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Gynaecological chair Gracie
Digital videocolposcope

UN-PACKING MANUAL
INSTRUCTION MANUAL

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Version: 02
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www.gracie.eu

CE

BORCAD Medical a.s., CZ - 739 45 Fryčovice 673
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Introduction

Please read carefully all these operating instructions that have been elaborated to familiarize you with the proper use and the respective parameters of a prototype gynecological chair (hereinafter referred to as Gracie). Please always follow these instructions and always use the chair only in accordance with these instructions.

Keep these operating instructions near the product throughout its operation. Each person operating the chair must read and be acquainted with these operating instructions.

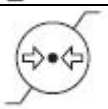
Particularly important information in these operating instructions is marked with the following symbols:

Logo	Meaning
CE	EU legislation compliant product
	Quality management systems certification authority marking
CERTLINE ČSN EN ISO 13485:2012	Quality management systems certification authority marking
ČESKÁ KVALITA	Quality management systems certification authority marking
5 RESISTANT Conforms to BS 7177 : 2008 for medium hazard	The upholstery meets the requirements on resistance to ignition according to BS 7177 in the Medium hazard category. The upholstery meets the requirements of BS EN 1021-1, BS EN 1021-2, BS 5852 – resistance to ignition sources 5

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Pictogram	Meaning
	Warning
	Warning: Dangerous electric voltage
	This symbol introduces any information, that may help you to avoid operative problems
	Type B applied parts
SN	Production number
REF	Type number explanation
int x/y	Marking of intermittent operation, i.e. if the product has been continuously operated for time period “x”, then it must rest idle for time period “y”. For example int 10 / 20 means that after 10 minutes of continuous use /positioning the product must be out of use/not positioned for 20 minutes
IP X #	Constructional protection against water leakage, dangerous touch contact and intrusion of foreign objects
	Safe operational load
	Safe patient load
	Product weight
	Producer
	Date of production
	Follow the instructions manual.
	Equipotentiality
	Packaging material: “Keep dry”

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	Packaging material: “Fragile!“
	Packaging material: “This side up”
	Temperature limitation
	Transportation marking: „Relative air humidity“.
	Transportation marking: “Air pressure”.
	Marking according to the directive EC 2002/96/EC (Directive about the disposal of old electric and electronic appliances). Symbol for: “Do not dispose of the product into communal waste. Use special collection points for old electronic appliances.“
	The medical device includes an RF transmitter which emits non-ionizing electromagnetic radiation.
	MEDICAL DEVICE (compatible with Medical Device Regulation)
	UNIQUE DEVICE IDENTIFIER
	BATTERY SYMBOL
	SUITABLE ONLY FOR INDOOR USE
	WARNING AGAINST PINCHING OR JAM

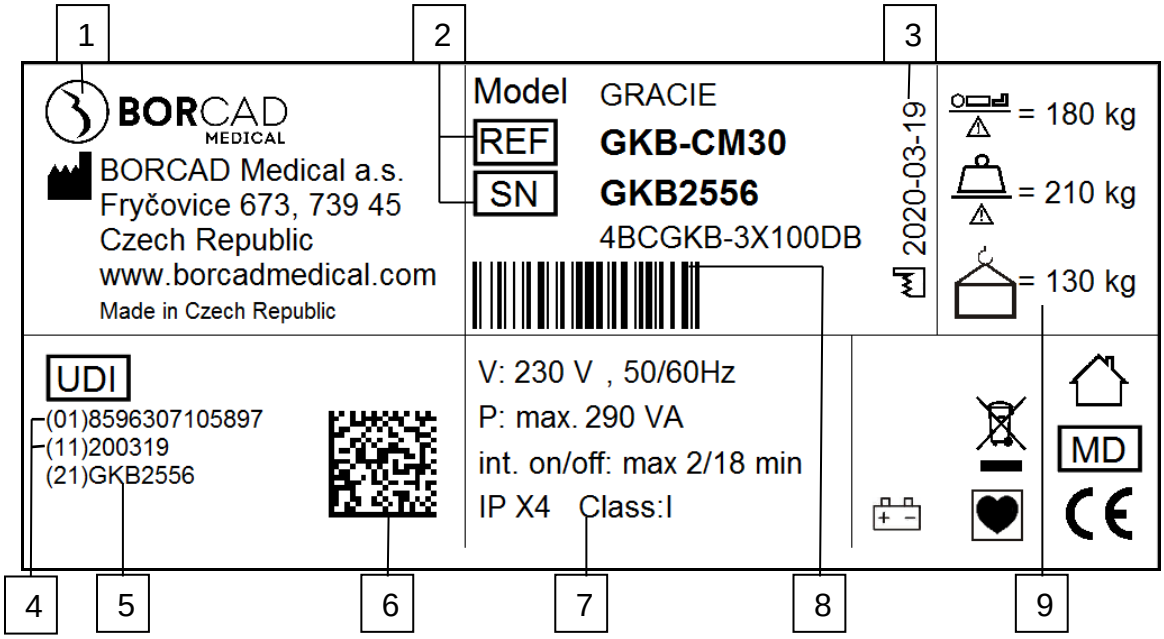
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Abbreviation	Meaning
REF	Catalogue number
LED	Light emitting diodes
VA	Power intake units
VGA	Computer standard for computer imaging technology
USB	Universal serial bus
LCD	Liquid crystal display
IT	Information technology
PC	Personal computer
dB	Sound intensity unit
hPa	Pressure unit
ČSN	Protected marking of the Czech technical norms
Hz	Frequency unit in the SI system
SMB	The Service Message Block is a protocol for sharing files in Microsoft Windows networks.
EMC	Electromagnetic compatibility
VF	High frequency
ME	Medical equipment
CISPR	International Special Committee on Radio Interference

Acoustic signalling	
Sound	**Signification**
Intermittent sound.	CB power failure. It stops when it is at the lower positions with the engines.
Short sound when you press a button	Low battery level.
Short sound when the STOP button is pressed in the same time with the pre-set position button.	Saving of a new position in memory function.
Intermittent sound when column buttons up and down are pressed	Reset of the current engines' protections.
Intermittent sound.	Overheating of the heated seat.

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Data plate with UDI



1	Address of Manufacturer
2	Type of product, serial number
3	Manufacturing Date (Year-Month-Day)
4	DI (Device Identifier)/ GTIN (Global Trade Item Number)
5	PI (Product Identifier)
6	2D Bar Code (GS1 DataMatrix) DI+PI=UDI
7	Electrical Specification
8	1D Bar code GS1-128 (Serial number)
9	Symbols

If you have any queries, please, contact the producer – BORCAD Medical a.s., or local sales representatives.

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1 Un-packing manual

Cut the securing tape.



Remove the top lid and the box ring. Cut and crush the corners of the lower enclosure so we can take the chair easily off the pallet.



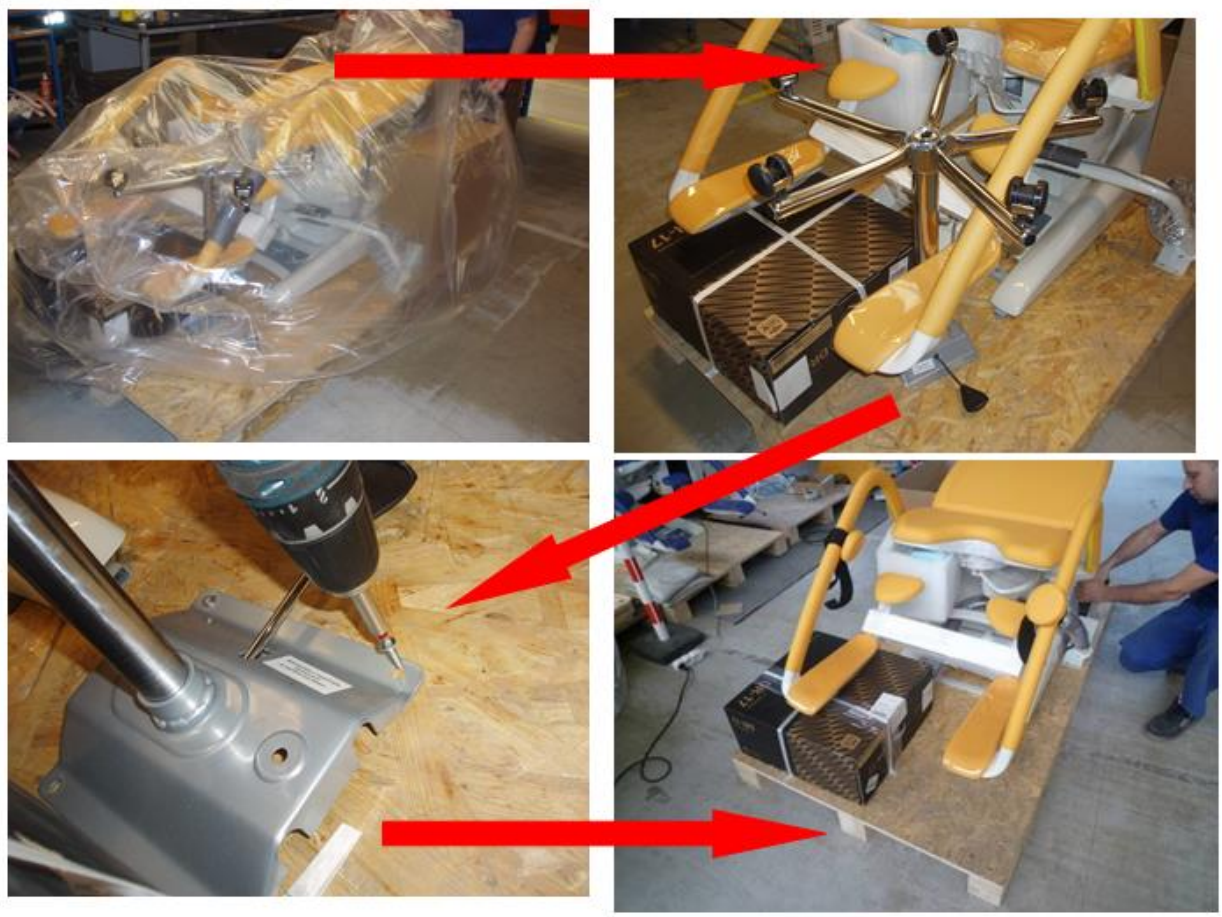
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Gradually remove all accessories from the buffer, including the manual controller and the network cable. Destroy the empty buffers.



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Using tools, screw off the doctor´s chair from the palette so that the upper area of the palette is free.



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Dismount the 4 securing screws M8 on the auxiliary frame.

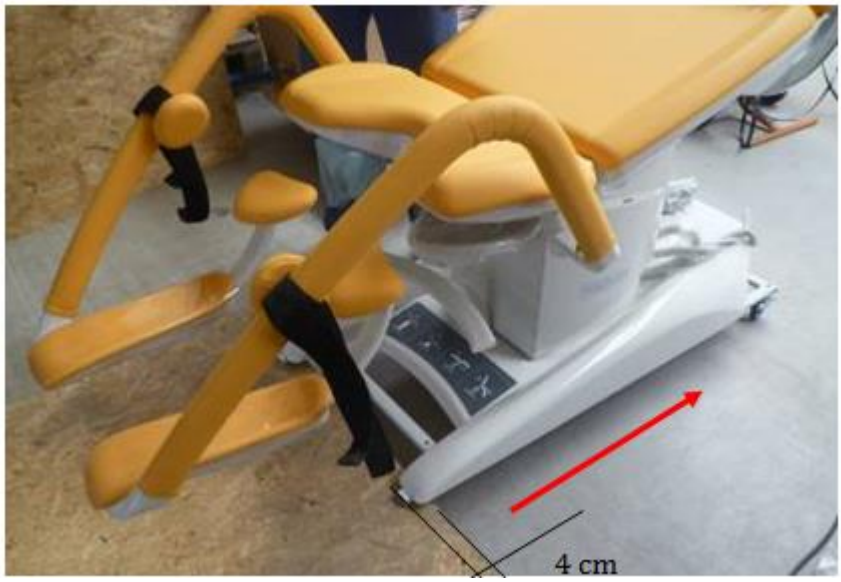


Push the rear part of the chair over the palette forward. Screw on the castors. The castors must be screwed on so that the braked castors are on one side all the time.



