edge" see below
4 Potential equalization “Potential equalization connector and conductive castors or stands” on page 9
5 (not shown) Position monitoring “Position monitoring” on page 9
6 (not shown) Error monitoring “Error monitoring” on page 9
7 (not shown) Temperature monitoring “Temperature monitoring” on page 9
8 (not shown) Single-acting cylinder “Single-acting cylinder“ on page 9

2.5.2. Description of safety devices

EMERGENCY OFF SWITCH

Fig. 2.5.2.A: Emergency off switch

The operating table is immediately disconnected from the power supply (battery or power supply unit), when the emergency off switch is pressed.

PRESSURE SENSITIVE SAFETY EDGE

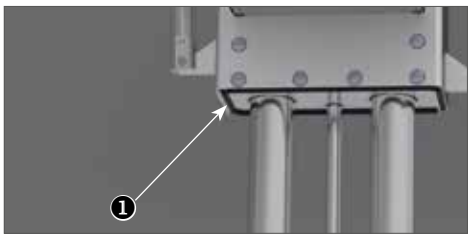

Fig. 2.5.2.B: Pressure sensitive safety edge

GENIUS EYE-DTA and EYE PRO-DTA | GENIUS EYE-DTN and EYE PRO-DTN

The model with the dual telescopic column has a pressure sensitive safety edge (Fig. 2.5.2.B/1) on the bottom of the control casing and battery case or power supply housing. As soon as the pressure sensitive safety edge encounters an obstacle, the movement of the operating table stops. If the pressure sensitive safety edge is defective, the table stops at a position 4.72 in (12 cm) above the floor. In addition, an error code is displayed. The model with the standard telescopic column stops the table at a position 4.72 in (12 cm) above the floor. This prevents the physician’s foot from getting crushed between the operating table and the floor.

POSITION MONITORING

The position monitoring feature also recognizes how far the bottom of the foot section is away from the floor. As soon as the foot section is less than 12 cm above the floor, the foot section swerves upwards.

TEMPERATURE MONITORING

The temperature monitoring feature automatically switches off the rechargeable battery in case of overheating.

ERROR MONITORING

Certain functions are shut down when errors occur and an error code is shown in the error display.

SINGLE-ACTING CYLINDER

The cylinders installed in the operating table are open on the top. This enables lifting the foot section up manually e.g. without having to use the control system. This serves minimizing the crushing hazard.

POTENTIAL EQUALIZATION CONNECTOR AND CONDUCTIVE CASTORS OR STANDS

The operating table consists of conductive materials, so that electrostatic charges caused by padding, the stainless steel hinges, the column and the conductive castors or stands are discharged into the floor. If the floor is not conductive, the table must be grounded via the potential equalization connector (Fig. 2.5.2.C/1). he frame and all conductive housing parts are coupled and connected to the local potential equalization panel after installation, to prevent sparks and touch voltages in the event of an error in connection with the ground fault circuit interrupter.

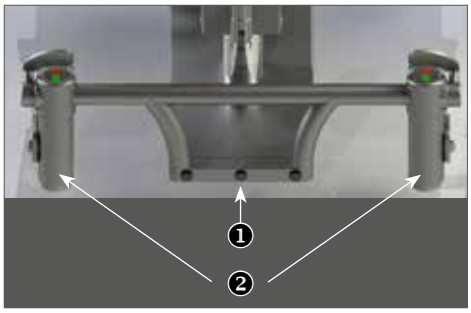

Fig. 2.5.2.C: Potential equalization connector (1)and conductive castors or stands (2)

Fig. 2.5.2.D: Conductive parts of the system

Conductive parts of the system are highlighted in red in the diagram (Fig. 2.5.2.D) on the left.

WARNING!

Mortal danger due to touch voltages and sparks!

- **Before initial operation, connect the device to the local potential equalization panel and check the functioning of potential equalization.**

Touch voltages and sparks can arise if potential equalization is missing or defective. Those in turn pose the risk of injury and even death.

2.6. Residual risks
2.6.1. Electrical hazard

The operating table is designed in accordance with the best available technology and the current safety requirements. Nevertheless, there are residual risks that require prudent practices. The residual risks and appropriate behavior and measures resulting from them are listed in the following.

ELECTRIC CURRENT

DANGER!

Danger of life-threatening injuries due to electric current!

- Do not touch the plug with wet hands.
- When unplugging, never pull on the cord but only on the plug.
- Lay the cord in a manner that does not allow it to be kinked, pinched or rolled over.
- Cords and electronic parts cannot come in contact with cleaning agents, disinfectants, oils, greases or other media containing moisture as well as heat sources.
- Do not connect to extension cords or power strips.
- Careful when moving the table: Unplug the cord first!
- The power outlet must be easily accessible at all times.
- Cord version: Switch off the operating table and remove the cord from the outlet before conducting any cleaning or service work.
- Battery version: Switch off the operating table before conducting any cleaning or service work.
- Before undoing screws or detaching parts from the operating table, switch it off and unplug the power cord.
- The device can only be connected to a grid suitable for this purpose.

Immediate danger of electrocution if live parts are touched. Damage to the insulation or individual components can be deadly.

LEAD-ACID BATTERIES

WARNING!

Risk of injury if lead batteries are handled incorrectly!

- Only use the provided power cord and charger to charge the battery.
- Only use this battery for this operating table.
- Never short-circuit the contacts (positive and negative pole) of the battery.
- Never expose the battery to wetness or moisture. Never use or charge a moist or wet battery.
- Any contact with liquid leaking from the battery must be avoided; if you come in contact with it, consult a physician immediately.

If the battery used is not handled properly, there is a risk of the lead battery exploding or harmful liquid leaking from the battery. If it comes in contact with skin, this liquid can cause chemical burns, if swallowed, severe poisoning and if it comes in contact with your eyes, to blindness.

NOTICE!

The service life of the battery decreases due to an incorrect ambient temperature and when the power supply is disconnected while charging!

- Do not connect the battery to a power outlet that is turned off at night for example.
- Do not unplug the battery until it is fully charged.
- Observe the ambient conditions of the operating table when storing the battery and using the operating table.

The service life of the battery also depends on the ambient temperature and the number of charge cycles. The warmer the room is, in which the battery is stored or the operating table is used, the shorter the service life of the battery. A new charge cycle begins every time a connection is made to the power supply; it does not matter whether the battery was fully charged during the last charge cycle or not. However: It is better to charge the battery too soon rather than too late!

NOTICE!

Reduction of the service life of the battery due to exhaustive discharge of the battery!

- Check the charge level every time it is switched on.
- Charge the battery as soon as the yellow LED on the battery indicator is on.

A full discharge of the battery reduces the service life or the battery ends up completely defective.

ELECTROSTATIC RESIDUAL POTENTIAL

Danger of life-threatening injuries and fire hazard due to electrostatic residual potential!

- Only use the operating table on conductive floors or with connected potential equalization.
- Do not operate the operating table in rooms in which flammable substances such as disinfectants are stored.

Electrostatic charges can build up due to friction of the patient on the operating table, which can cause flammable substances to ignite.

INTERACTION WITH OTHER EQUIPMENT

Danger if an MRI is used at the same time!

- Do not use the operating table on an MRI.

Interaction can take place if an MRI is used simultaneously.

Danger due to high frequency surgical equipment, defibrillators and defibrillator monitors!

- Observe the manufacturer's instructions of the respective device.
- In the event of a malfunction, immediately press the emergency off switch.
- Disconnect the operating table from the grid.

When using high frequency surgical equipment, defibrillators and defibrillator monitors, unexpected changes in position, burns and danger due to electric current can result.

2.6.2. Risks due to poor hygiene

Danger of infection due to insufficient hygiene, cleaning and disinfection!

RISK OF INFECTION

- Clean and disinfect the operating table every time before it is used.
- Replace damaged padding immediately.
- If sterile drapes are used, still clean and disinfect the operating table at least once daily.
- Only use sterile drapes once.
- Put down new sterile drapes before each treatment, surgery and procedure.
- Please observe all locally applicable requirements pertaining to hygiene, cleaning and disinfection.

There is a higher risk of infection if you come in contact with components that were not cleaned or disinfected

BURNS

Danger due to excessive use of disinfectants, cleaning agents and care products!

- Routinely wash off residue from disinfectants, cleaning agents and care products using clear water.

Patients can get burned due to excessive residue from disinfectants, cleaning agents and care products on the padding.

DANGER OF MATERIAL DAMAGE TO THE OPERATING TABLES

Danger of material damages to the operating table due to poor hygiene!

- Clean the operating table immediately after use.

An insufficient cleaning and disinfection of the operating table can lead to corrosion and damages of/to plastic parts and padding.

2.6.3. Risks caused by the operating table moving

Danger of the patient falling down!

FALLING DOWN OF THE PATIENT

- The patient should be positioned in a manner that enables his/her lying safely on the OR table. If the patient moves on the OR table or the operating table is moved, the medical staff must provide safe assistance, so that the patient cannot fall off the OR table. Move the operating table carefully.

The patient can fall off the operating table when it is being moved.

ROLLING AWAY OF THE OPERATING TABLE

WARNING!

Risk of the operating table rolling away if the brake is not applied!

- Before beginning the treatment, surgery, procedure or examination, please ensure that the brake is on and the operating table is no longer moving.

If the brake is not applied, the operating table can roll away unintentionally. This can result in the patient being injured.

NARROWING SPACES

WARNING!

Risk of crushing and jamming injuries in narrowing spaces!

- When in use, do not touch moving components or tamper with moving parts.
- Make sure that there are no body parts of individuals or individuals themselves underneath the operating table during its use.
- When changing positions, please make sure that there is no crushing hazard for the patient, the user or third parties.
- Observe the overview of the danger zones “Areas with the risk of crushing or jamming body parts” on page 7.

When moving the operating table, the user or the patient can crush or jam body parts in narrowing spaces; this can cause severe injuries.

NOTICE!

Material damage due to rolling over, crushing or tearing off hydraulic lines and cords!

- Please do not place the stands of the operating table on top of electrical wires or other cords.
- Pay attention to hydraulic lines and cords when moving the operating table.
- Move the operating table carefully.
- Before moving it, unplug the foot control and transfer it separately.
- Attach the manual control unit to the magnetic plate and make sure that the cord is not hanging down or unplug it and transfer it separately as well.

When moving the operating table, hydraulic lines, the manual control unit cords, the foot control or the ground wire can be rolled over, torn off or crushed. That will result in material damage.

COLLISION

WARNING!

Risk of injury due to collision!

- Make sure that the patient surfaces on the operating table can move freely and that there is no danger of colliding with accessories, additional devices, chairs or other objects if movement takes place.
- Install accessories so that the maneuverability of the operating table is not restricted.
- Position additional devices, chairs, etc. in a manner that does not restrict the maneuverability of the operating table.

Injuries can result if the table top or the patient collides with accessories, additional devices, chairs or other objects.

CAUTION!

Risk of injury and material damage caused by collision!

- Move the operating table slowly and with caution.
- Do not roll the operating table over any objects.
- Do not roll the operating table into any persons.
- Do not roll the operating table into any obstacles; e.g. door frames or walls.

Injuries and material damage can result if the operating table collides with people, objects or obstacles.

ACCESSORIES

WARNING!

Risk of injury if attached accessories are leaned on for support!

- Never lean on accessory parts.
- Observe the instruction manuals for the accessories.

Accessories are not designed for heavy loads. Therefore, there is a risk of injury when leaning on attached accessories.

ACCESSORIES FROM OTHER MANUFACTURERS

WARNING!

Risk of injury caused by accessories from other manufacturers!

- **Only use BRUMABA accessories with the operating table.**
- **Only use BRUMABA manual controls and foot controls with BRUMABA tables.**

Do not connect other devices to the electronic interface.

Using accessories from other manufacturers can lead to injuries.

In the event of incidents involving accessories from other manufacturers, there is no liability claim and no guarantee.

2.6.4. Basic risks at the place of use

ACCUMULATION OF LIQUIDS

CAUTION!

Risk of slipping if liquids have leaked!

- **Use appropriate means to immediately remove spilled or leaked liquids.**
- **Wear slip resistant shoes.**

Slipping on liquids in the area of the operating table can lead to severe injuries.