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Move the chair so that only a short part of the frame is on the palette – approximately 4 cm.



Stop the castor which is on the ground.



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Screw on the remaining castors (castors with brake must be on one side of the chair), release the braked castor and move the chair out of the palette.

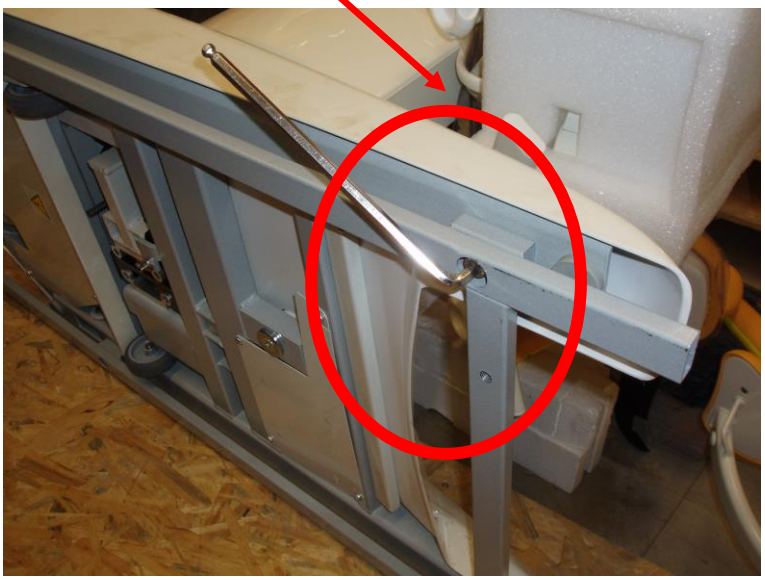


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When tilting the chair, it is necessary to underlay part of the foot support with a soft pad so that no damages to the chair occur.

When reaching the place of destination, brake one side, tilt the chair over this side and remove the castors and 4 screws M10 fixing the supporting frame to the chair underframe.



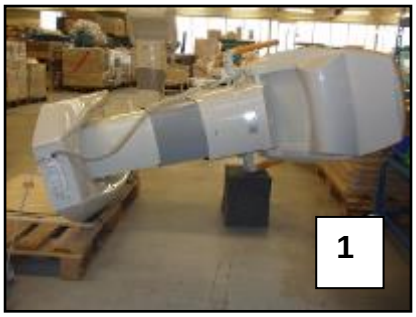


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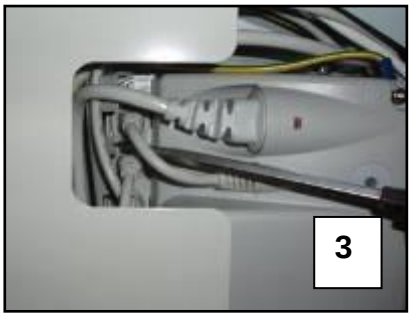
Before tilting back, connect the backup battery to the control box according to the following procedure.

Ensure the power cable is unplugged of power site!

1) Tilt the armchair and support the leg from the side (see Fig. 1).
2) On the bottom side of the base there is a disconnected supply connector (highlighted in Fig. 2).
3) Plug the supply connector firmly to the vacant socket as far as it goes (Fig. 3 and 4).
4) Secure the plugged in connector by clicking the security frame, use a screwdriver (Fig. 4).







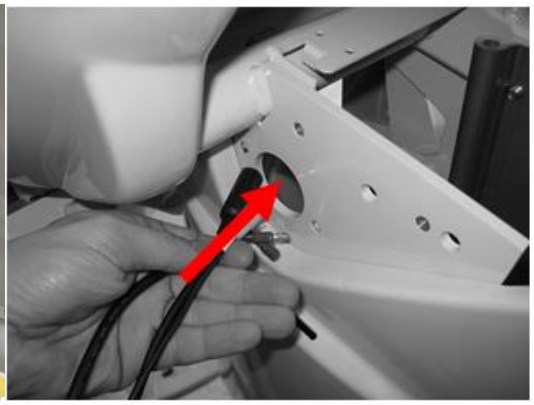


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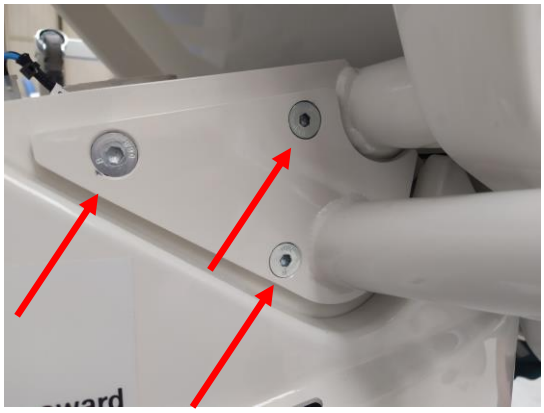
M**ounting the arm with the monitor**

Dismantle the top plastic cover of the column. Pull the arm cables through the column hole.



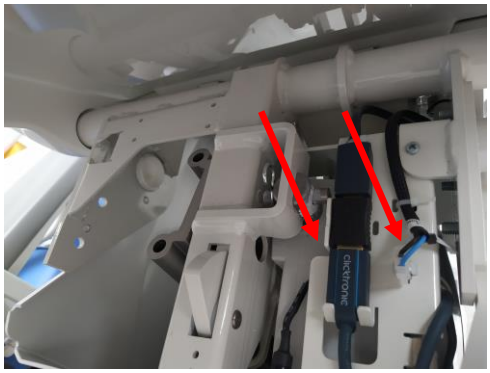


Use three screws to attach the arm to the column. Secure the screws with Loctite243.



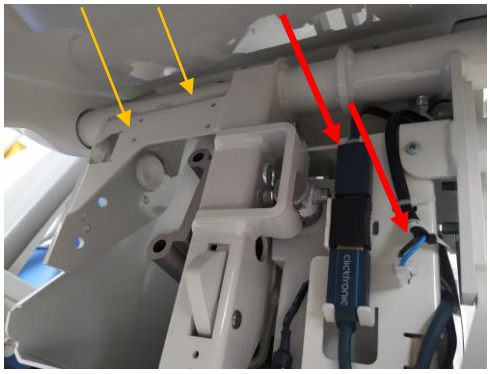


Plug the connectors and cables (connectors are not interchangeable).



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Fasten the plugged connectors and cables with electrical strips
2x left monitor (red arrow) or 4x right monitor (all arrows) Then close the upper plastic cover of the column and screw it on.





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2. General information

2.1 Standards

This product meets the requirements of current standards ČSN EN 60601-1:2007, ČSN EN 60601-1-1 ed.2:2001, ČSN EN 60601-2-52:2010, ČSN EN 60601-1-2 ed.2:2008. According to the directive 93/42/ES of the Council of Medical Devices, as amended, the chair is classified as class I medical device.

2.2 General Instructions

The chair operation is only permitted in areas that meet the conditions of current standards for electric distribution in places intended for medical purposes. According to the Council directive 93/42/ES, as amended, and the appropriate national legislation, only a person with adequate qualification can operate the product. In case that the gynecological chair is used as part of the medical system, electromagnetic or other interference can generate between the device and the other devices. Thus, we recommend using only certified and approved medical devices. Colposcope can be operated only on places that fulfill the conditions of valid standards for electric mains on places for medical purposes. According to the Council guideline 93/42/ES as amended later and relevant national legislation, the product can be operated only by a person being qualified.



2.3 General Safety

- Pay attention to proper fastening of accessories (handle tightening, etc.).
- Do not carry out disassembly or unskilled repairs of motors, control units, etc.
- Design changes are reserved!
- Threads of tightening screws or jointed points on Goepel leg supports can be degreased in consequence of disinfecting agents working. In this case, early greasing prevents from an expensive repair.
- The chair must be equipotentially connected with other medical devices to prevent fire in combination with flammable substances and anesthetics during minor surgical procedures using high-frequency (HF) instruments.
- Never use other than original accessories. All original accessories are marked with original label containing the name and brand of the manufacturer, serial number or batch ID and date of manufacture.
- **Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established!**
- **Only authorised and trained person using the tool is allowed to change fuses and power supplies!**
- **This medical device is not intended for oxygen enriched environment!**
- **This medical device is not intended for use with flammable substances!**
- **This medical device is not portable medical electrical equipment!**
- **Make sure the duty cycle (2 min ON/18 min OFF) is not exceeded during bed positioning!**
- **Patient is allowed to use selected control elements only if hospital personnel had assessed that the patient´s physical and psychological state is in accordance with use of them and only if the hospital personnel had trained the patient in accordance with the instructions for use!**



Gynecological chair GRACIE

- The chair Gracie serves for gynecological examination and ultrasound scan of patients, resp. for small ambulatory operations. For hygienic reasons, it is necessary for the upholstery to always be covered before the chair is used. The product does not contain latex.
- The product was subjected to biological evaluation according to the ČSN EN ISO 10993-1: 2004 - the product is fully operational and safe for human use from the point of view of biological evaluation.



- Descriptions of the sides in the Instructions are meant from the physician's sight. For example the right shoulder of monitor is on the right side from the physician's view at the chair.

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- **Any other usage, for example as a transport wheelchair for a patient, an operating table or a chair with unapproved accessories, is forbidden!**

Video colposcope
The device is intended for colposcopic examination of the cervix. The image is transmitted digitally to the LCD monitor of the GRACIE gynaecological examination chair. The product does not contain latex.



Every usage different from the above mentioned one is forbidden.

Fire Extinguishing Information



Warning:
Note

Danger of frostbite by contact of CO2 with human skin!
Do not use halotron extinguisher in closed rooms without ventilation – danger to your health!

The medical product is categorised as energised electric installation, hence, fire can be extinguished by the following types of extinguishers.

Use	Do not use
Powder extinguisher	Foam extinguisher
CO2 extinguisher	Water extinguisher
Halotron extinguisher	



2.4 Electrical safety and EMC

- **Since the unit is powered from the network, it may cause interference with sensitive equipment due to generation of electromagnetic field. In order to reduce the influence of undesired electromagnetic effects, the chair was designed in compliance with ČSN EN 60601–1-2. To prevent the occurrence of these problems the chair must be used in compliance with this manual.**
- **To avoid risk of electric shock, this chair must be connected to power main with protective earthing.**
- **The chair must be positioned in such way, so if it's necessary could be immediately disconnected from the power main.**
- **Modifications to this chair is forbidden.**
- **If there is a fluctuation in the voltage range (+/- 20 V) then it is necessary to connect the product to voltage regulator. Otherwise the electronics can be damaged.**
- **Gynecological chair is not intended for use in areas enriched with oxygen (concentration higher than 25% or partial pressure reaching 27.5 kPa).**
- **The chair must be connected to power supply in accordance with the product specifications listed on the product label.**
- **The chair is intended only for use by medical professionals.**
- **The chair may cause radio interference, which can have effects on the operation of nearby equipment. It may be necessary to take measures to reduce these effects, such as redirection, relocation or shielding of the device.**
- **The bed includes firmware that can be updated only by an authorised service technician.**
- **This firmware is protected against unauthorised access by mechanical housing (tool is needed to access), by seal (components with processor are sealed), by exclusive compatibility with an authorised software tool and by check of compatibility of the new firmware with the bed.**
- **Interference is possible in the vicinity of devices marked with the following label.**



- **Portable and mobile HF communication devices should not be used closer than the recommended distance of d = 15 cm from any part of the chair, including the cables.**
- **The gynaecological chair must be installed and operated in accordance with the EMC information by professionally trained service personnel.**

  Portable and mobile RF communications equipment can affect medical electrical equipment.

<table>
<tr><td colspan="3">Manual and declaration of the manufacturer - electromagnetic radiation</td></tr>
<tr><td colspan="3">The chair is intended for use in electromagnetic environment specified below. The customer or user of the chair must ensure that the chair is used in such environment.</td></tr>
<tr><td>High frequency radiation
CISPR 11</td><td>Group 1</td><td>The chair uses high frequency energy only for its internal functioning. Therefore, its high frequency radiation is very low and is not likely to cause any interference with nearby electronic equipment.</td></tr>
<tr><td>High frequency radiation
CISPR 11</td><td>Class A</td><td rowspan="3">The chair is intended for use in all facilities other than households and buildings which are directly connected to a public low-voltage power supply network that supplies buildings used for residential purposes.</td></tr>
<tr><td>Harmonic emissions
IEC 61000-3-2</td><td>Not applicable</td></tr>
<tr><td>Voltage fluctuations/ flicker emissions
IEC 61000-3-3</td><td>Not applicable</td></tr>
</table>

2.5 Intended use

The chair serves for gynecological examination and ultrasound scan, resp. for small ambulatory operations. Part of the chair can be accessories – digital video colposcope and LCD monitor.
Colposcope is used in gynecological examinations to provide enlarged, non-contact visualization of the female external genitalia (vulva, vagina, vaginal portion of cervix) and anus. Colposcope can also be used to document the findings. Colposcopes are intended for diagnostic purposes only.

2.5.1 User population

- Women and girls of any age for preventive examination or if they notice irregularities in their breasts, genitalia, menstrual cycles, or if they become pregnant
- Caregivers (Doctor, nurses, technical personnel, transport personnel, cleaning personnel)

2.5.2 Contraindications

The medical device is not intended for any other usage, for example as a transport wheelchair for a patient, an operating table or a chair with unapproved accessories.
Colposcope is a device for viewing the body from a distance and is not intended for patient contact. Because of this there are no contraindications for use of a Colposcope.

2.5.3 Operator

- Caregiver

2.6 Setting-up the Chair

The chair Gracie shall be set up by the representatives of BORCAD Medical a.s. Any handling/maneuvers with the chair within the room is permitted according to the instructions stated in the chapter “4”.



- **Before a patient gets on the chair Gracie, the chair must be set up safely.**
- **The chair is intended for patients with weight up to 180 kg, the total load must not exceed 210 kg**
- The chair Gracie must not be used in areas intended for medical care that can constitute a risk of fire or explosion due to air, oxygen or nitrous oxide in combination with anesthetic or cleaning agents (such as operating theatre).
- Distribution cable is included. It is forbidden to connect it through an extension cable and it is forbidden to connect the product into common multiple sockets.
- No power cable of another device can lead over the product surfaces or over a patient lying on it.
- While handling the product, be careful not to pinch any other objects.
- While handling and subsequently setting-up the product, consistently pay attention to safe positioning and cabling outside the base. Careless setting-up causing pinching of the electrical and control cables can result in equipment damage or personal injury.
- Prior to resetting the chair, check that no other persons are within reach of moving parts.
- Objects (furniture, stands, etc.), which could get into collision with the chair, may not be placed in immediate proximity of the chair.
- These operating instructions contain permitted accessories. Use of other than original accessories approved in these operating instructions is not permitted.
- Prior to connecting the mains cable, check its condition; it must not have any mechanical damage.
- The chair includes **firmware** that can be updated only by an authorised service technician.
- This firmware is protected against unauthorised access by mechanical housing (tool is needed to access), by seal (components with processor are sealed), by exclusive compatibility with an authorised software tool and by check of compatibility of the new firmware with the chair.

Objects (furniture, stands, etc.), which could get into collision with the chair, may not be placed in immediate proximity of the chair.

- Front side of the chair is set up on height-adjustable feet. In most cases, the chair can be fixed without further manual adjusting. In case of uneven floor, when the chair cannot be unintentionally set up (it swings), the chair needs to be inclined to the side and, using tools, adjusted to required height of the front foot for secure set up. Then the chair needs to be inclined back to the base. The chair may not swing!
- A battery is a component of every gynaecologic chair, it is fully charged and flawless and allows for the operation of the chair for the time of approx. 3 minutes. The battery is recharged automatically from the control unit and does not require any special maintenance. If the chair is not connected to the network for more than one week, it is necessary to disconnect the battery connector from the CB (Control box).

In case of uneven surface under the chair a safety switch is switched on to stop the movement of the chair. This condition is indicated by a red diode on the chair base (Fig. 1). To remedy the colliding condition the chair feet must be screwed in so that the chair base is closer to the floor. This will cause the safety switch to turn off and the chair will be switched to normal operation.

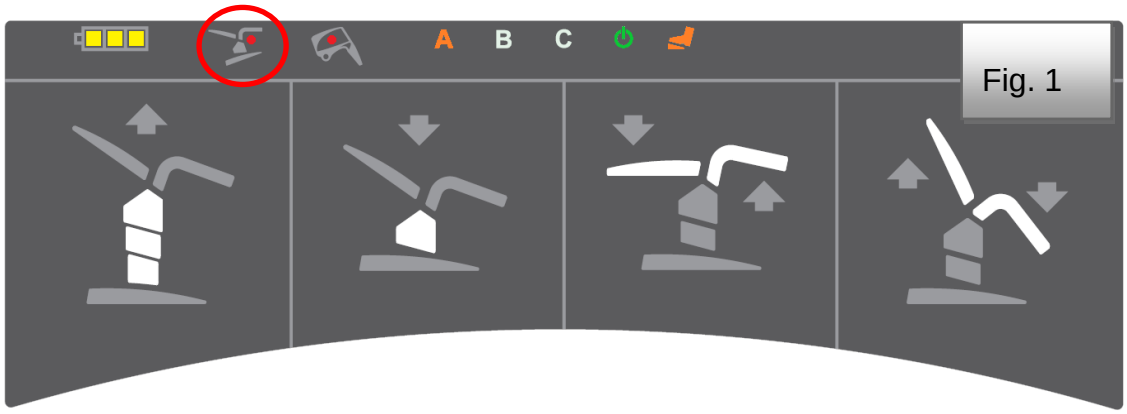


Fig. 1

In case that the chair collides with the video colposcope, the safety switch is switched on to stop the movement of the chair. This condition is indicated by a red diode on the chair base (Fig. 2). Remove the cause of the collision. The switch will be turned off and the chair will be switched to normal operation.

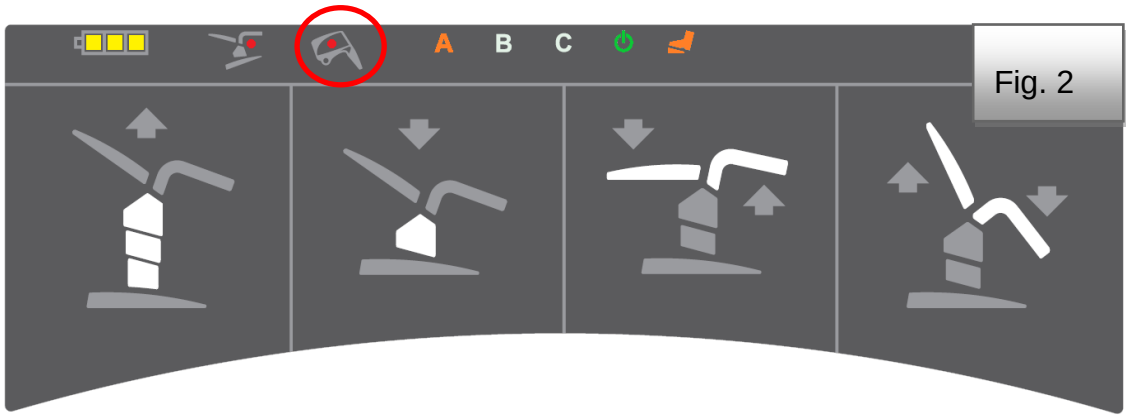


Fig. 2

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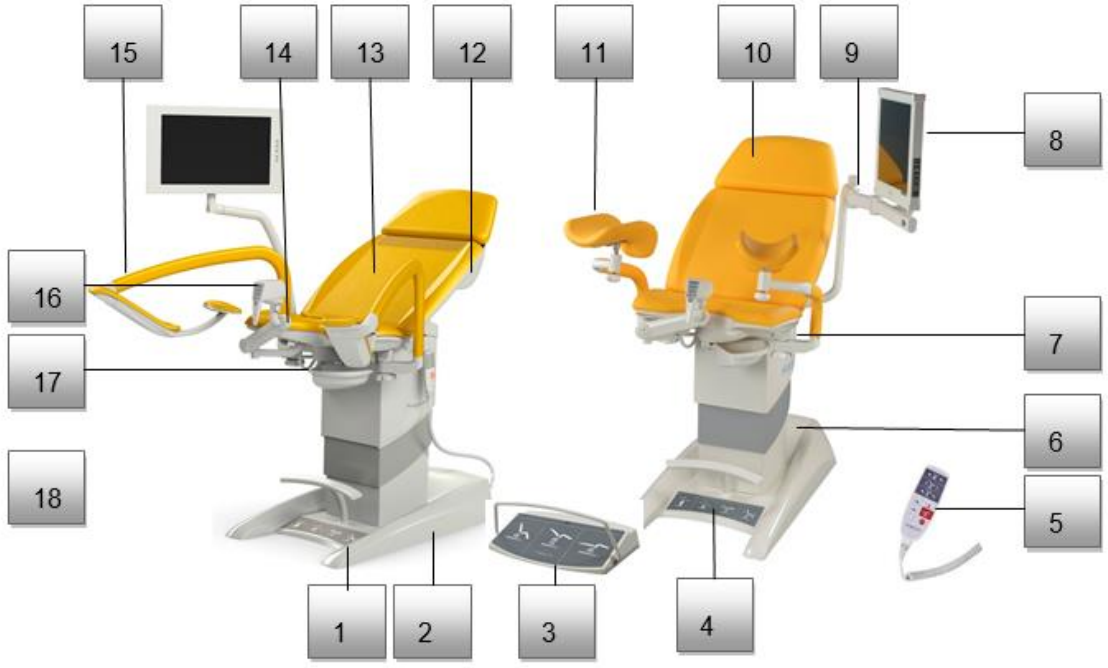
3 Summary

Part	GKB-AX 	GKB-CX (LCD) 
Leg rests (standard / Goepel)	*	*
Fixed foot controller	*	*
Mobile wireless controller	*	*
Hand controller	*	*
Telescopic castor	*	*
PVC conduit to the bowl	*	*
PVC footrest cover	*	*
3 memory functions for 3 doctors	*	*
Paper roll holder	*	*
Rotary plastic bowl	*	*
Anti-bacterial artificial leather	*	*
Seamless upholstery	*	*
Selection of color designs	*	*
Equipotential coupling	*	*
One button Trendelenburg	*	*
Selection of network cables	*	*
Back-up battery with charge indicator	*	*
Indication of improper fitting of the chair into place	*	*
Transport packaging	*	*
17" LCD screen		*
21" FULL HD LCD screen		
Integrated video colposcope		*
Video colposcope LED illumination		*
Two light intensities of the video colposcope		
Integrated polarization filter		*
WLAN/LAN connection of the chair to a PC		*
HDMI IN/OUT		
VGA IN		*
VGA cable		*
Ethernet cable		*

* part of standard equipment of the GRACIE chair

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Overview



1	Chair base	10	Head part with cushion
2	Integrated wheels	11	Goepel leg holders
3	Mobile foot control	12	Paper tray under the cushion
4	Fixed foot control	13	Back part with cushion
5	Hand control	14	Seat part with cushion
6	Chair lifting column	15	Leg holders with thigh support
7	Hand control holder	16	Video colposcope
8	LCD Monitor	17	Plastic tray
9	Monitor arm	18	Doctor's foot support

Color versions

Substituted by the letter “X”.