ADHESIVE STRIPS, ADHESIVE TAPE, ADHESIVE BANDAGES

WARNING!

Material damage to the padding by applying adhesive strips or bandages, etc.!

- **Do not attach any adhesive tape, adhesive bandages or the like to the padding.**

The adhesive in the adhesive strip, adhesive tape, adhesive bandages, etc. reacts to the faux leather and in doing so, damages the faux leather padding.

2.7. Operator's responsibilities

OPERATOR

The operator is the person who operates the operating table him- or herself for commercial or economic purposes or gives it to a third party for use / application and who bears the legal responsibility for the product regarding the protection of the user, the staff or a third party during its use.

OPERATOR'S DUTIES

This device is used in the medical field. Therefore, the operator of the device is subject to the legal obligations; amongst others, occupational safety and patient safety.

In addition to the safety precautions in this instruction manual, the applicable safety regulations, occupational health and safety measures and environmental protection regulations must be observed.

Furthermore, the operator must also ensure that the operating table is always in a technically flawless condition. Therefore, the following applies:

The operator must make sure that the service intervals defined in this instruction manual are adhered to. ↳ Kapitel 8.2 auf Seite 37. The operator must have all safety devices checked for proper functioning and completeness on a regular basis.

2.8. Personal protective equipment

DESCRIPTION OF THE PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment serves protecting individuals against health and safety being compromised while working with this device.

The staff must wear personal protective equipment while conducting different tasks on and with the operating table, which are indicated separately in the individual sections of this instruction manual.

The personal protective equipment is defined in the following:
Chemical resistant gloves
Chemical resistant gloves protect hands against aggressive chemicals such as disinfectants for instance.

Safety gloves
Safety gloves protect hands against friction, abrasions, punctures or deeper wounds well as against coming in contact with hot surfaces.

2.9. Spare parts

INCORRECT SPARE PARTS

WARNING!

Risk of injury due to the use of incorrect spare parts!

- **Only BRUMABA original spare parts or spare parts approved by BRUMABA can be used.**
- **If you are uncertain, always contact BRUMABA customer service.**

If incorrect or defective spare parts are used, danger to the staff can arise and damages, malfunctions or a complete breakdown can result.

ORDERING SPARE PARTS

Spare parts can be ordered from BRUMABA customer service.

↳„Customer service“ on page 2

2.10. Environmental protection

NOTICE!

Danger to the environment caused by incorrect handling of environmentally hazardous substances!

- **Always observe the information provided below in regard to handling environmentally hazardous substances and their disposal.**
- **Immediately take appropriate measures if environmentally hazardous substances are accidentally released into the environment. In cases of doubt, inform the responsible local authority of the damage and ask about and take appropriate measures.**

Significant damage to the environment can result if environmentally hazardous substances are handled incorrectly, particularly if they are disposed of incorrectly.

The following environmentally hazardous substances are used:

RECHARGEABLE BATTERIES OR BATTERIES

Rechargeable batteries and batteries contain toxic heavy metals. They are subject to special waste treatment and must be brought to municipal collection points or be disposed of by a specialized company.

Alternatively, the rechargeable battery can be returned to BRUMABA for disposal.

HYDRAULIC OIL

Hydraulic oil cannot be released into the environment. Hydraulic oil can lead to a long-term harmful impact on water bodies. Disposal must be carried out by a waste management company.

LUBRICANTS

Lubricants, such as greases and oils contain toxic substances. They cannot be released into the environment. Disposal must be carried out by a waste management company.

ELECTRICAL COMPONENTS

Electrical components can contain toxic substances. They cannot be released into the environment. Disposal must be carried out by a waste management company.

2.11. Service life

If the instruction manual is observed, the device is used properly, the service intervals are adhered to and maintenance is conducted on a regular basis, each BRUMABA OR table has a service life of 10 years.

During this period, BRUMABA recommends routine servicing (1x yearly) by a BRUMABA service technician. Particularly high demands on the product, depending on the operator's use of it, can, under certain circumstances, call for shorter service intervals.

Additionally, please observe the legal provisions of your country regarding safety inspections.

2.12. Warranty

There is a 2-year warranty from the date of delivery. The rechargeable battery, damages caused by improper use or load capacities as well as damage to the padding are excluded from the warranty. To benefit from the applicable warranty, the service schedule must be adhered to.

Original BRUMABA spare parts must be used when repairing BRUMABA products. As soon as spare parts are used that were not verifiably supplied by BRUMABA, the guarantee and any kind of warranty for BRUMABA products expire.

3. Functional desription
3.1. Overview of the operating table

Fig. 3.1.A: GENIUS EYE PRO

Fig. 3.1.B: Transport handles

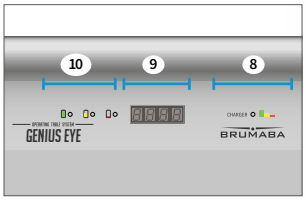

Fig. 3.1.C: Display elements

Fig. 3.1.D: Dual telescopic column

Fig. 3.1.E: Adjustable arm rests
GENIUS EYE PRO

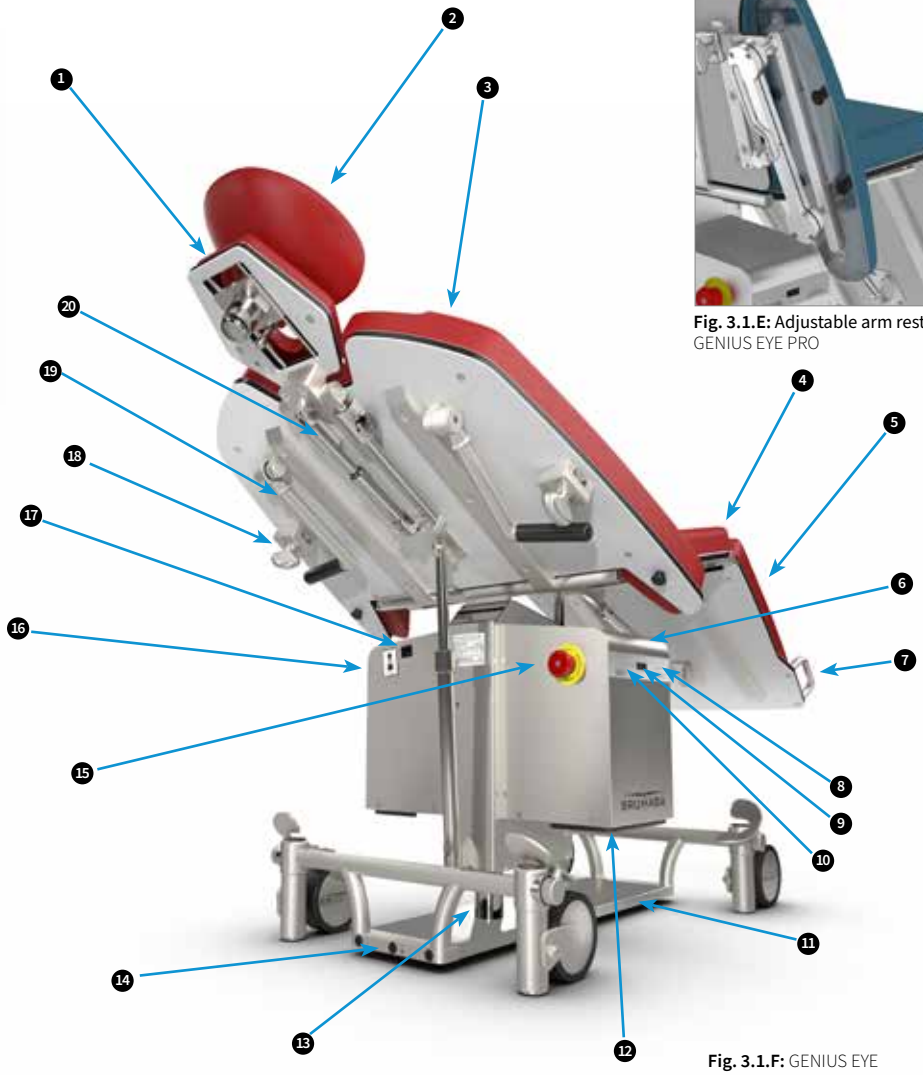

Fig. 3.1.F: GENIUS EYE

1 Head section
2 Horseshoe-shaped headrest
3 Back section
4 Seat section
5 Foot section
6 Battery case/Power supply housing
7 Transport handles
8 Charge state indicator
9 Error code display (battery version)
10 Battery charge level indicator (battery version)
11 Base plate with undercarriage 4-Easy-Drive
12 Pressure sensitive safety edge (only for dual telescopic column)
13 Precision column guide (here: optional dual telescopic column)
14 Potential equalization connector
15 Emergency off switch
16 Hydraulic housing
17 Charging cable connection (battery version)
18 Fixed mounting bracket
19 Fold out handles
20 Hydraulic cyclinder

3.2. Operating table functions

The operating table serves accommodating patients during procedures, surgeries, treatments and examinations.

The head, back, seat and foot section of the table can each be moved up or down with the help of the control elements (manual control and foot control). The cylinders for this purpose are controlled hydraulically. The adjustment of the distance between the head section and the back section and the adjustment of the horseshoe-shaped headrest are conducted manually using the adjustment device intended for this purpose.

3.3. Component functions

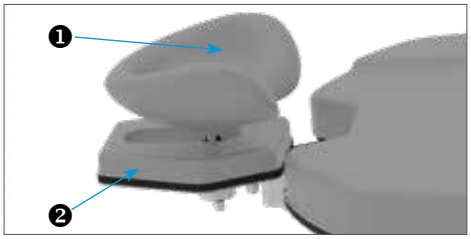

Fig. 3.3.1.A: Head section (2) with headrest (1)

3.3.1. Head section with horse-shoe shaped headrest

The head section (Fig. 3.3.1.A/2) with horse-shoe shaped headrest (Fig. 3.3.1.A/1) serves keeping the head in the required position during surgery. The angle between the back section and the head section can be adjusted with the help of the manual control or the foot control. The distance between the back section and the head section and horseshoe-shaped headrest can be manually adjusted to the patient's height.

3.3.2. Foot section

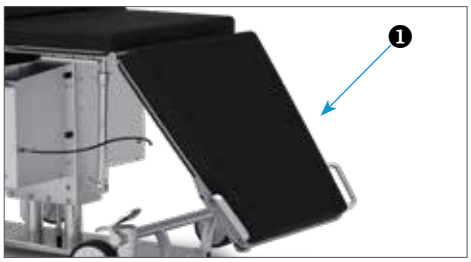

Fig. 3.3.2.B: Foot section (1)

The patient's feet are positioned on the foot section (Fig. 3.3.3./1).

3.3.3. Seat section

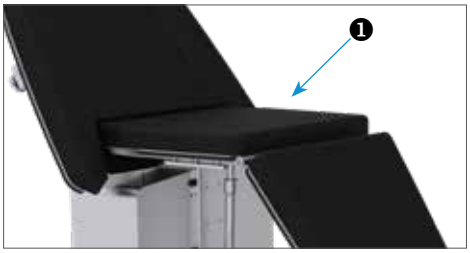

Fig. 3.3.3.A: Seat section (1)

The patient's thighs are positioned on the seat section (Fig. 3.3.2.A/1). The seat section serves as a seat when the operating table is in an upright position.

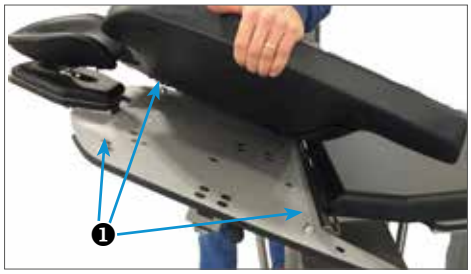

Fig. 3.3.4.A: Padding

3.3.4. Padding

The surface of the padding consists of high frequency heat-sealed faux leather. The individual padding is attached to pins installed on the operating table (Fig. 3.3.4.A/1) and can be completely removed. The padding is slightly smaller than the corresponding section of the operating table, to prevent damage to the padding when the operating table is accidentally pushed too closely to a wall, door frame, or the like.

Fig. 3.3.5.A: Hydraulic housing

3.3.5. Hydraulic housing

The electronic system (Fig. 3.3.5.A/2) to control the operating table is located in the hydraulic housing. The connections for the control elements (Fig. 3.3.5.A/1) of the operating table are also located here. The charger and the charging cable connection are also located on the hydraulic housing in the case of the battery versions (STA and DTA). As soon as the charge **cable is connected, the rechargeable battery is being charged. The operating table must not be** used while it is charging.

↳Chapter 6.10 "Charging the battery" (battery versions)

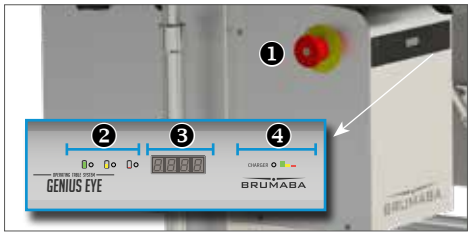

Fig. 3.3.6.A: Battery case|Power supply housing (2-4)

3.3.6. Battery case (battery version STA und DTA)

1. Emergency off switch ↳„Emergency off switch" on page 8
2. Battery indicator ↳ Chapter 3.5.2. „Battery indicator on page 18
3. Error code display ↳Chapter 3.5.1 „Error code display" on page 18
4. Charge state indicator ↳Chapter 3.5.3 „Charge state indicator" on page 18

The battery case contains the battery of the operating table. On the front you can find the battery indicator, the error code and charge state indicator.

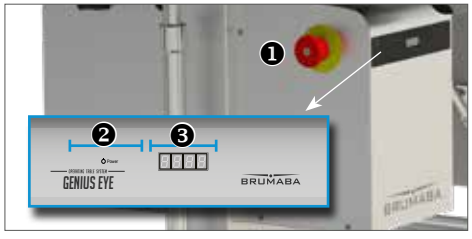

Fig. 3.3.7.A: Power supply housing

3.3.7. Power supply housing (plug-in version STN und DTN)

1. Emergency off switch
2. Operating mode diplay (LED)
3. Error code display
4. Power cord (not shown)

The power supply unit can be found in the power supply housing. On the front you can find the error code and operating mode display.

Fig. 3.3.8.A: Telescopic column (1)

3.3.8. Teleskopsäule

The operating table can be moved up and down using the telescopic column.

The s**tandard telescopic column** consists of a single-stage lifting column. It enables adjusting the height of the operating table between 20.67 in (525 mm) and 32.09 in (815 mm) (+55 mm Polster) +/- 0.39 in (+/-10 mm).

BASE PLATE WITH STAND

Fig. 3.3.9.A: Operating table with stand

3.3.9. Base plate with stand or undercarriage

Base plate with stand

As a standard feature, the base plate of the operating table is equipped with a stand.

4 EASY-DRIVE

Fig. 3.3.9.B: Two swivel castor undercarriages with directional lock (optional)

4-EASY-DRIVE (optional)

With this swivel castor undercarriage, the castors lock into place when moving straight ahead, so that there is no problem staying on track. As soon as the table is turned and the castors are needed, they are released. This undercarriage version has extremely smooth-running rollers. This makes pushing the operating table in any direction extremely easy.

When the brake for this undercarriage version is applied, stands are extended in addition to the rollers, so that the rollers can be lifted and the operating table is securely on the floor on the stands.

Chapter "“Operating the brake on the swivel castor undercarriage with directional lock” on page 29.

5 WHEEL-DRIVE

Fig. 3.3.9.C: Operationstisch mit 5 Wheel-Drive

5 WHEEL-DRIVE (optional)

The 5th wheel is on the base side on the base plate. It is operated by pressing one of the two pedals with your foot, which can be operated either from the left or from the right.
Bring the pedal shaft (Fig. 3.3.10.C) into the „ON“ position.
Now the table can be driven straight ahead or around bends with a stable track.
Move the pedal shaft (Fig. 3.3.10.C) to the „OFF“ position.

Now the table can be pushed sideways.

2-GUIDE-DRIVE

Fig. 3.3.9.D: Operating table with fixed wheel axle (1) and swivel caster undercarriage (2

2-GUIDE-DRIVE base plate with a lever and swivel castor undercarriage (optional)

The base plate is optionally available with the swivel caster undercarriage 2-GUIDE-DRIVE and a fixed wheel axle.

This enables pushing the operating table around corners.

The locking brake on the swivel castor undercarriage prevents the operating table from being able to make any unintentional movements.

Chapter „Operating the swivel castor undercarriage“ on page 29.

3.4. Control elements
3.4.1. Manual control

Fig. 3.4.1.A: Manual control

The manual control can be used to move the table to the required position. Furthermore, positions can be stored and called up again. The stored positions are recorded in the control system of the operating table and can therefore still be called up even after replacing the manual control. The manual control can be attached to the control housing of the operating table using the included self-adhesive magnetic plate.

"Key assignment manual control" on page 24
Chapter "Adjusting positions" on page 25
Chapter "Storing and calling up positions" on page 25
Chapter "Coupling control elements with the table" on page 21

3.4.2. Foot control (optional)

Fig. 3.4.2.A: Foot control

The foot control and the manual control have the same functions. The stored positions are recorded in the control system of the operating table and can therefore either be called up using the manual control or the foot control.

Chapter “Operating the foot control” on page 24
Key assignment foot control (optional)" on page 24
Chapter "Adjusting positions" on page 25
Chapter "Storing and calling up positions" on page 25
Chapter "Coupling control elements with the table" on page 21

The bottom of the foot control is slip resistant, so that it cannot slip away during use. With the help of the metal bracket (Fig. 3.4.2.A) , the foot control can be lifted to the required position with your foot.

Fig. 3.4.3.A: Locking brake on the swivel castor undercarriage (closed position)

3.4.3. Locking brake

The operating table can be secured against being unintentionally shifted or rolling away using the locking brake on the swivel castor undercarriage.

Chapter 6.9 "Operating the swivel castor undercarriage" on page 28

3.5. Display elements

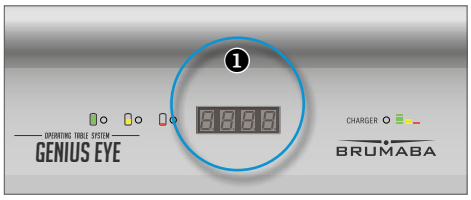

Fig. 3.5.1.A: Error code display (1)

3.5.1. Error code display

In the event of an error, the display on the power supply unit or battery case shows an error code.

Chapter 9.4 “Error code table” on page 39
Chapter 9.3 “Reading out error codes” on page 40

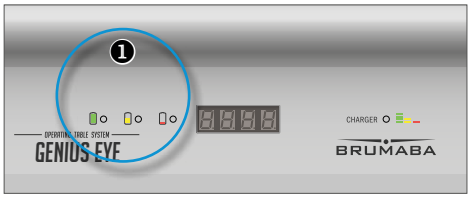

Fig. 3.5.2.A: Battery indicator (1)

3.5.2. Battery indicator (battery version STA and DTA)

The battery indicator (Fig. 3.5.2.A) on the left of the display shows the charge status of the battery.

	battery full	The battery still has sufficient capacity to operate the operating table. The full extent of the functions is available.
	Charge battery	The battery still has approx. 20% of its capacity. The battery should be charged, to prevent any malfunctions. When this battery charge status is reached, the table peeps three times every 60 seconds.
	Battery empty	The battery no longer has sufficient capacity to operate the operating table. It must be charged immediately. When this battery status is achieved, the table will peep six times every 30 seconds.

Reduction of the service life of the battery due to exhaustive discharge of the battery!

- **Check the charge level every time it is switched on.**
- **Charge the battery as soon as the yellow LED on the battery indicator is on.**

A full discharge of the battery reduces the service life or the battery ends up completely defective.

NOTICE!

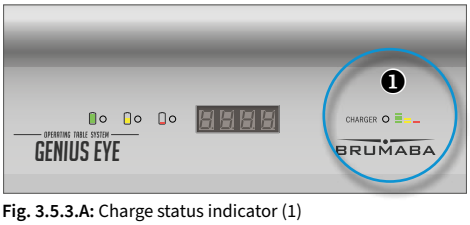

Fig. 3.5.3.A: Charge status indicator (1)

3.5.3. Charge status indicator (battery version STA and DTA)

The charge status indicator goes on as soon as the operating table is connected to the power supply and the battery is charging. First is indicates a red light, then a yellow one. When the battery is fully charged, the LED turns green.

If the LED is flashing red, an error has occurred.

„Battery or charger malfunctions” on page 41

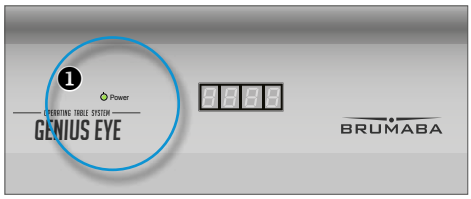

Fig. 3.5.4.A: Operating mode display (1)

3.5.4. Operating mode display (plug-in version STN und DTN)

The LED goes on as soon as the operating table is connected to the power supply and is therefore ready for operation.

After the emergency off switch has been e nabled and the operating table has been switched off, the LED for the operating mode display is still on for a brief moment.

3.6. Connections

3.6.1. Manual control and foot control

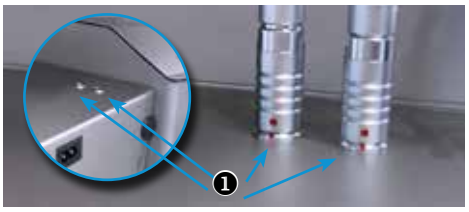

Fig. 3.6.1.A: Manual control and foot control connections (1)

The connections (Fig. 3.6.1.A/1) for the manual control and the foot control are located on the top of the hydraulic housing.

3.6.2. Connection for potential equalization

Fig. 3.6.2.A: Connection for potential equalization (1)

The potential equalization connector is attached to the base plate on the foot end of the operating table. If the floor is not conductive, the table must be connected to the potential equalization panel provided at the installation site via the potential equalization connector(Fig. 3.6.2.A./1).

„Potential equalization connector and conductive castors or stands” on page 8

3.6.3. Connection charging cable (STA andDTA)

Fig. 3.6.3.A: Connection charging cable (1)

The connection for the charging cable is located on the hydraulic housing (Fig. 3.6.3.A/1).

3.6.4. Power cord connection (plug-in version STN und DTN)

Fig. 3.6.4.A: Power cord connection (1)

The power cord is connected on the right side of the power supply housing (Fig. 3.6.4.A/1).

4. Transfer and Storage

4.1. Safety precautions

UNSACHGEMÄSSER TRANSFER

NOTICE!

Material damage due to improper transfer!

- **Proceed cautiously and observe the symbols and notes on the packaging when unloading the transfer parts upon delivery as well as during internal transfer.**
- **Only use the intended suspension points.**
- **Do not tilt the pallet.**
- **Do not remove packaging until right before assembly.**

If not transferred properly, transfer parts can fall down or tip over. This can result in a significant amount of material damage.

4.2. Symbols on the packaging

SYMBOL	MEANING
	**Attention fragile** Treat the packages with care.
	**Top** The arrowheads of the symbol mark the top of the package. They must always point upwards. Otherwise, the content can be damaged.
	**Keep dry** Keep packages dry.
	**Do not stack the packages** Do not place another package on top of this one.
	**Temperature** Do not store below -20°C or above +70°C.

4.3. Transferring the operating table

TRANSFERRING FROM PALLETS USING A FORKLIFT/LIFT TRUCK

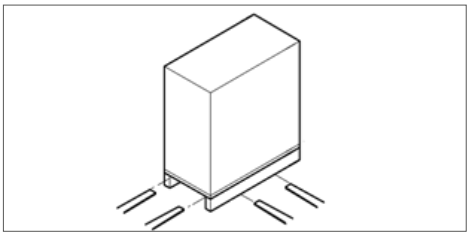

Fig. 4.3.A: Transport using a forklift/lift truck

TRANSFER

ⓘ **Delivery!**

The operating table is delivered screwed to a pallet and packed in a box.