A - violet	M - yellow
B - blue	P - orange
F - green	

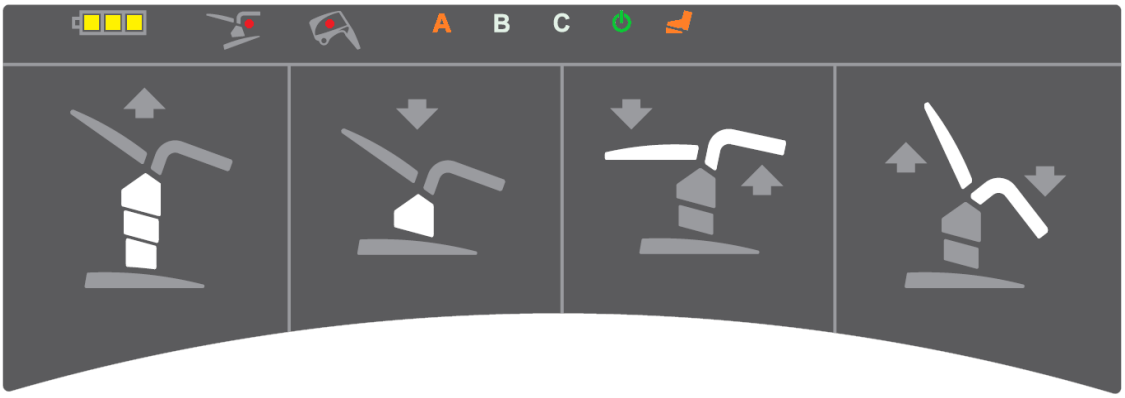
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4 Chair Operator

The chair can be operated only by trained personnel. Training is conducted by the manufacturer's expert representatives.

4.1 Motorized Adjustments (foot controller)

Relevance of the foot control buttons is evident in the picture. For motor set up the requested function button needs to be pushed down and held. After pushing requested button, the light coloured parts move.

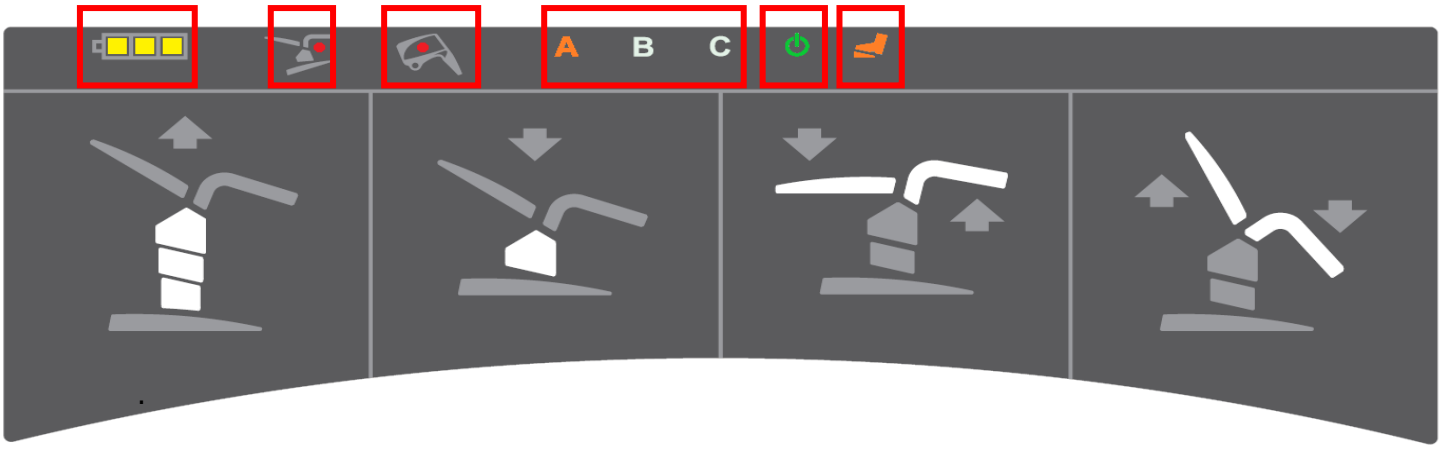


The fixed foot control is used to adjust setting of the position of examination. It is placed in the chair base and it has the following elements:

1. Setting up the chair height (the first two buttons from the left – up/down)
2. Setting up the back part joined with footrest (the third and fourth buttons from the left – back part down and footrest up / back part up and footrest down)

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At the top there is placed a panel with colour indicator lamps. The lit letter A, B or C means of the attending doctor´s option. Furthermore here is a green indicator lamp indicating the connection of the chair to the network, an orange indicator lamp indicating the connection of wireless control to the chair. The function, which does not lit, is switched off. There is a yellow battery status indicator on the left (see the Backup Battery Section) and a red indication of two collision situations – videocolposcope vs. leg supports and setting the chair on the uneven floor and thus not closed security SLS switch.





- Do not stand in the space under the motor driven parts of the loading area (back, seat and footrest)
- In case of the controller failure (permanent pushing the button or cable damage), the drive can be stopped by pressing the STOP button on the hand control. Right after that the supply connection must be disconnected and a representative of the BORCAD Medical a.s. Company must be contacted.
- In case of blocking of the motor motion we advise to simultaneously push both upper buttons of the hand control (adjustment of the chair lifting) – acoustic signalling will sound for 5 seconds. During the acoustic signalling we keep the buttons pushed. All saved positions will be deleted.
- If the above mentioned does not help, we recommend to incline the back part into maximum position (vertical position), to lower down the footrest maximally and to bring the chair to the lowest position. Then pull the energy supply cable out for ten seconds.
- **The gynaecological chair is not intended for permanent operation – motors can be burdened maximally to the values of 2 minutes operation and then 18 minutes idle state. In case of overburden the operation can be automatically stopped. Service action must be carried out – please, contact a representative of the BORCAD Medical a.s. Company.**

Battery

All versions of a gynaecologic chair are equipped with a backup battery.

This battery makes possible to set the chair in case of a power cut, or unavailability of supply from the electric power network.

In the case of fully charged battery, 3 display fields lit, with decreasing capacity the individual fields switch off. Battery capacity reduction below 50% of the total one is indicated by a beep sound when pushing any button of any controller. It is necessary to connect the chair plug to the electric power network as to recharge the battery.

After disconnecting the chair from the electric network the control box automatically goes to the sleep mode. In this mode the battery condition is not displayed so as not to come to useless discharge of the battery. The control box activation is made by pushing any button of the controller.

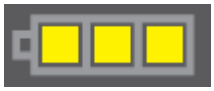
The backup battery serves for emergency travelling of the chair, a fully charged battery enables the operation of it for the time of approx. 3 minutes.



- **Batteries may be exchanged only by service personnel!**
- **Battery replacement by insufficiently trained personnel can lead to hazards or limit the medical device functionality!**

Indication of battery charging mode

Battery charging mode is indicated by a yellow indicator lamp of electric power supply (see Fig. 1). The battery is part of the medical device control unit and is charged continuously if connected to electrical power network. When disconnected from the mains or in the event of power failure, the indicator lamp switches off. The operation is then possible with backup battery.

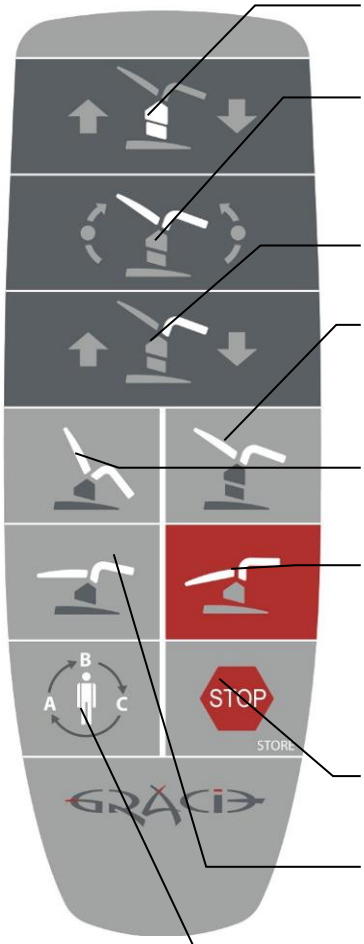




If one light indicator of the battery is shining, it is urgent to connect the chair immediately to the electrical network!

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4.2 Motorized Adjustments (Remote control)



Height adjustment loading areas (up and down)

Back rest tilting with footrest at same time (The back part down and footrest up / the back part up and footrest down)

Foot rest tilting (up and down)

Examination position (memory function)

Position for getting on and out (a memory function)

Anti-shock position A
(memory function - automatically programmed factory setting, cannot be changed)/ save memory location

Movement stop / position saved

Ultrasound scan position (memory function)

The physician's choice (A, B, C) and his/her individually set memory functions (with repeated pushing down the signalling on the fixed foot control occurs)

- **Description with white ground provides the information which part will move during setting up.**
- **The length of the stretched cable of manual control is 4 m (max).**

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Storage area for the hand controller is both on the left and right of the chassis (Fig. 1). Under the thigh rest (Fig. 2, does not apply for the version with Goepel type leg rest), on the foot section (Fig. 4), on the GKB-GX screen arm (Fig. 4).

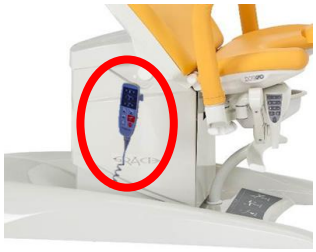


Fig. 1



Fig. 2



Fig. 3



Fig. 4

4.3 Motorized Adjustments (Mobile Foot Controller)

The wireless foot controller provides remote radio transmission of a command for activation of the Gracie memory functions related to the positions for getting on, examination, and ultrasound scan. The remote control transmitter is powered by two alkaline batteries of LR14 type, C size, voltage 1.5 V. The mobile wireless foot controller signal range is 5 m from the transmitter located in the chair base. The assumed minimum service life is approx. half a year. For correct function we recommend using these types of batteries:

1) GP (14AU-U2)
2) VARTA (BV4914)
3) Duracell (EY-DUR-LR14X2)

The turned on wireless control of the foot controller is indicated by the pilot light (LED diode) on the board of fixed foot control (Fig. 1). Control of the foot controller can be turned off by the switch at the back side of the chair (Fig. 2,3).



Fig. 1

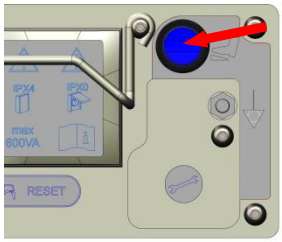


Fig. 2 GKB-CX

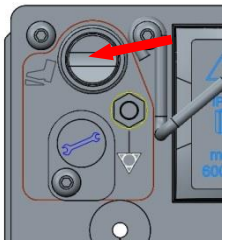
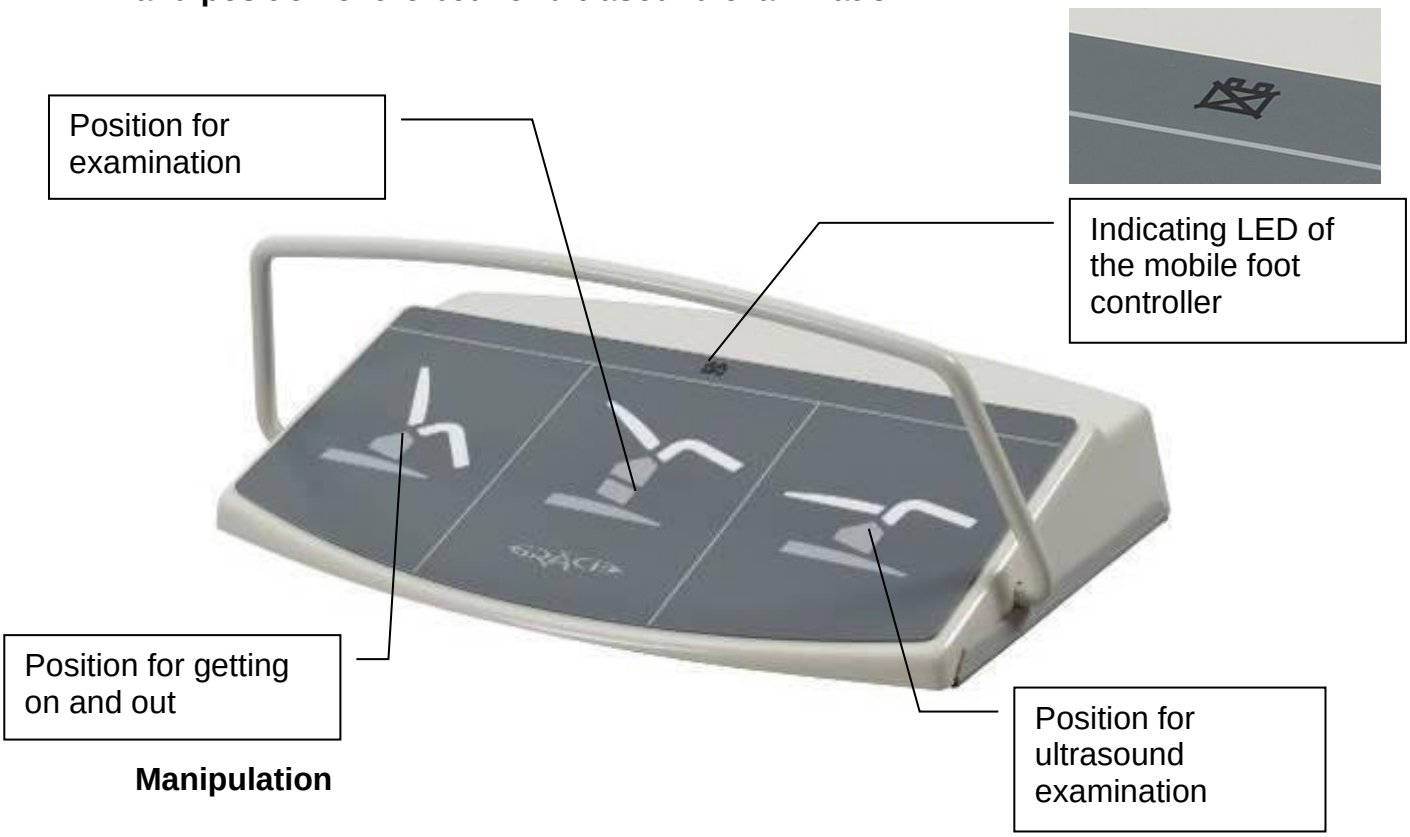