- **Transfer parts attached to pallets can be transferred using a forklift under the following conditions:**
- **The forklift/lift truck must be designed for the weight of the transfer parts.**
- **The transfer part must be securely mounted on the pallet.**
- **The forklift driver must be authorized to drive industrial trucks with an operator's seat or driver's station according to the locally applicable regulations.**

➲ 1. Using the forklift/lifting truck, move the forks between or under the beams of the pallet.

➲ 2. Insert the forks so far that they stick out on the opposite side.

➲ 3. NOTE! Material damage caused by leaking hydraulic oil! Make sure that the pallet cannot tip over.

➲ 4. Lift the pallet and begin transferring.

➲ 5. Place the pallet down at the installation site.

4.4. Storing the packages

AMBIENT CONDITIONS FOR STORAGE AND TRANSFER

ⓘ **There may be information regarding storage on the packages, which exceed the requirements stated here. Observe this accordingly.**

Store the packages under the following conditions:

- Do not store outdoors.
- Store dry and dust-free.
- Do not subject to any aggressive media.
- Protect against direct sunlight.
- Avoid mechanical vibrations.
- Storage temperature: -20°C to +70°C (-4°F to +158°F)
- Relative humidity: 10% to 95%.
- Air pressure: 500 hPa to 1060 hPa (7.25 psi to 15.37 psi).
- If stored for longer than 1 month: Check the battery charge. If necessary, recharge or remove battery.

5. Assembly and installation

5.1. Prior to assembly

INSTALLATION SITE REQUIREMENTS

- The maximum load-bearing capacity of the floor must exceed 500 kg (1100 lbs.) (weight of the operating table plus maximum patient weight).
- The operating table must also be able to be moved under the maximum load capacity without damaging the floor.
- The floor must be firm and level.
- The room must comply with the legal provisions for the intended application (e.g. operating room, treatment room, examination room, procedure room).
- The floor must be conductive. Alternatively, there must be a potential equalization panel available.
- Do not position the operating table in the swivel range of doors and windows.
- Keep the operating table away from sources of heat and humidity.
- Ambient temperature during operation: +10°C to +40°C (50°F to 104°F).
- Relative humidity: 30% to 75%.
- Air pressure: 800 to 1060 hPa (11.6 to 15.37 psi).
- Observe guidelines on electromagnetic compatibility.

↳Appendix "Information on electromagnetic compatibility (EMC)"

5.2. Unpacking

5.2.1. Transfer inspection

Upon receiving delivery, please check for completeness and transfer damage.

- Proceed as follows if externally recognizable transfer damage is apparent:
- Do not accept or only accept delivery with reservations.
- Record the extent of damage on the transfer documents or on the delivery note of the forwarding agent.
- Initiate complaint.

ⓘ **Object to every defect as soon as it is determined. Claims for damages can only be asserted within the applicable complaint periods.**

5.2.2. Unpack the operating table

PROTECTIVE EQUIPMENT:
SAFETY GLOVES:

Fig. 5.2.2.A: Box with protective plastic wrap and plastic straps

Fig. 5.2.2.B: Box without lid

Fig. 5.2.2.C: Operating table sealed in plastic wrap

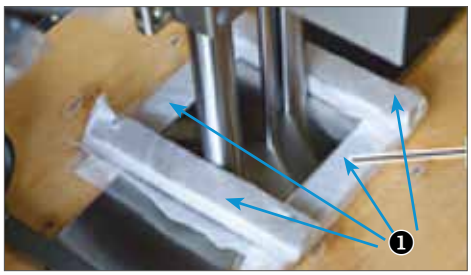

Fig. 5.2.2.D: Slats (attachment of the operating table to the pallet)

Fig. 5.2.2.E: Pallet with operating table

➲ **1.** Remove the plastic wrap.
➲ **2.** Remove plastic straps (Fig. 5.2.2.A).
➲ **3.** Remove the lid.
➲ **4.** Take out the padding and accessories.
➲ **5.** Remove the box.
➲ **6.** Unscrew the screws on the slats used to secure the operating table on the pallet.
➲ **7.** Remove the slats (Fig. 5.2.2.D/1).

WARNING!

➲ **8. Risk of injury due to the weight of the operating table!**

- **Have another person help you.**
- **Operating table without castors:**
  - Have a third person help if the operating table does not have castors.
  - Have a trolley available with sufficient load bearing capacity and in a sufficient size.
  - With the help of another person, slowly and carefully lift the operating table and with the help of the third person, push the trolley under the operating table.
- **Only remove the operating table from the pallet on an inclined plane.**
- **Make sure the inclined plane can bear the weight of the operating table.**
- **When selecting the angle of the inclined plane, bear in mind that the bottom of the operating table cannot touch the pallet.**
- **Slowly and carefully remove the operating table from the pallet.**
- **Make sure that the operating table does not fall on anyone's feet and in doing so, cause injuries.**
- **The operating table is heavy. This can lead to injuries and material damage in the event of it rolling off/slipping off the pallet uncontrollably.**

Remove the operating table from the pallet with the help of on an inclined plane.

NOTICE!

➲ **9.** Unpack padding.

WARNING!

Pointy objects can damage the padding!

- **Unpack the padding carefully.**
- **Do not use pointy objects such as scissors or knives directly on the padding.**

➲ **10.** Open the box.

➲ **11.** Remove the control elements and accessories.

5.3. Connection and initial operation

Fig. 5.3.A: Potential equalization (1)

➲ **1.** If the floor is not conductive, connect the potential equalization connector (Fig. 5.3.A) to the potential equalization panel provided at the installation site.

WARNING!

Mortal danger due to touch voltages and sparks!

- **Before initial operation, connect the device to the local potential equalization panel and check the functioning of potential equalization.**

Touch voltages and sparks can arise if potential equalization is missing or defective. Those in turn pose the risk of injury and even death.

➲ **2. Risk of injury due to poor hygiene and disinfection!**
- **Clean and disinfect the operating table every time before it is used.**

➲ **3.** Charging the operating table
Chapter “Charging the battery” on page 30
Mains operation: plug the power cord into a power outlet.

WARNING!

Risk of tripping! Lay cables in a manner that rules out the risk of tripping and ensures the cables cannot be kinked or crushed.

CAUTION!

➲ 4. Plug in manual control and if applicable foot control. When doing so, observe the red marking on the jack and on the plug (Fig. 5.3.B).
ⓘ The red dots must be precisely above one another.

Fig. 5.3.B: Connecting the control elements (1)

➲ 5. Switch on the operating table.
Chapter 6.3. “Switching the operating table on and off” on page 22

➲ 6. Store useful positions in the control system.
Chapter 6.5.4. "Storing and calling up positions" on page 25

➲ 7. Record the positions on the provided information sheet “Memory Functions” vermerken.

The operating table is ready for use.

6. Operation
6.1. Operational safety precautions

MOVEMENTS OF THE OPERATING TABLE

DANGER!

Danger of life-threatening injuries due to the patient falling down!

- **Protect patient against falling down.**

Risk of injury caused by the operating table moving!

- **Always apply the brake on the swivel castor undercarriage after moving the operating table.**
- **Before beginning the treatment, surgery, procedure or examination, please ensure that the brake is on and the operating table is no longer moving.**

If the brake is not applied, the operating table can move unintentionally. This can lead to the patient being injured.

WARNING!

Risk of crushing and jamming injuries in spaces which become tighter and tighter!

- **When in use, do not touch moving components or tamper with moving parts.**
- **Make sure that there are no body parts of individuals or individuals themselves underneath the operating table during its use.**
- **When changing positions, please make sure that there is no crushing hazard for the patient, the user or third parties.**
- **Observe the overview of the danger zones.**
“Areas with the risk of crushing or jamming body parts” on page 7

When moving the operating table, the user or the patient can crush or jam body parts in narrowing spaces; this can cause severe injuries.

Risk of injury caused by the operating table moving!

- **If the patient is awake, inform him or her of changes in position.**

Sudden movements can scare patients, who are awake during surgery.

WARNING!

Danger due to excessive use of disinfectants, cleaning agents and care products!

- **Routinely wash off residue from disinfectants, cleaning agents and care products using clear water.**

Patients can get burned due to excessive residue from disinfectants, cleaning agents and care products on the padding.

Danger due to insufficiently trained and instructed staff!

- **The operating table can only be used by medical professionals instructed by persons or organizations authorized by BRUMABA.**

A safe handling of the control elements requires skill and practice. Incorrect operation can lead to the patient being injured.

Risk of injury due to collision!

- **Make sure that the patient surfaces on the operating table can move freely and that there is no danger of colliding with accessories, additional devices, chairs or other objects if movement takes place.**
- **Install accessories so that the maneuverability of the operating table is not restricted.**
- **Position additional devices, chairs, etc. in a manner that does not restrict the maneuverability of the operating table.**

Injuries can result if the table top or the patient collides with accessories, additional devices, chairs or other objects.

Risk of injury and material damage caused by collision!

- **Move the operating table slowly and with caution.**
- **Do not roll the operating table over any objects.**
- **Do not roll the operating table into any persons.**
- **Do not roll the operating table into any obstacles; e.g. door frames or walls.**

CAUTION!

Injuries and material damage can result if the operating table collides with people, objects or obstacles.

6.2. Emergency shutdown

In the case of an emergency, proceed as follows:

➲ **1.** Immediately press the emergency off switch (refer to Fig. 6.3.A.).
➲ 2. For plug-in version: Also pull the power plug.
➲ **3.** Commission customer service with the repair

6.3. Switching on and off

Mortal danger due to electric current! Do not put the operating table into operation if the power cord is damaged.

DANGER!

SWITCHING ON THE OPERATING TABLE

STAFF:
INSTRUCTED MEDICAL PROFESSIONALS

Fig. 6.3.A: Emergency off switch

➲ 1. Mains operation: Check the power cord for any damages.
➲ 2. Check the position of the emergency off switch. Table can only be operated if the emergency off switch is pulled out. The display is on and shows (in battery mode) the charge status of the battery. The LED [active] on the manual control and/or the foot control is/are green. The operating table is ready for use.
➲ 3. Place a load on the operating table.
➲ 4. Move the operating table into a different position. If the battery indicator (Chapter 3.5.2 “Battery indicator” on page 17) moves to 🟡, the battery's state of charge is low and it would be best to charge the battery immediately. If the battery charge indicator moves to 🔴, immediately charge the battery. ↳Chapter 6.9 "Charging the battery" on page 30
➲ 5. Move the operating table in all directions.

CHECK THE BATTERY LEVEL

FUNCTION TESTING

➲ 1. The table is automatically deactivated after a preset time.

SWITCH OFF THE OPERATING TABLE.

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The table is put back into operation by pressing the [active] key on the manual control. In case of an emergency or a longer period of not being used, the emergency off switch must be pressed (refer to Fig. 6.3.A.).

ⓘ **Voltage is still applied due to the connected power cord or the installed battery.**

6.4. General procedures

WARNING!

➲ **1. Risk of the operating table rolling away if the brake is not applied!**
- **Before beginning the treatment, surgery, procedure or examination, please ensure that the brake is on and the operating table is no longer moving.**

If the brake is not applied, the operating table can roll away unintentionally. This can result in the patient being injured.

Apply the brake on the operating table.↳"Applying the brake" on page 29

➲ **2. Danger of life-threatening injuries and fire hazard due to electrostatic residual potential!**
- **Only use the operating table on conductive floors or with connected potential equalization.**
- **Do not operate the operating table in rooms in which flammable substances such as disinfectants are stored.**

Electrostatic charges can build up due to friction of the patient on the operating table, which can cause flammable substances to ignite.

Insert the potential equalization connector if the floor is not conductive.
↳Chapter "Connection and initial operation" on page 21

➲ **3. Risk of injury due to incorrect positioning!**
- **Use the narrow back section extension for patients who are approx. 185 cm (6 ft.) to approx. 200 cm (6.56 ft.) tall.**
- **Use the optionally available wide back section extension for patients who are approx. 200 cm (6.56 ft.) tall or taller.**

Patients taller than approx. 185 cm (6 ft.) cannot be positioned ergonomically without the back section extension because the distance between the back section padding and the padding of the head section becomes too great. This can lead to injuries and pressure points caused by incorrect positioning.

➲ **4.** Move the operating table to an accessible position (e.g. flat or sitting position).
↳Chapter "Operating the foot control and manual control" on page 24

DANGER!

➲ **5.** Position the patient on the operating table.

➲ **6. Danger of life-threatening injuries due to the patient falling down!**
The patient should be positioned in a manner that enables his/her lying safely on the operating table. If the patient moves on the OR table or the operating table is moved, the medical staff must provide safe assistance, so that the patient cannot fall off the OR table.

WARNING!

➲ **7. Risk of injury due to loose head section or loose horseshoe-shaped headrest!**
- **Make sure all adjusting screws are tightened, before beginning the surgery, treatment or procedure.**

If the manual adjusting screws of the head section or horseshoe-shaped headrest are not tightened, the head section or the horseshoe-shaped headrest can unintentionally move during the surgery, treatment or procedure. This can lead to severe injuries to the patient.

Make sure all adjusting screws on the head section and horseshoe-shaped headrest are sufficiently tightened.

➲ **8.** Put the patient into the required position.
↳Chapter "Operating the foot control and manual control" on page 24

➲ **9.** Unplug the potential equalization connector. Release the brake. Move the patient to the desired location with the operating table.
↳Chapter "Connection and initial operation" on page 21
and ↳"Applying the brake" on page 29

➲ **10.** Reapply the brake on the operating table.
↳"Applying the brake" on page 29

WARNING!

➲ **11.** Plug the potential equalization connector back in if the floor is not conductive. ↳Chapter "Connection and initial operation" on page 21

➲ **12. Risk of injury due to loose accessories!**
- **Make sure all accessories are mounted and fastened correctly, before beginning the surgery, treatment or procedure.**
- **Observe the instruction manuals for the accessories.**

Accessories can unintentionally move if these are not mounted and fastened correctly. If applicable, make sure all attached accessories are firmly mounted.

➲ **13. Risk of injury due to collision with accessories, additional devices, chairs or other objects!**
Make sure the mounted accessories, additional devices, chairs or other objects cannot restrict the maneuverability of the patient surfaces or collide with these.

➲ **14.** Conduct the procedure, surgery or examination.

➲ **15.** Put the patient into the required position.
↳Chapter “Operating the foot control and manual control” see below

➲ **16.** Reapply the brake on the operating table.
↳“Applying the brake” on page 29

➲ **17.** Put the patient into the required position.
↳Chapter “Operating the foot control and manual control” see below

➲ **18.** Plug the potential equalization connector back in and activate it, if the floor is not conductive.
↳Chapter “Connection and initial operation” on page 21

6.5. Operating the foot control and manual control

6.5.1. Key assignment

KEY ASSIGNMENT MANUAL CONTROL

Fig. 6.5.1.A: Key assignment manual control

KEY ASSIGNMENT FOOT CONTROL

Fig. 6.5.1.B: Key assignment foot control

EXPLANATION KEY ASSIGNMENT

KEYS HandRemoteControl KEYS FootRemoteControl		DESCRIPTION	
HRC	FRC	Function after pressing the [ACTIVE] key	Function after pressing the [MEMORY] key (optional)
1▲	1▲	Head section up	Memory-Position 1
5▼	5▼	Head section down	Memory-Position 5
2▲	2▲	Back section up	Memory-Position 2
6▼	6▼	Back section down	Memory-Position 6
3▲	3▲	Seat section up	Memory-Position 3
7▼	7▼	Seat section down	Memory-Position 7
4▲	4▲	Foot section up	Memory-Position 4
8▼	8▼	Foot section down	Memory-Position 8
9 [ACTIVE]	9 [ACTIVE]	Activation key for the manual adjustment of positions	
10 LED [ACTIVE]	10 LED [ACTIVE]	– Is green if foot control/ manual control is plugged in – Flashes green if the [ACTIVE] key was pressed – Is red in case of a malfunction	
11 ⓘ	—	Display of battery status and error codes (see pages 32 and 43)	
12▼	12▼	Complete operating table down	
13▲	13▲	Complete operating table up	
14 LED [MEMORY]	—	Flashes blue if the [memory] key was pressed	
15 ◯ [MEMORY]	—	[MEMORY]-Taste	

6.5.2. Foot control

Fig. 6.5.2.A: Foot control

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➲ **1.** Press the [ACTIVE] (Fig. 6.5.2.A/1) key on top of the foot control downward with your foot.

➲ **2.** Control using the joystick: Press the joysticks (Fig. 6.5.2.A/2) on the front of the foot control up, down, to the right or to the left with your foot ↳Chapter 6.5.1 “Key assignment” see above

6.5.3. Adjusting the position

WARNING!

Risk of crushing and jamming injuries in spaces which become tighter and tighter!

- **When in use, do not touch moving components or tamper with moving parts.**
- **Make sure that there are no body parts of individuals or individuals themselves underneath the operating table during its use.**
- **When changing positions, please make sure that there is no crushing hazard for the patient, the user or third parties.**
- **Observe the overview of the danger zones**
  ↳"Areas with the risk of crushing or jamming body parts" on page 7.

When moving the operating table, the user or the patient can crush or jam body parts in narrowing spaces; this can cause severe injuries.

ⓘ **For safety reasons, the foot control and the manual control are deactivated 10 seconds after being used (the LED [ACTIVE] stops flashing).**

ⓘ **The positions are adjusted using the manual control and the foot control in the same manner.**

ACTIVATING MANUAL CONTROL/FOOT CONTROL/OPERATION

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➲ **1.** Press the activation key [ACTIVE].
➔ The LED [ACTIVE] flashes green.

➲ **2.** Press the required key on the manual control or display or press the joystick on the foot control in the required direction.
↳Chapter "Key assignment" on page 24
➘ The required part of the operating table moves.

ADJUSTING THE REQUIRED POSITION

EXAMPLE: ADJUSTING THE TRENDELENBURG POSITION

Activate manual control/foot control	➲ **1.** Press the activation key [ACTIVE]. ➔ The LED [ACTIVE] flashes green.
Adjust the required position	➲ **2.** Press the keys [m 6▼] (back section down) and [m 3▲] (seat section up) ➔ The operating table moves to the Trendelenburg position.

6.5.4. Storing the position

WARNING!

Make sure that only ergonomically useful positions are stored when storing the individual memory positions. If this is not observed, danger or injuries to the user or patient can result.

ⓘ **6 different positions can be stored. The positions can be stored on the keys [m2–m4] as well as [m6–m8]. The positions are stored in the control system and can be called up using the manual control as well as the foot control. If a memory location is already occupied, the old position is deleted and the new position is stored in the memory location.**

ⓘ **Recommendation for preventing incorrect operations.**
The filled out information sheet does not warrant the actually currently stored positions. Therefore:

- **Compare on a regular basis.**
- **If the information sheet is not filled out, simulate the movements without a patient and react cautiously.**

It is recommended to write down the stored positions and to display them for all users to see in the operating room. For instance the provided information sheet "Memory Functions" can be used for this purpose.

ⓘ **Positions stored by the manufacturer**
Some positions were already stored by the manufacturer. However, these must be adapted during initial operation

NOTICE!

The position [M1] is already preassigned with a sitting position and the position [M5] with a lying position. These can only be changed after consulting with a BRUMABA service technician.

ⓘ **Trendelenburg position**
Store the Trendelenburg position, to be able to react in emergency situations.

STORING THE POSITION ON THE [5▾] KEY

(Position 5 is only named as an example. The Trendelenburg position can also be stored on any other position key.)

Store the position on the [5▼] key	➲ **1.** Adjust the position manually. Chapter “Adjusting positions" see page 26.
	➲ **2.** Keep the [MEMORY] key pressed down and simultaneously press the [5▼] or head section down for approx. 10 seconds. ➔ An acoustic signal will sound after approx. 10 seconds and the position is stored on the [5▼] key.

6.6. Adjusting the head section

ADJUSTING THE DISTANCE BETWEEN THE BACK SECTION AND THE HEAD SECTION

ⓘ **The length of the torso varies in each patient.**
Therefore, it may be necessary to increase or reduce the distance between the back section and the head section

➲ **1.** The blue arrow (Fig. 6.6.A) shows on which axis the head section can be moved with this step.
Release head section fixation. To do so, turn the star screw (Fig. 6.6.A/1) zin the direction of the black arrow, to adjust the head section.

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HINWEIS!

➲ **2. Material damage to the head section caused by it falling down!**
- **Hold on to the head section.**
- **After adjustment, retighten the screw.**

Pull out or push in the head section.

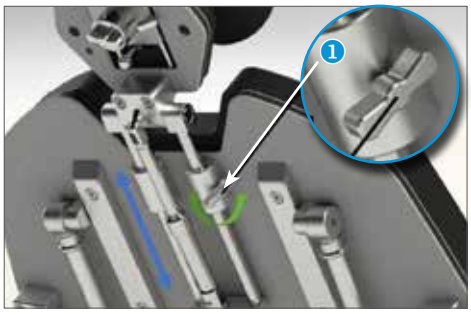

Fig. 6.6.A: Distance between the back and head section (tighten/loosen star screw)

➲ **3.** Refasten the head section: To do so, turn the star screw (Fig. 6.6.A/1) iin the opposite direction of the green arrow.

6.6.1. Adjusting the horseshoe-shaped headrest

WARNING!

Risk of injury due to loose head section or loose horseshoe-shaped headrest!

- **Make sure all adjusting screws are tightened, before beginning the surgery, treatment or procedure.**

If the manual adjusting screws of the head section or horseshoe-shaped headrest are not tightened, the head section or the horseshoe-shaped headrest can unintentionally move during the surgery, treatment or procedure. This can lead to the patient being severely injured.

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ATTACHING THE HORSESHOE-SHAPED HEADREST

Fig. 6.6.1.A: Attaching the horseshoe-shaped headrest

➲ **1.** Insert the horseshoe-shaped headrest into the opening intended for this purpose.

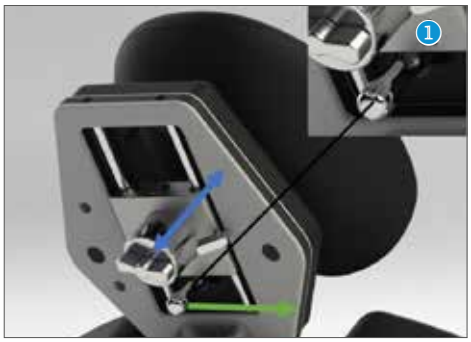

Fig. 6.6.1.B: Lever (1) for adjusting the height of the horseshoe-shaped headrest

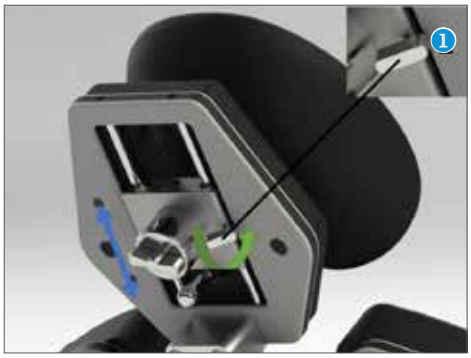

Fig. 6.6.1.C: Screw (1) for adjustment of the position of the horseshoe-shaped headrest (loosen screw)

ADJUSTING THE HEIGHT

➲ ⓘ **2.** The blue arrow indicates on which axis the position of the horseshoe-shaped headrest can be moved with this step.

Hold the horseshoe-shaped headrest at the required height and press the lever**(Abb. 6.8.B/1) in the direction of the green arrow.**

➔ The height of the horseshoe-shaped headrest is adjusted and cannot be changed again until the lever is pressed in the opposite direction of the green arrow.

ADJUSTING THE POSITION

➲ ⓘ **3. The blue arrow (Fig. 6.8.C) indicates on which axis the position of the horseshoe-shaped headrest can be moved with this step.**

Risk of injury due to incorrect positioning!

- **Loosen the screw before the patient is put into a lying position from a sitting position (or vice versa).**
- **If anesthesia is used, hold the patient's head.**
- **Always observe the patient while adjusting the horseshoe-shaped headrest and check for correct positioning.**
- **If the patient's head slips out of the horseshoe-shaped headrest, immediately reposition his or her head in the horseshoe-shaped headrest and readjust the horseshoe-shaped headrest accordingly.**

When the patient is put into a lying position from a sitting position (or vice versa), the length of the patient changes and this can lead to the patient's head slipping out of the horseshoe-shaped headrest.