Fig. 3 GKB-AX

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Controlling the position for getting on and out, position for examination and position of the bed for ultrasound examination:



Manipulation

To start the chair moving the corresponding button of the foot control needs to be stepped on shortly. This control is equipped with a protective wire that prevents accidental stepping on the control button. When any button is pressed again, a command to stop the chair is sent.

Matching the remote controllers and Gracie

- **Maximum of 3 foot controls, which can work together then, can be paired with one chair (receiver in the chair base has 3 positions, into which individual foot controls are stored)**
- **If the remote control is coupled with the chair for the second time and it was already coupled with this chair before, then the remote control is coupled for a new position (unless the reset occurred).**
- **The foot controller and the chair are already paired at the factory and do not need to be paired again during the first installation!**

1) Unscrew 4 screws from the back side of the foot control (fig. A)
2) Remove the protective cap at the chair base (fig. B), then press the button under the cap by a non-metallic, non-conductive object so that the surface is not scratched. The LED indicator on the receiver will light up.

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3) Then push on the button placed on printed circuit of the foot control (fig. C). Small diode placed on the printed circuit will flash once. (fig. C)
4) The LED on the receiver goes out (fig. B). Cover the button with a protective plug.
5) Now the correct connection is set up.
6) Screw the cover of remote control back (fig. A)
7) Set up the chair in standard position and test function of wireless control.



Fig. A



Fig. B



Fig. C

How to erase saved position



If all three positions have been saved but some new controller should be assigned, all the controllers connected so far must be deleted from the receiver memory. For erasing, please hold the pairing button (use a non-conductive object for this operation) on the GRACIE chair up to the LED indicator turn off.

Error Messages

Error messages are indicated by means of a LED located on the mobile foot controller. When operating the device, the following situations can occur:

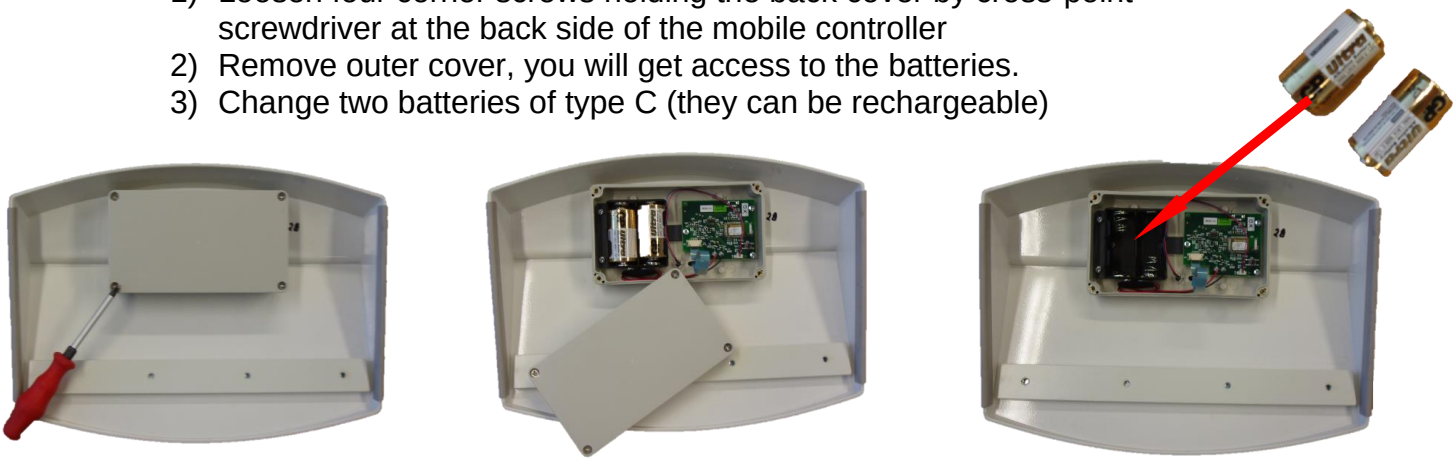
Almost discharged battery	After pressing the button, the battery symbol will flash

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In case you will not use the wireless foot control for longer period, remove batteries from the control. It is recommended to replace the batteries every two years!

Changing batteries of the wireless foot control

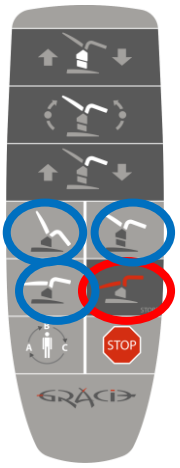
1) Loosen four corner screws holding the back cover by cross-point screwdriver at the back side of the mobile controller
2) Remove outer cover, you will get access to the batteries.
3) Change two batteries of type C (they can be rechargeable)



4.4 Memory Functions

Mobile foot control and part of the hand control are equipped with buttons (so called memory functions) to set up the positions for getting on, examination and ultrasound. After pushing on the button the chair automatically goes to the selected position set in advance. In case of using the memory function, please, pay enhanced attention when the chair is setting up itself for certain time – prevent collision with surrounding objects or persons.

- Movements of impulse function can be stopped at any time using either the stop button located on the manual controller or any button on the manual or the foot controller.
- The chair is equipped with a tilting control sensor preventing it from overtilting. If a dangerous tilt of the chair occurs, all chair movements are automatically halted.



How to save positions on chair

To do this, use the "STORE" button (highlighted in red in the picture), which you keep, and simultaneously push on one of the buttons for memory functions (highlighted in blue in the picture). Saving the position is confirmed by a sound signal (beep). Memory functions can be set up for up to three physicians.

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4.5 Manipulating the chair

4.5.1 Using integrated wheels

It is essential that the chair travels without any person sitting in it.

Manipulation wheel is used only for chair travel within a room for the purposes of cleaning the area under the chair, setting up the chair in the room, etc.

Sticking the manipulation wheels out

1) Drive the chair up from its lowest position (c. 10 cm).
2) Push on the button for sticking the wheels out.



3) Hold the button for sticking wheels out and simultaneously drive the chair to the lowest position, which inclines the base and sticks the wheels out.
4) The button does not need to be held – it is pressed permanently (it holds itself)
5) Now take hold of the chair by holding ends of footrests, lift them and then you can manipulate with the chair.



Sliding the manipulation wheels in

1) Drive the chair up (watch electric cables under the base)
2) The wheels automatically hide and the base is inclined to the original position. The signal for secure sliding the wheels in and setting up the base is an audible click together with the sliding out of the button for sticking the manipulation wheels out.
3) **Memory functions do not operate with manipulation wheels sliding out. It is forbidden to use the chair with manipulation wheels sliding out.**



4.5.2 Without integrated wheels

Correct transport position of the chair

1) The chair is in the lowest position (minimum column height)
2) Footrests must be set up as low to the ground as possible.

If the two above mentioned conditions are kept, the chair can be held by the footrests and the back part and it can be moved. During manipulation the chair needs to be lifted. The chair may not be shoved so that safeguard of the switch placed underneath in the centre of the chair frame is not damaged.

Improper position of the chair

Moving the chair by grasping the footrests, which are not in the lowest position in relation to the ground, can cause permanent damage of the column covers, which makes the chair unserviceable.



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4.6 Pinching Points

When adjusting the foot rests, there is a danger of pinching the body under the seat. Thus, it is forbidden to place any part of the leg in areas indicated by a red circle as in Fig. for reasons of preventing injuries. Pinching between the footrest and seat can occur.

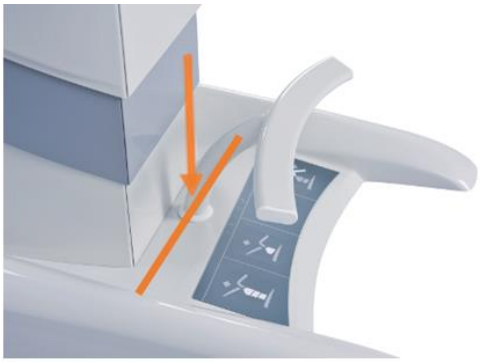




If the backrest adjustment is running, there is a risk of pinching a body part between the backrest and the top cover of the column. It is therefore forbidden to put any part of the limb in the area in order to prevent injuries. A pinch may occur.

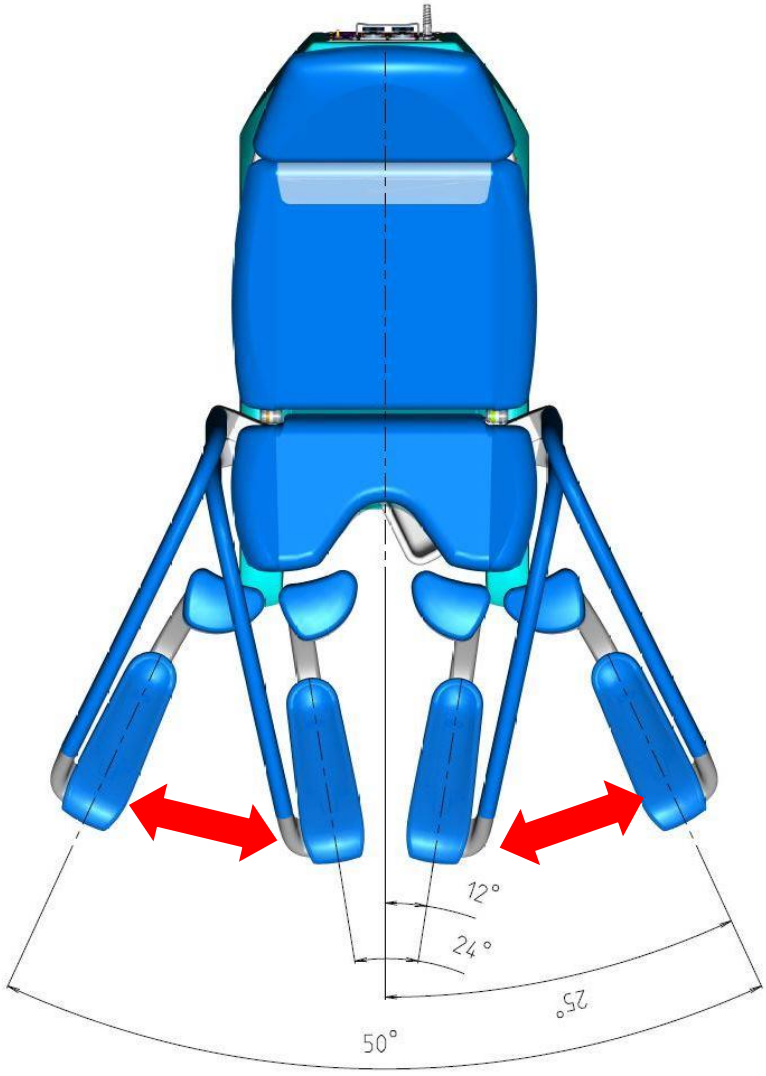


If the chair is adjusted to the boarding position (downward movement), objects may be pinched between the chassis cover and the column cover. Therefore, it is forbidden to place any objects on the chassis cover.