Loosen the fixation: To do so, turn the screw (Fig. 6.8..C/1) in the direction of the blue arrow and hold onto the horseshoe-shaped headrest.

➲ **4.** Move the horseshoe-shaped headrest backwards or forwards.

➲ **5. Refasten the horseshoe-shaped headrest: To do so, turn the screw** (Fig. 6.8.C/1) in the opposite direction of the green arrow (Fig. 6.8.C).

The horseshoe-shaped headrest is fastened and cannot be moved again until the screw has been loosened.

WARNING!

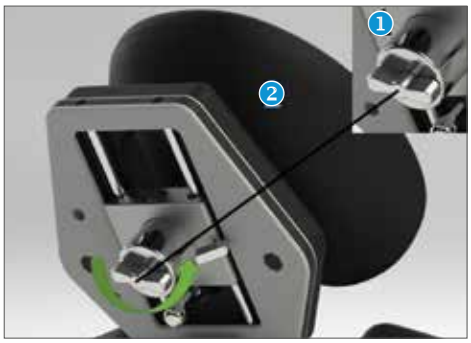

Fig. 6.6.1.D: Star screw for the adjustment of the angle of the horseshoe-shaped headrest (loosen screw)

ADJUSTING THE ANGLE

➲ **6.** Loosen the star screw: To do so, turn the star screw (Fig. 6.8.D/1) in the direction of the green arrow.
➔ The ball joint on the horseshoe-shaped headrest is open.

➲ **7.** Position the horseshoe-shaped headrest as needed (Fig. 6.8.D/2).

➲ **8.** Refasten the horseshoe-shaped headrest. To do so, tighten the star screw (Fig. 6.8.D/1) in the opposite direction of the arrow.

ⓘ **If the star screw is only tightened halfway, the horseshoe-shaped headrest remains spring-loaded however, can still be slightly adjusted by pressing against it, without having to loosen the screw again.**

6.7. Swivel castor undercarriage

DANGER!

Risk of injury caused by the operating table moving!

- **Always apply the brake on the swivel castor undercarriage after moving the operating table.**
- **Before beginning the treatment, surgery, procedure or examination, please ensure that the brake is on and the operating table is no longer moving.**

If the brake is not applied, the operating table can move unintentionally. This can lead to the patient being injured.

CAUTION!

Risk of injury and material damage caused by collision!

- **Move the operating table slowly and with caution.**
- **Do not roll the operating table over any objects.**
- **Do not roll the operating table into any persons.**
- **Do not roll the operating table into any obstacles; e.g. door frames or walls.**

Injuries and material damage can result if the operating table collides with people, objects or obstacles.

NOTICE!

Material damage due to rolling over, crushing or tearing off hydraulic lines and cords!

- **Pay attention to hydraulic lines and cords when moving the operating table.**
- **Move the operating table carefully.**
- **Before moving it, unplug the foot control and transfer it separately.**
- **Attach the manual control unit to the magnetic plate and make sure that the cord is not hanging down or unplug it and transfer it separately as well.**

When moving the operating table, hydraulic lines, the manual control unit cords, the foot control or the ground wire can be rolled over, torn off or crushed. That will result in material damage.

OPERATING THE BRAKE ON THE SWIVEL CASTOR UNDERCARRIAGE

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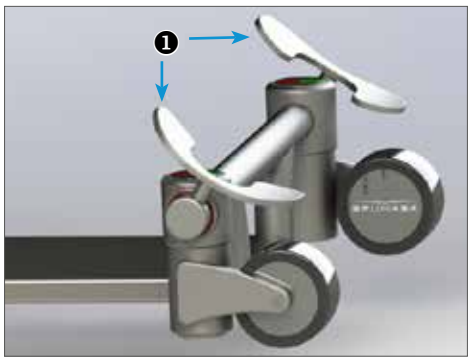

Fig. 6.9.A: Brake unlocked

UNLOCK BRAKE

➲ Turn the lever (Fig. 6.9.A/1) outwards.
➔ The stands are retracted.
The operating table can be moved freely.

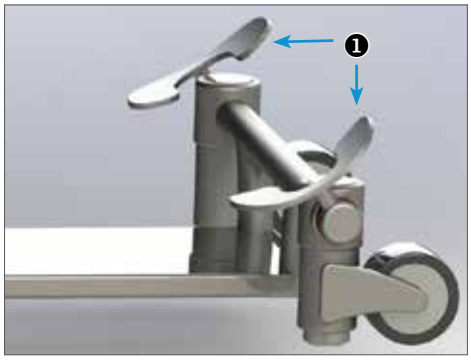

Fig. 6.9.B: Brake in locked position

APPLY THE BRAKE

➲ Turn the lever (Fig. 6.9.B/1) inwards.
➔ The stands are extended.
The operating table cannot be moved.

6.8. Transferring patients

Fig. 6.8.A: Correct positioning of the patient

CAUTION!

Please make sure that the patient's buttocks are always positioned in the bend between the seat and back section.

NOTICE!

Please observe that no thresholds greater than 6 mm can be moved over during transport!

6.9. Charging the battery (battery version STA und DTA)

ELECTRIC CURRENT

DANGER!

Mortal danger due to electric current!

- **Do not touch the plug with wet hands.**
- **When unplugging, never pull on the charging cable, only on the plug.**
- **Lay the charging cable in a manner that does not allow it to be kinked, jammed or rolled over.**
- **The charging cable and electronic parts cannot come in contact with cleaning agents, disinfectants, oils, greases or other media containing moisture as well as heat sources.**
- **Do not connect to extension cords or power strips.**
- **The power outlet must be easily accessible at all times.**
- **Switch off the operating table and remove the charging cable from the outlet before conducting any cleaning or service work.**
- **Remove the charging cable and switch off the operating table before conducting any cleaning or service work.**
- **Switch it off and pull the plug during installation work.**

DANGER!

Immediate danger of electrocution if live parts are touched. Damage to the insulation or individual components can be deadly. Work on the charger or other live parts can only be conducted by BRUMABA service staff.

The service life of the battery decreases due to an incorrect ambient temperature and when the power supply is disconnected while charging!

- **Do not connect the operating table to a power outlet that is turned off at night for example.**
- **Do not unplug the operating table until it is fully charged.**
- **When storing the battery and operating the operating table, observe the ambient conditions of the operating table.**

Chapter “Ambient conditions” on page 19

The service life of the battery also depends on the ambient temperature and the number of charge cycles. A new charge cycle begins every time a connection is made to the power supply; it does not matter whether the battery was fully charged during the last charge cycle or not.

NOTICE!

ⓘ Reduction of the service life of the battery due to exhaustive discharge of the battery!

- **Check the charge level every time it is switched on.**
- **Charge the battery as soon as the battery indicator (Fig. 6.9.A/1) indicates a yellow light.**
- **If the OR table is not going to be used for a longer period of time, the charge status of the battery must be checked regularly. The battery must be charged as soon as the battery indicator (Fig. 6.9.A/1) indicates a yellow or red light.**

A full discharge of the battery reduces the service life or the battery ends up completely defective.

Check battery performance over a longer period of time!

Depending on use, a new battery lasts at least one week. When the battery only lasts 3 days, inform BRUMABA customer service or a service technician authorized by BRUMABA and initiate an exchange of the battery, to continue to ensure a smooth-running operation.

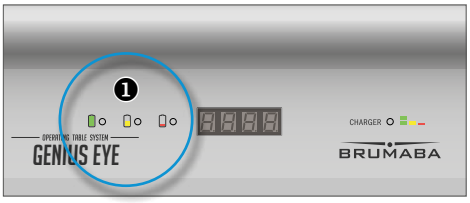

Fig. 6.9.A: Battery indicator (1)

ⓘ Duration of the charging process
Depending on the residual charge of the battery, a complete charging process can take between 6 and 10 hours.

➲ **1.** Check the battery indicator.
If the LED is on above the yellow or red battery symbol (Fig. 6.9.A/1), the battery must be charged, to prevent malfunctioning.
Chapter 3.5.2 “Battery indicator” on page 18

➲ **2.** Switch off the operating table.
“Switching off the operating table“ on page 23

CAUTION!

➲ **3. CAUTION! Risk of tripping!**
Lay cables in a manner that rules out the risk of tripping and ensures the cables cannot be kinked or crushed.

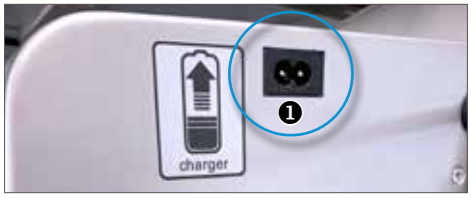

Fig. 6.9.B: Connection for charging cable (1)

Plug charging cable into the charging connection (Fig. 6.9.B) and into the outlet.

ⓘ The charging process begins. The LED on the charge status indicator (Fig. 6.9.C/1) is red or yellow. During loading, the operating table must not be operated.

➲ **4.** When the LED on the charge level indicator is green (Fig. 6.9.C/1), the battery is fully charged. Unplug the charging cable from the outlet and operating table

Fig. 6.9.C: Charging status indicator (1)

6.10. Battery voltage indication

Fig. 6.10.A: Key combination for showing the battery voltage (1)

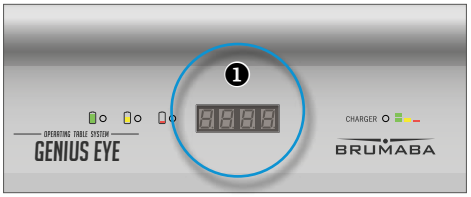

Fig. 6.10.B: Error code display (1)

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➲ **1.** Switch on the operating table.
↳"Switching on the operating table" on page 23

➲ **2.** Press the ⓘ and ▲ keys simultaneously on the manual control for 2 seconds. (Fig. 6.10.A/1)

he current battery voltage is shown on the error code display (Fig. 6.10.B/1).

➲ **3.** Repeat key combination or switch the operating table off and back on again. The battery voltage is no longer shown.

7. Cleaning and disinfecting the operating table

7.1. Safety precautions for cleaning and disinfecting the operating table

POOR HYGIENE

Danger of infection due to insufficient hygiene, cleaning and disinfection!

- **Clean and disinfect the operating table every time before it is used.**
- **Replace damaged padding immediately.**
- **If sterile drapes are used, still clean and disinfect the**
- **operating table at least once daily.**
- **Only use sterile drapes once.**
- **Put down new sterile drapes before each**
- **treatment, surgery and procedure.**
- **Observe all locally applicable hygiene regulations.**

There is a higher risk of infection if you come in contact with components that were not cleaned or disinfected.

CLEANING AGENTS AND DISINFECTANTS

Danger due to excessive use of disinfectants, cleaning agents and care products!

- **Please remove the residue from cleaning agents, disinfectants and care products on the padding regularly and clean them thoroughly.**
- **We recommend using residue-free disinfectants.**

Patients can get burned due to excessive residue from disinfectants, cleaning agents and care products on the padding.

Danger of skin coming in contact with cleaning agents, disinfectants and care products!

- **Use chemical resistant gloves when cleaning, disinfecting and maintaining the operating table.**

Skin irritations can result from excessive contact with cleaning agents, disinfectants and care products.

Material damage caused by incorrect or too highly concentrated cleaning agents!

- **Disinfectants containing more than 30% alcohol should only be used when needed and only on small surfaces.**
  In this case, please make sure cleaning is carried out in a timely manner.
- **Always apply cleaning agents and disinfectants across the entire surface and allow to dry thoroughly.**
- **Never use cleaning agents or disinfectants that contain solvents, diluents, gasoline or acetone.**
- **Never use iodophors or caustic soda for cleaning or disinfection.**
- **Never use cleaning agents or disinfectants with chlorine, chlorides or halides.**
- **Avoid contact between aldehyde and amino products! Before using disinfectants with aldehyde active substance basis for the first time, conduct intermediate cleaning (particularly, if an amino product was used beforehand)! If this is not observed, residue may not be able to be removed.**
- **Only use cleaning agents and disinfectants in the concentrations defined by the manufacturer.**

Using incorrect or too highly concentrated cleaning agents and disinfectants can result in damage to the padding and the operating table.

Material damage due to contact corrosion!

- **Wait until the disinfectant has completely dried.**

If the padding is attached while it is still wet, the cleaning agent or disinfectant cannot dry on the bottom. This can lead to contact corrosion.

Attention! Avoid material damage caused by incorrect cleaning!

- **Never clean the operating table in an automatic washer system.**
- **Never use steam or water with a temperature above 66°C (150.8°F)**
- **for cleaning purposes.**
- **Never use a high-pressure cleaner or the like for cleaning purposes.**

The operating table or the padding can be damaged by incorrect cleaning and disinfecting.

7.2. Cleaning agents, disinfectants and care products

PRODUCTS AVAILABLE FROM BRUMABA FOR CLEANING, DISINFECTION AND MAINTENANCE

The following agents can be ordered directly from BRUMABA for cleaning, disinfection and maintenance:

APPLICATION	PRODUCT DESCRIPTION	ITEM NO.
Faux leather (care product for the padding)	Ferrari Easy Clean Faux Leather Cleaner	V.000002
Faux leather (repair for the padding)	PVC cold flux	V.000014
Stainless steel (care product)	Cromodur 0.5 l – stainless steel care product	V.000011
Stainless steel (cleaning product)	Intensive cleaner 0.5l	V.000012
Operating table surfaces (Removal of gross contamination)	Universal abrasive cleaner	fine: V.000015 medium: V.000016
Padding (cleaning)	Multistar highly concentrated solution 1 l	V.000008
Padding and stainless steel surfaces (disinfection)	Bacillol 30 Foam 0.75 l	V.000085

ADDITIONALLY RECOMMENDED PRODUCTS

The following additional products were tested in the indicated concentration and are recommended by BRUMABA:

PRODUCT	MANUFACTURER	TESTED CONCENTRATION
Descocid	Antiseptica	2.0%
Kohrsolin FF	Bode Chemie	0.5%
Mikrobac forte	Bode Chemie	0.5% and 2.0%
Mikrobac extra	Bode Chemie	0.5% and 2.5%
Hexaquart Plus	Braun Medical AG	1.5%
Melsitt	Braun Medical AG	3.0%
Quatohex	Braun Medical AG	5.0%
D103 (Ferrari cleaning agent)	DiverseyLever	5.0% and 100%
Incidin Extra N	Henkel	5.0%
Incidin Plus	Henkel	1.0%
Incidur	Henkel	3.0%
Köhler disinfectant spray	Köhler Neckarsulm	100%
Medichem surface wipe-down disinfection	Medichem	0.5%
Dodenal new	Merck Vienna	0.5%
Quartamon Med	Schülke & Mayr	7.5%
Sagroplus Forte	Schülke & Mayr	0.5%
Terralin	Schülke & Mayr	0.5%
TPH 5225	Schülke & Mayr	0.5%
Uniclean	Unident SA	100%

CLEANING AGENT FOR THE PADDING (NOT A DISINFECTANT)

PRODUCT	MANUFACTURER	TESTED CONCENTRATION
Eskaphor HD6	Haug Chemie	50%
Tege tarp cleaner	Heine/Weizen	100%
TASKI Frost, Selfon Frost	DiverseyLever	100%
TASKI Mela	DiverseyLever	100%
TASKI R50 Concentrated	DiverseyLever	0.25%
Car Shampoo Steinet 320	Steinfels Cleaning Sys.	4.8%
Steinet 670	Steinfels Cleaning Sys.	100%

7.3. Attaching and removing the padding

REMOVING THE PADDING

Fig. 7.3.A: Unfastening the padding (1)

STAFF:
INSTRUCTED MEDICAL PROFESSIONALS

➲ **1.** Switch off the operating table.
↳ “Switching off the operating table“ on page 23

➲ **2.** The padding is attached to the operating table on the corners through cavities and appropriate pins (Fig. 7.3.A).

Carefully pull the individual padding upwards and remove it. Due to the structure of the pins, which prevent an unintentional removal of the padding, it may be necessary to exert a little extra force, to remove the padding.

ATTACHING THE PADDING

NOTICE!

Material damage due to contact corrosion!

- **Wait until the disinfectant has completely dried.**

If the padding is attached while it is still wet, the cleaning agent or disinfectant cannot dry on the bottom. This can lead to contact corrosion.

Fig. 7.3.B: Attaching the padding (1)

ⓘ **Correct order for attaching the padding:**
Because of the straps on the padding, the padding must be attached to the operating table in the following order:
1. head section, 2. back section, 3. seat section, 4. foot section(s)

➲ **1.** Place the padding on the operating table.

➲ **2.** Press padding down on all four corners until the pins (Fig. 7.3.B/1) have locked into place in the holes in all four corners on the operating table.

7.4. Cleaning, disinfection, care

CLEANING PADDING AND STAINLESS STEEL SURFACES

NOTICE!

Material damage due to incorrect cleaning agents!

- **Use mild all-purpose cleaner.**
- **As an alternative, use products recommended by BRUMABA in the indicated concentration.**
↳ Chapter “Cleaning agents, disinfectants and care products“ on page 34

Material damage due to the incorrect use of the cleaning agent!

- **Observe the information provided by the manufacturer of the cleaning agent.**

CLEAN	PADDING	STAINLESS STEEL SURFACES
With what?	Mild all-purpose cleaner	Mild all-purpose cleaner or stainless steel cleaner
How?	1. Switch off the operating table.	1. Switch off the operating table.
	2. For the plug-in version, please also remove the power plug.	2. For the plug-in version, please also remove the power plug.
	3. Remove the padding. ↳“Removing the padding” see above	3. Remove the padding. ↳“Removing the padding” see above
	4. Properly disinfect the padding before cleaning it. ↳“Disinfecting padding and stainless steel surfaces” on page 32	4. Properly disinfect stainless steel surfaces before cleaning them. ↳“Disinfecting padding and stainless steel surfaces” on page 32
	5. Use cleaning agents according to manufacturer specification.	5. Use cleaning agents according to manufacturer specification.
	6. Dry padding using a dry, lint-free cloth.	6. Dry stainless steel surfaces using a dry, lint-free cloth.
And then?	Disinfect the padding.	Disinfect the stainless steel surfaces.

DISINFECTING PADDING AND STAINLESS STEEL SURFACES

NOTICE!

Material damage due to incorrect disinfectants!

- More details: “Suitable disinfectants” on page 34
- **If in doubt, contact BRUMABA customer service.**

Material damage due to the incorrect use of the disinfectant!

- **Observe the information provided by the manufacturer of the disinfectant.**

DISINFECT	PADDING	STAINLESS STEEL SURFACES
With what?	Disinfectants	Disinfectants
When?	Every time before the operating table is used.	Every time before the operating table is used.
How?	1. Apply the disinfectant across the entire surface.	1. Apply the disinfectant across the entire surface.
	2. Wait until the disinfectant has completely dried.	2. Wait until the disinfectant has completely dried.
And then?	Reattach the padding. “Attaching the padding” on page 32	—

CARE FOR PADDING AND STAINLESS STEEL SURFACES

NOTICE!

Material damage due to the incorrect use of the care product!

- **Observe the information provided by the manufacturer of the care product.**

MAINTAIN	PADDING	STAINLESS STEEL SURFACES
With what?	Faux leather cleaner e.g. Ferrari Easy Clean	Stainless steel cleaner e.g. Chromodur
When?	1–2 times per month	1–2 times per month
How?	1. Disinfect the operating table. “Disinfecting padding and stainless steel surfaces“ see above	1. Disinfect the operating table. “Disinfecting padding and stainless steel surfaces“ see above
	2. Clean the operating table. “Cleaning the padding and stainless steel surfaces“ on page 32	2. Clean the operating table “Cleaning the padding and stainless steel surfaces“ on page 32
	3. Use a faux leather care product (we recommend Ferrari Easy Clean).	3. Use a stainless steel cleaner.
	4. Wait until the care product has completely dried.	4. Wait until the care product has completely dried.
And then?	Disinfect the padding. „Disinfecting padding and stainless steel surfaces“ see above	Disinfect the stainless steel surfaces. “Disinfecting padding and stainless steel surfaces“ see above

CLEAN MANUAL CONTROL AND FOOT CONTROL

NOTICE!

Material damage due to the penetration of liquids into the manual control or foot control!

- **Do not submerge the foot control into any liquids.**
- **Do not submerge the manual control into any liquids.**
- **Material damage due to incorrect cleaning agents!**
- **Use mild all-purpose cleaner.**
- **As an alternative, use products recommended by BRUMABA in the indicated concentration.**

↳Chapter 7.2 “Cleaning agents, disinfectants and care products“ on page 34

Material damage due to the incorrect use of the cleaning agent!

Observe the information provided by the manufacturer of the cleaning agent.

Clean	Manual control	Foot control
With what?	Mild all-purpose cleaner	Mild all-purpose cleaner
When?	When it is apparent that the manual control is soiled/contaminated.	When it is apparent that the foot control is soiled/contaminated.
How?	1. Switch off the operating table.	1. Switch off the operating table.
	2. For the plug-in version, please also remove the power plug.	2. For the plug-in version, please also remove the power plug.
	3. Unplug the manual control.	3. Unplug the foot control.
	4. Properly disinfect the manual control before cleaning it	4. Properly disinfect the foot control before cleaning it
	5. Clean the manual control and the cord using a mild cleaning agent.	5. Clean the foot control and the cord using a mild cleaning agent.

DISINFECT MANUAL CONTROL AND FOOT CONTROL

NOTICE!

Material damage due to the penetration of liquids into the manual control or foot control!

- **Do not submerge the foot control into any liquids.**
- **Do not submerge the manual control into any liquids.**

Material damage due to incorrect disinfectants!

↳More details: “Suitable disinfectants” on page 34

- **If in doubt, contact BRUMABA customer service.**

Material damage due to the incorrect use of the disinfectant!

- **Observe the information provided by the manufacturer of the disinfectant.**

Maintain	Padding	Stainless steel surfaces
With what?	Disinfectants	Disinfectants
When?	Every time before the operating table is used.	Every time before the operating table is used.
How?	1. Apply disinfectant to the manual control and the cord.	1. Apply disinfectant to the foot control and the cord.
	2. Wait until the disinfectant has completely dried.	2. Wait until the disinfectant has completely dried.
And then?	Reinsert the manual control into the hydraulic housing.	Reinsert the foot control into the hydraulic housing.

7.5. Service-Kit

Fig. 7.5.A: Service-Kit

The service life of our operating tables and chairs requires a certain extent of care. We put together all necessary cleaning agents and care products for BRUMABA OR tables in our new Service Kit.

Printed brief instructions are included, so that the most important steps regarding maintenance and cleaning are available at all times. After using up any of the cleaning agents, these can easily be reordered via our website or the telephone hotline.

8. Servicing

8.1. Servicing safety precautions

SECURE AGAINST RESTARTING

DANGER!

Life-threatening danger due to unauthorized restarting!

- **Switch off the operating table before beginning the work.**
- **For battery version: Also remove the battery.**

If a reconnection to the power supply is made without authorization during service work, there is a risk of severe injuries and even death for the persons in the danger zone.

ENVIRONMENT

Please observe the following information regarding environmental protection when conducting service work:

- Remove leaking, used or excess grease at all points of lubrication, which are provided with lubricant manually and dispose of it in compliance with the applicable local regulations.
- Collect replaced oils in suitable containers and dispose of them in compliance with the applicable local regulations.

8.2. Service schedule

The service work required for an ideal and smooth-running operation of the operating table is described in the following chapters.

If increased wear is determined during routine inspections, shorten the required service intervals according to the actual wear and tear. Contact BRUMABA customer service if you have any questions regarding service work or intervals.