4.7 Synchronous Adjustment of Foot Rests

- **Vertical set up can be changed using the hand control.**
- Footrests can be horizontally adjusted manually, where both footrests are connected (coupled together). When pushing to one of the footrests, the other one is adjusted too.
- Force of setting up can be adjusted using the screw for adjusting toughness of footrests operation.



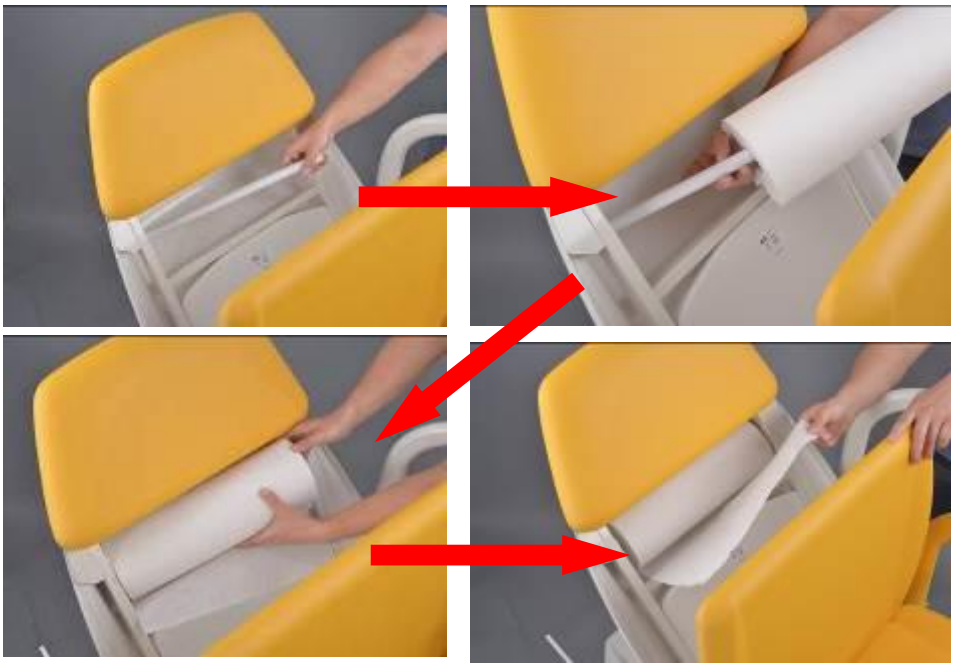


A screw for adjusting rigidity of the foot rests

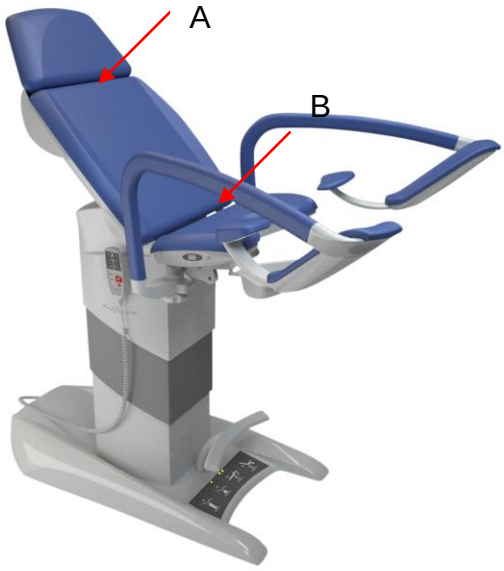
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4.8 Paper Roll Replacement

To replace the paper roll, tilt the upholstery of the backrest. Paper roll width is 39 cm.



Paper from a roll can be drawn through the upper gap (point A), the back part and sitting part will be covered, or through the lower gap (point B), only the sitting part will be covered.

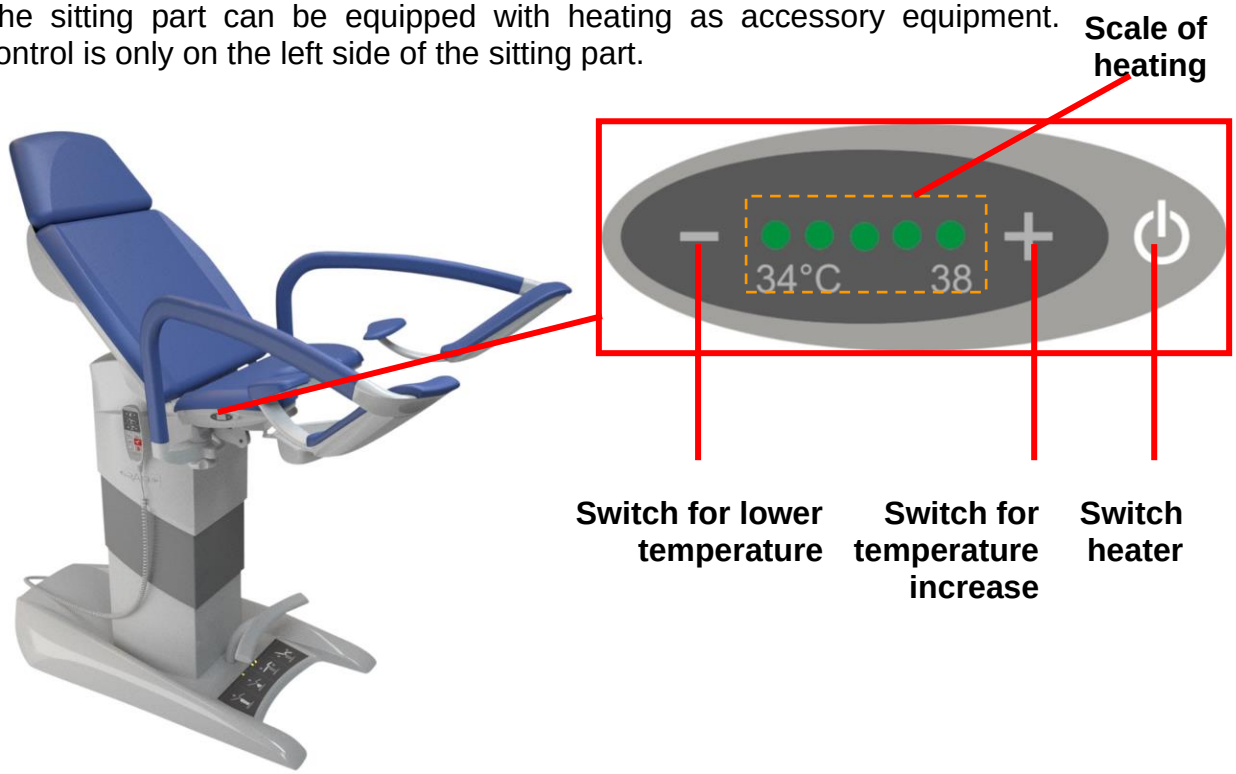




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4.9 Heating of seat section

The sitting part can be equipped with heating as accessory equipment. control is only on the left side of the sitting part.



Seat heating serves to increase the patient's comfort during the examination. The seat can be individually adjusted to the surface temperature using the "+" (temperature increase switch) and "-" (temperature decrease switch) buttons - see figure. In the case of connecting to the electrical network, the seat automatically does not turn on – in stand by mode that signalizes the flashing middle LED on the panel. To turn it is necessary to press the „switch heater“ and then set the temperature individually. The temperature change occurs depending on the ambient environment. Seat heating switches off automatically after eight hours, respectively press again the „switch heater“ to disable the function.

It is prohibited to use the seat heating in case of any mechanical damage of the seating section. In this situation it is necessary to call an authorized service center to repair the seating section and check the function and safety of heating.

The operator should acquaint the patient with the fact of the heated surface of the seat and warn of a possible temperature change, which may be higher than the normal ambient temperature.

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If the ambient temperature falls below 0° C the seat heating is disabled (does not work). The heating function is active again if the seat is placed in an environment with ambient temperatures above 0° C. When the sun or other external source of heat heats up the seat may activate thermal fuse that disconnect the heating. (Surface temperature is above 50°C). After cooling of the seat section the thermal fuse is deactivated, thereby heating function is available again.

Before removing the whole sitting part, first it must be tilted off and cable for heating the seat must be disconnected from the base heating board (Fig. No. 1).



Fig. 1

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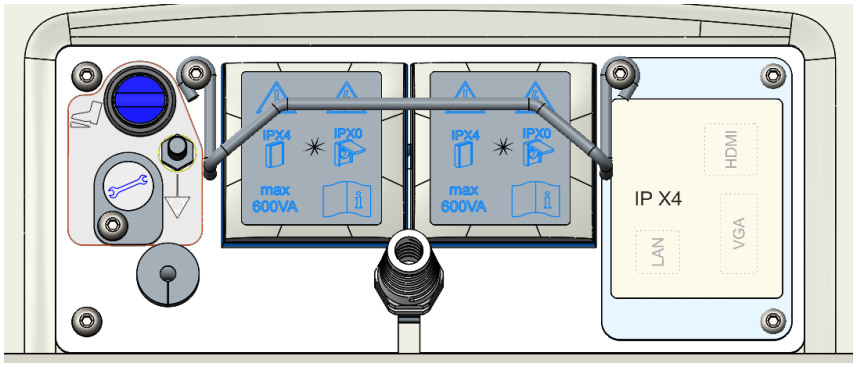
4.10 Antishock Position



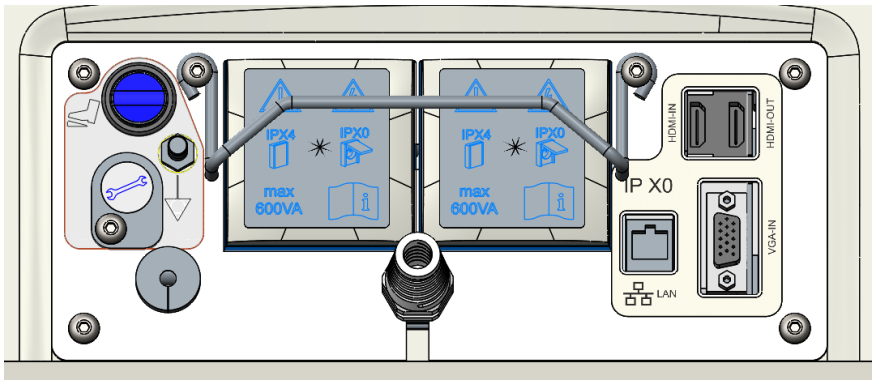
Setting up the anti-shock position will be carried out by prolonged pressing the button tinged with red on hand control. After such pressing the chair moves itself to the requested position. If the back motor or footrest motor does not function, this position cannot be reached.

4.11 The socket-outlet panel

If the HD chair has a preparation, colposcope or monitor, a sticker with the words IPX4 is placed on the cover plate.

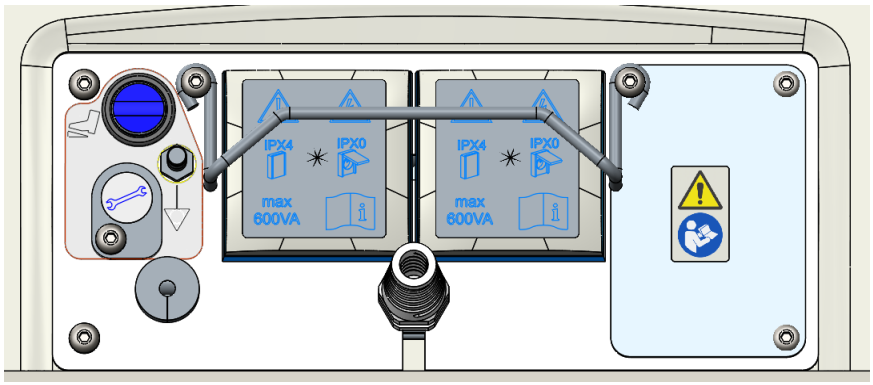


Notice: After uninstalling the cover, you can access the connectors, but the IP cover of the chair drops to IPX0 (shown by the sticker).