INTERVAL	SERVICE WORK	STAFF
Daily	Check if the castors can move freely.	Instructed medical professionals manufacturer or authorized service technician.
	Check the padding for any damages. Immediately replace damaged padding!	Instructed medical professionals manufacturer or authorized service technician.
	Check the hydraulic system for leaks (visual inspection).	Instructed medical professionals manufacturer or authorized service technician.
1–2 times per month	Care for the padding and stainless steel surfaces using a care produc.t ↳ “Maintaining the padding and stainless steel surfaces“ on page 32	Instructed medical professionals manufacturer or authorized service technician.
Every 1–6 months	Spray cylinders, ball joints and articulated connections with lubricant spray approved by BRUMABA for operating rooms. ↳Chapter 8.3.1 “Lubricating cylinders” on page 36	Manufacturer or authorized service technician.
	Remove abrasive residue from the lifting columns. ↳ Chapter 8.3.2 “Removing abrasive residue from the lifting columns” on page 36	Manufacturer or authorized service technician.
Annually	Conduct safety inspection.	Manufacturer or authorized service technician.
As needed	Replace battery. ↳ Chapter 8.3.3. “Replacing the battery“ on page 36	Manufacturer or authorized service technician.

8.3. Service work

8.3.1. Lubricating the cylinders

PROTECTIVE EQUIPMENT:
CHEMICAL RESISTANT GLOVES

MATERIALS:
LUBRICANT SPRAY APPROVED FOR OPERATING ROOMS

Fig. 8.3.1.A: Apply spray to the cylinders

STAFF:
MANUFACTURER OR
AUTHORIZED SERVICE TECHNICIAN

- **1.** Switch off the operating table and if applicable, unplug the power cord or the charging cable.
  ↳"Switching off the operating table" on page 23
- **2. CAUTION WARNING!** of skin coming in contact with lubricant spray!
  Wear chemical resistant gloves.
- **3.** Apply lubricant spray to the cylinders.
- **4.** Move the cylinders up and down manually, so that the oil can be distributed.
- **5.** Wipe off excess oil using a rag.
- **6.** Apply lubricant spray to the ball joint of the horseshoe-shaped headrest.

8.3.2. Remove abrasive residue from the lifting column

PROTECTIVE EQUIPMENT:
CHEMICAL RESISTANT GLOVES

MATERIALS:
LUBRICANT SPRAY APPROVED FOR OPERATING ROOMS

Fig. 8.3.2.A: Remove abrasive residue from the lifting column

STAFF:
MANUFACTURER OR
AUTHORIZED SERVICE TECHNICIAN

- **1.** Move the operating table all the way to the top.
- **2.** Switch off the operating table and if applicable, unplug the power cord or the charging cable.
  ↳"Switching off the operating table" on page 22.
- **3. CAUTION WARNING!** of skin coming in contact with diluent!
  Wear chemical resistant gloves.
- **4.** Dampen the cloth with diluent or alcohol.

8.3.3. Replace battery

STAFF:
MANUFACTURER OR
AUTHORIZED SERVICE TECHNICIAN

The battery can only be replaced by BRUMABA service technicians or service technicians authorized by BRUMABA. (Refer to Service Manual).

8.4. After servicing

STAFF:
INSTRUCTED PROFESSIONALS

- Disinfect the operating table.
  ↳Chapter 7.4. "Cleaning, disinfection, care" on page 35.

9. Malfunctions

9.1. Troubleshooting safety precautions

SECURE AGAINST RESTARTING

DANGER!

Life-threatening danger due to unauthorized restarting!

- **Switch off the operating table before beginning the work.**
- **For battery version: Also remove the battery.**

If a reconnection to the power supply is made without authorization during service work, there is a risk of severe injuries and even death for the persons in the danger zone.

HOW TO HANDLE DANGEROUS MALFUNCTIONS

ⓘ **Basically, the following applies:**

➲ **1. Press the emergency off switch immediately if malfunctions constitute direct danger to people or material assets. For the plug-in version, please also remove the power plug.**

➲ **2. Secure the patient**

➲ **3. Inform customer service.**

The error code table (↳Chapter Error code table on page 41) and the troubleshooting table (↳Chapter “Troubleshooting table” on page 42) provides information on which error occurred and who is authorized to eliminate it.

9.2. Malfunction displays

ERROR CODE DISPLAY

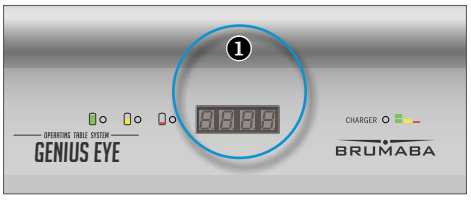

Fig. 9.2.A: Error code display (1)

Operating table malfunctions are shown via the error code display.

In the event of an error, an error code is shown on the display (Fig. 9.2.A/1) of the battery case or power supply housing. .

9.3. Reading out error codes

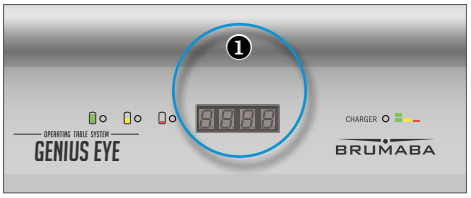

Fig. 9.3.A: Error code display (1)

Fig. 9.3.B: Error code display (1)

As soon as an error occurs, the respective error code is shown on the display (Fig. 9.3.A/1) and stored.

ⓘ **The error memory has sufficient space for 10 error codes. At the same time, each error code is only stored once. If another error occurs, the oldest error code is overwritten. The stored error codes can be read out as follows: The error code is no longer visible after the operating table has been switched off and back on again. However, the error is still there. The error code can be read out following the steps below.**

STAFF:
INSTRUCTED MEDICAL PROFESSIONALS

➲ **1.** Switch on the operating table.
↳ “Switching on the operating table” on page 23

➲ **2.** Make sure the LED [ACTIVE] is on and not flashing.
If the [ACTIVE] key was pressed and the LED [ACTIVE] is flashing: wait 10 seconds until the LED is no longer flashing.

➲ **3.** Simultaneously press the ⓘ and ▼ keys on the manual control for 2 seconds. The stored error codes are shown on the display consecutively.

➲ **4.** Switch the operating table off and on again.
↳ Chapter 6.3 “Switching the operating table on and off” on page 23

9.4. Error code table

CATEGORY A

The operating table can still be moved if errors within this category occur.

NO.	DESCRIPTION/CAUSE	REMEDY
F001	Defective pressure sensitive safety edge	Call customer service

CATEGORY B

The operating table can still be moved to a limited extent if errors within this category occur.

NO.	DESCRIPTION/CAUSE	REMEDY
F003	EEPROM save failure	Call customer service
F020	Chest encoder error	Call customer service
F021	Leg encoder error	Call customer service
F022	Height encoder error	Call customer service
F024	Foot encoder error	Call customer service
F031	Chest encoder blocked	Call customer service
F032	Upper leg encoder blocked	Call customer service
F033	Height encoder blocked	Call customer service
F035	Foot encoder blocked	Call customer service
F037	Auto-position time-out reached	Call customer service
F038	Control unit not calibrated	Call customer service

CATEGORY C

The operating table can no longer be moved if errors within this category occur.

NO.	DESCRIPTION/CAUSE	REMEDY
F002	Communication with Safety MCU failure	Call customer service
F004	ECPLL failure (External clock failure)	Call customer service
F005	ADC Failure (Analogue Reference measured by both MCU's)	Call customer service
F040	Battery voltage is too low. The battery is dead.	Charge battery. Chapter 6.10. „Charge battery“ on page 28
F041	Control voltage hydraulic motor	Call customer service
F042	Control voltage valves	Call customer service
F043	MOSFET driver hydraulic motor	Call customer service
F044	Communication UART1, foot remote control. The plug for the foot control was pulled out during operation.	Switch the operating tableoff and back on again. Chapter 6.3. “Switching the operating table on and off“ on page 22 If the error persists, call customer service.
F045	Communication UART2, manual control The plug for the manual control was pulled out during operation.	Switch the operating tableoff and back on again. Chapter 6.3. “Switching the operating table on and off“ on page 22 If the error persists, call customer service.

CATEGORY C

F049	24V Active time-out (D1-Ventile zu lang auf) Time-out	Call customer service
F060	Battery temperature sensor failure on low	Call customer service
F061	Battery temperature sensor failure on high	Call customer service
F062	Battery temperature too high	Call customer service
F064	Transistor on valves malfunction	Call customer service
F093	Second Mcu: LIN CRC failure between Main MCU and remotes	Call customer service
F094	Second Mcu: Class B test failed	Call customer service

9.5. Troubleshooting table

ERROR DESCRIPTION	CAUSE	REMEDY
Cylinders or ball joints squeak	Cylinders and ball joints are not sufficiently lubricated. Chapter 8.3.1 “Lubricating cylinders” on page 36	Apply lubricant spray to the cylinders and ball joints.
Loss of oil	Oil leaks in the hydraulic system	Call customer service
The operating table moves downwards on its own	Oil leaks in the hydraulic system	Call customer service
Parts move unintentionally when moving another part	Defective magnetic valve	Call customer service

BATTERY OR CHARGER MALFUNCTIONS

ERROR DESCRIPTION	CAUSE	REMEDY
The LED on the charge level indicator is flashing rhythmically as follows: **Flash – pause – flash.** Moving the elements downwards without hydraulic motor is still possible.	Temperature rise – The battery is disconnected from the charger. The control system of the operating table is still being supplied.	Call customer service
The LED on the charge level indicator is flashing rhythmically as follows: **2x flash – pause – 2x flash.** The operating table can no longer be moved.	Rise in temperature – Temperature monitoring turned off the battery.	Call customer service
The LED on the charge level indicator is flashing rhythmically as follows: **3x flash – pause – 3x flash.** The operating table can still be moved.	Sensor signal outside the plausible range. The battery remains connected to the control system.	Call customer service

10. Accessories

Our customer service is happy to advise you on which accessories are suitable for you and your applications.

Please feel free to get an overview of the variety of our accessories at www.brumaba.com.

11. Disassembly, disposal

11.1. Safety

WARNING!

IMPROPER DISASSEMBLY

Risk of injury caused by faulty disassembly!

- **Before beginning with the work, make sure there is sufficient space.**
- **Handle open, sharp-edged components carefully.**
- **Make sure things at the work station are in order and clean! Components and tools that are loosely lying on top of one another or otherwise lying around can cause accidents.**
- **Disassemble components properly. Observe the in part high dead weight of the components. If necessary, use lifting gear.**
- **Secure components, to prevent them from falling down or tipping over.**
- **If in doubt, contact BRUMABA customer service.**

Stored residual energy, sharp components, pointy areas and corners on the operating table or on the required tools can cause injuries.

11.2. Disassembly

Before disassembling:

➲ Switch off the operating table.

Then, clean assembly groups and components properly and disassemble them in compliance with the applicable local occupational health and safety as well as environmental protection regulations.

11.3. Disposal

If no return or disposal agreement has been made, recycle disassembled components:

➲ Scrap metals.

➲ Have plastic elements recycled.

➲ Sort and dispose of other components according to the material characteristics.

DANGER!

Danger to the environment caused by incorrect disposal!

- **Have electronic waste, electronic components, batteries, hydraulic oil, lubricants and other auxiliary materials disposed of by authorized specialists.**
- **In cases of doubt, obtain information regarding environmentally compatible disposal from the local authority or special disposal companies.**

Danger to the environment can result due to incorrect disposal!

German “ear number: WEEE-Reg.Nr-.DE83987463“

THANK YOU

The product you purchased is a comfortable and versatile operating table, which can either be hydraulically adjusted to the required position using the manual control or the optional foot control. The patient can be positioned automatically and appropriately thanks to the division of the table top.

INFORMATION REGARDING THE INSTRUCTION MANUAL

This instruction manual enables a safe and efficient handling of the operating table. The instruction manual is an integral part of the operating table and must be kept in the direct vicinity of the operating table and be available to the staff at all times.

The staff members must read this instruction manual carefully and understand it prior to beginning any work. BRUMABA customer service is available in the event of any questions. A prerequisite for a safe operation is adhering to all indicated safety precautions and instructions in this instruction manual.

Furthermore, the local occupational health and safety regulations and general safety regulations for the application area of the operating table apply.

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CUSTOMER SERVICE

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INCIDENT REPORTING

Any severe incidents that occurred in connection with this product must be reported to the manufacturer and the responsible authority of the Member State.

TECHNICAL DATA

Refer to the separate data sheet "Technical data GENIUS EYE and GENIUS EYE PRO Operating Table“

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This instruction manual was created by: BRUMABA

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