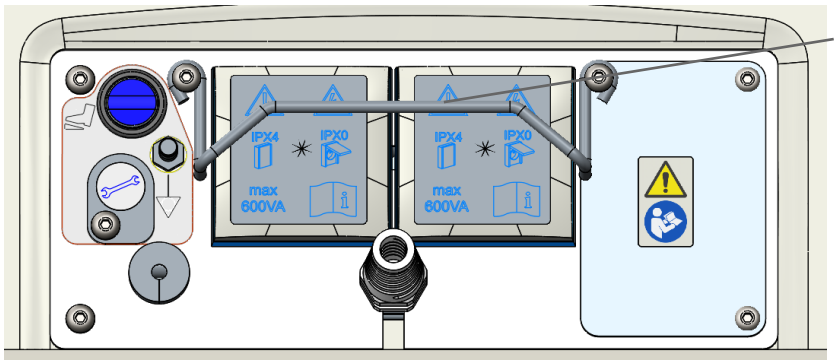
If a warning is placed on the cover plate, there are no connectors under the cover. The cover may only be replaced by an authorized and trained worker using tools.

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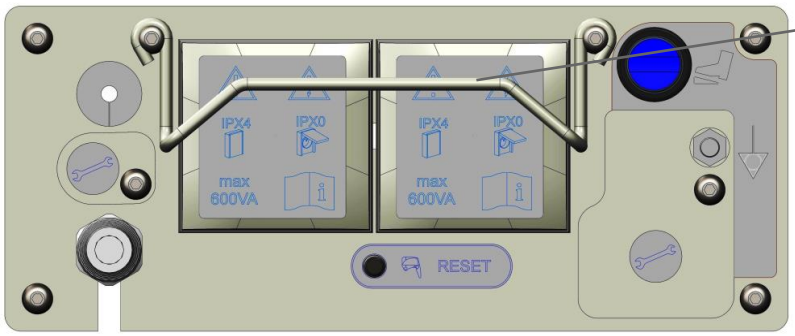
The splitter sockets supplied with the ME system must only be used to supply devices (colposcope, ultrasound) intended as part of this ME system. Multiple socket outlets with the possibility of connecting additional instruments. Connection of electrical instruments to multiple socket outlets gives rise to the medical system that can result in reduction of the safety level. The medical system is subject to ČSN EN 60 601-1 requirements. No additional multiple socket outlet or extension cable can be used in the medical system. Multiple socket outlets can be used to supply only those instruments determined as part of the medical system. **Input power per socket outlet must not exceed 600 VA**. A protective device of the socket-outlet panel serves as protection against unskilled connection of the electrical instrument and protection against electric shock. At the same time, it serves as protection against self- or unintended unplugging of the mains socket outlet. To remove the protective device, it is necessary to loosen two screws holding it.

Connecting of an appliance can be carried out only after dismantling the protective equipment.



Protective device

GKB-AX



Protective device

GKB-CX

After connecting cabling, the mains plugs must be secured by protective equipment.



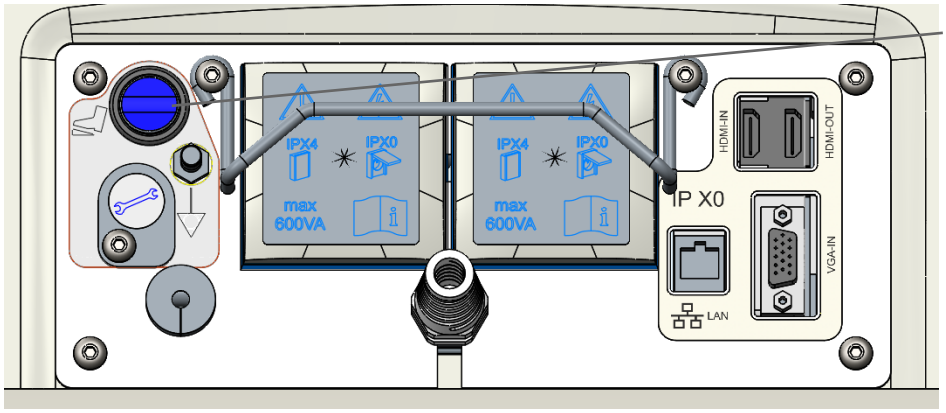
Protective device

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4.12 Equipotential terminal

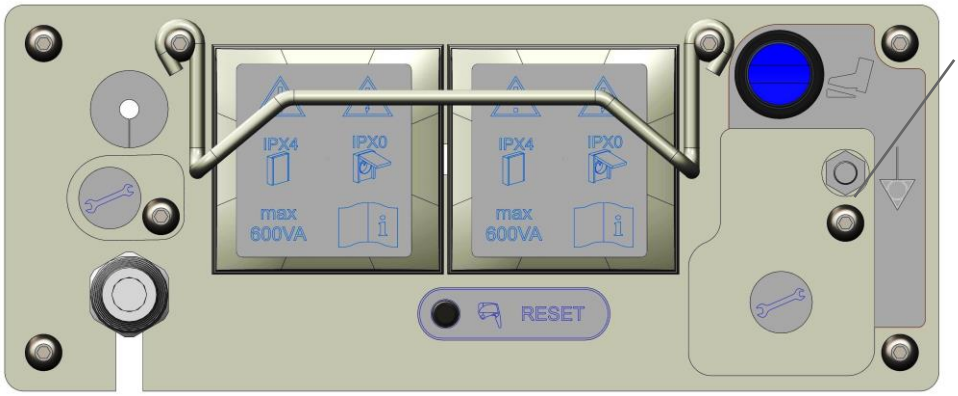
It is a component of each version of the chair. It is used for connecting with other apparatuses in the examination room to equalize electrostatic tension.

GKB-AX



Equipotential terminal

GKB-CX

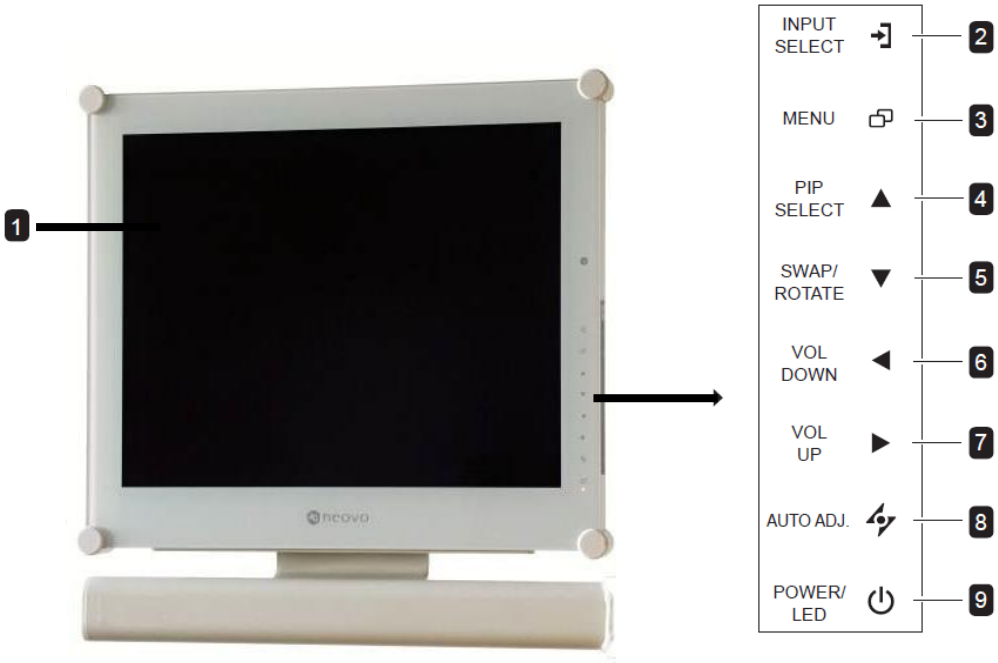


Equipotential terminal

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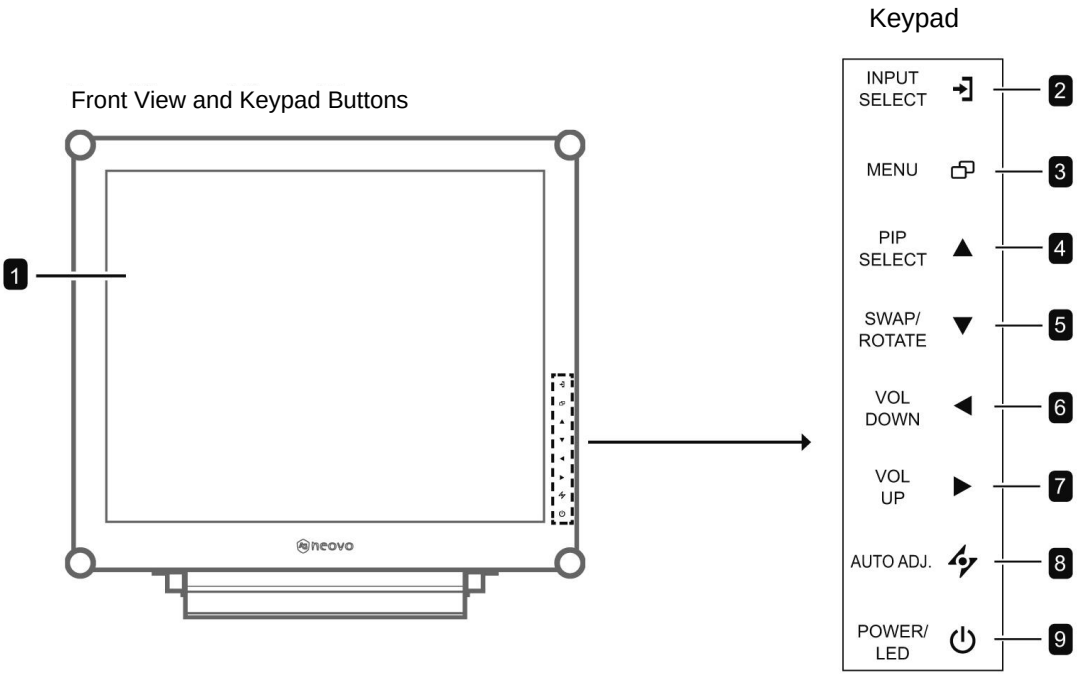
4.13 LCD Monitor GKB-CX

The screen has a touch panel on the front side of the display (see the picture below). The description of the individual touch buttons is from the right side of the screen.



PRODUCT DESCRIPTION

LCD Display Overview



1 Display screen
The LCD display screen is protected by NeoV™ Optical Glass.

2 SOURCE
Press repeatedly to select the input signal source.

3 MENU
- Press to display the OSD menu.
- Press again to hide the OSD menu.

4 UP
- Press repeatedly to select PIP option.
- During OSD menu selection, press to move up a menu or submenu.

5 DOWN
- Press to swap the PIP main and sub picture.
- When PIP is off, press to rotate the image 180°.
- During OSD menu selection, press to move down a menu or submenu.

6 LEFT
During OSD menu selection, press to adjust the settings.

7 RIGHT
During OSD menu selection, press to select an option and adjust the settings.

8 AUTO ADJUSTMENT
- For VGA input signal source, press to perform auto adjustment.
- During OSD menu selection, press to close the OSD menu or exit a submenu.

9 POWER/LED indicator
- Press to turn the power on or off.

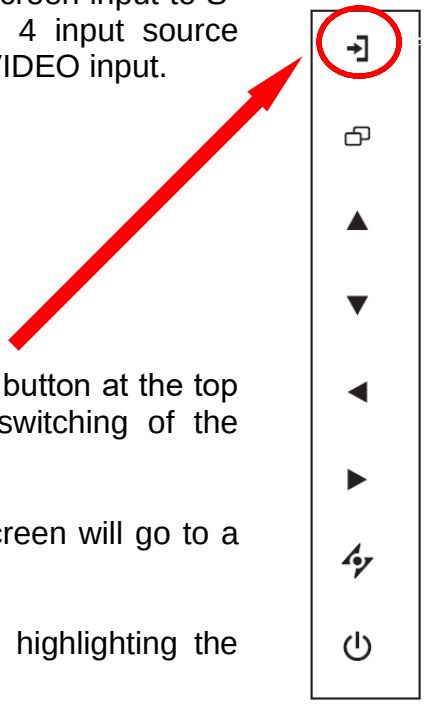
Green - Power on
Amber - Standby mode
Off - Power off

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You can turn the screen on and off by touching the POWER/LED button on the front side of the touch panel.



After turning the video colposcope on you need to switch the screen input to S-VIDEO (input from the video colposcope). The screen has 4 input source options. You need to keep switching them until you find the S-VIDEO input.



Input sources:

1) Analogue input (VGA)
2) Digital input (DVI)
3) CVBS
4) S-VIDEO

You can change the inputs by touching the "INPUT SELECT" button at the top of the touch panel. There is a 2 second delay between switching of the individual inputs.

If you do not find an active input within 5 – 6 seconds, the screen will go to a standby mode, even if the video colposcope is on.

After switching the input, a list will display for a short time, highlighting the present input, e.g. CVBS:



If the selected signal input is not connected, "NO SIGNAL" message will be displayed and the screen will switch to standby mode. For proper display, the video colposcope must be on and the correct signal input must be selected.



If the video colposcope is off, the screen will go to a standby mode. When the video colposcope is turned on again, the screen turns automatically on.

If the screen is fully turned off (no diode shines), you need to power it up by the POWER/LED button once the video colposcope is on.



Selecting the menu language

The required language of the screen menu can be set by touching the MENU button and then in the LANGUAGE section choosing the respective language.

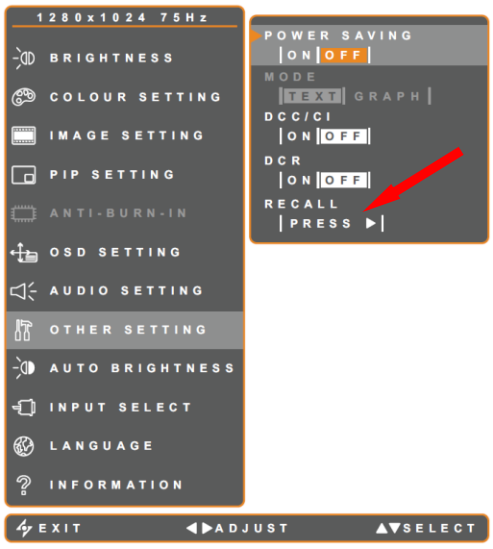




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Default factory setting of the screen

We recommend keeping the factory setting of the screen. You can restore the factory setting in the menu section “OTHER SETTING” where you select the “RECALL” function and confirm by the right arrow.



When the factory setting of the screen is restored, all user set values will be lost.

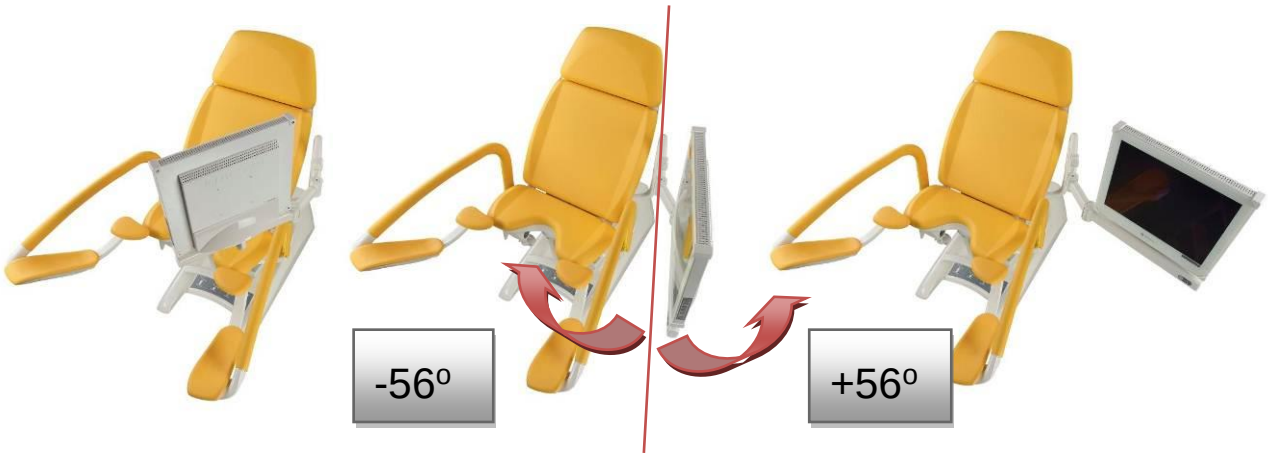
The other buttons on the touch panel of the screen serve for internal setting. You can find detailed instructions at website of the screen producer, AG Neovo (www.agneovo.com, screen type DR-17P).

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The monitor can be tilt horizontally in the range 0 ° - 15 °. Height adjustment is not possible. Monitor arm moves along the column of gynecological chair.



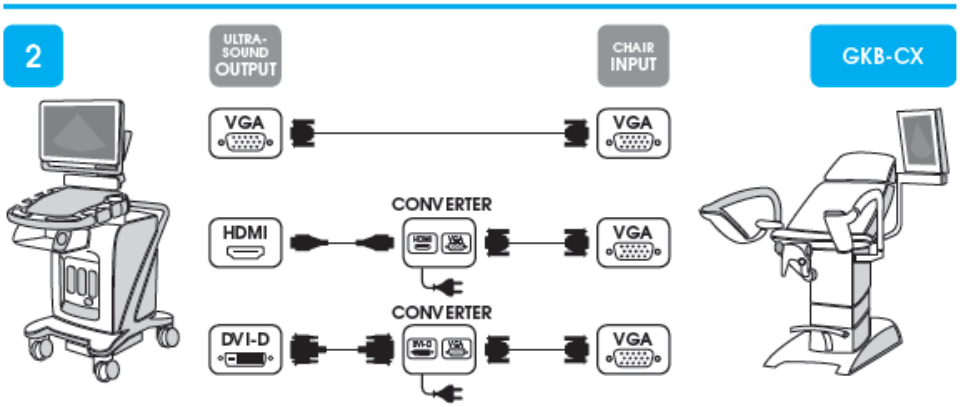
Monitor can be inclined using the joints of monitor shoulders ranging from –56°to + 56



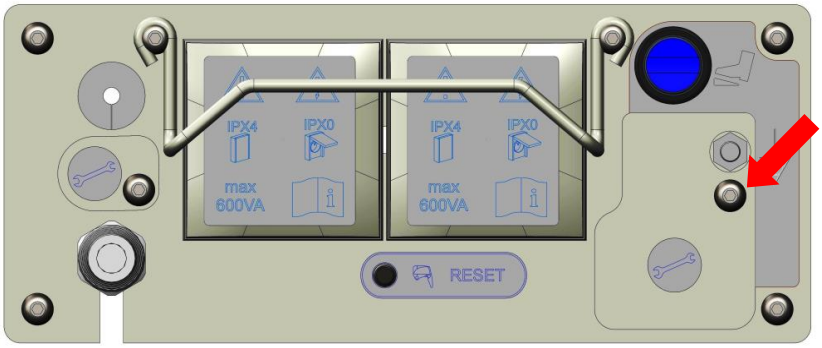
Do not cover the vent holes on rear side of the display and do not prevent from access of air to them. Do not place the display close to heat sources as for example heating bodies or on places exposed to direct sunshine, with high dustiness and close to sources of mechanical vibrations or strokes.

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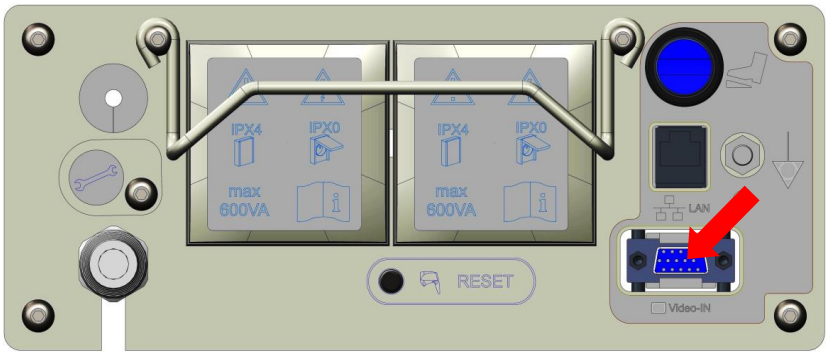
Ultrasound input



In case of connection of ultrasound with the chair, you must first unscrew the safety cover using a hex key.



Then external ultrasound can be connected through the input placed on the socket board in the back part of the chair base (VGA type input).

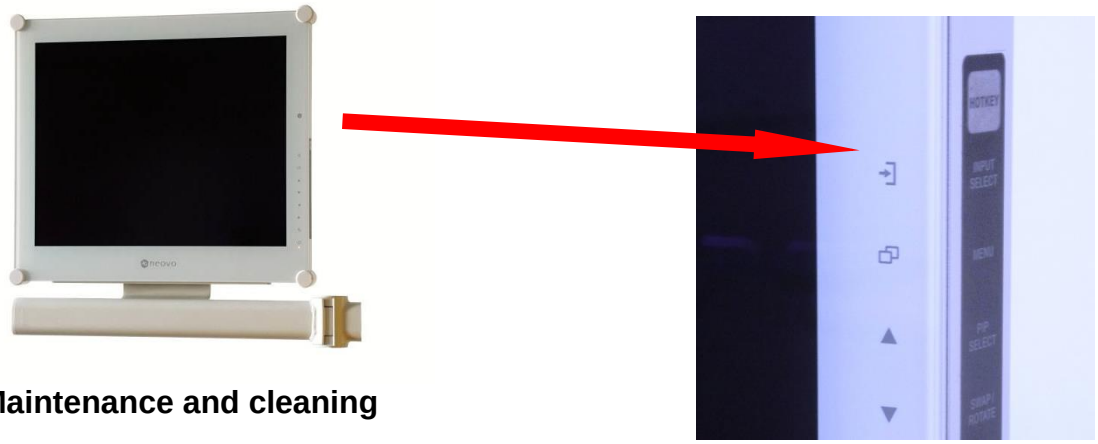


Connection of any other appliance is not possible!

There is a firmly installed input from the video colposcope leading to the screen, marked as S-VIDEO. On the front of the touch panel of the screen there is a toggle switch (SELECT INPUT) to select the image input from the video colposcope or from a connected external ultrasound (marked as “Analogue input”).

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The screen has 4 inputs, you must switch among them until you find the required input.



Maintenance and cleaning

- Performing regular annual revision of medical product is necessary.
- To have a clear image, it is necessary to wipe the video colposcope lens with a cloth made of special microfibres.

Maintaining display

- Prior to cleaning, turn the screen off. This will prevent accidental pushing of the buttons on the touch panel.
- Clean the case, glass and the control elements with a soft cloth, mildly moist with soap water. Do not use abrasive sponge, cleaning powder or solvents such as alcohol or petrol.
- Do not touch, scratch or knock on the glass of the monitor with sharp objects such as a pencil or a screwdriver. Such contact may scratch the glass.
- Do not insert sharp objects and do not pour liquids into ventilation openings of the screen. It may cause fire, electric shock or a malfunction.



Do not attempt to repair this appliance, because by opening the cover you would be endangered with high voltage and other hazards.

4.14 Full HD GKB-GX Screen

The monitor (21.5") includes a control panel on the front (the image shows the right hand side option). Each button has the following functionality:

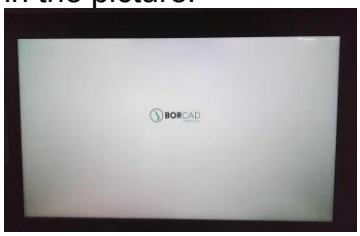


1) Power on/off*
2) Access/browse the menu and adjust values
3) Access/browse the menu and adjust values
4) Turn on displaying the image from the video colposcope (in case the video colposcope is off or on stand-by, it will switch on). Confirm the selected value by pressing ‘enter’.
5) Turn on displaying the image from the external input of the video converter (ultrasound). For return without saving select ‘exit’.



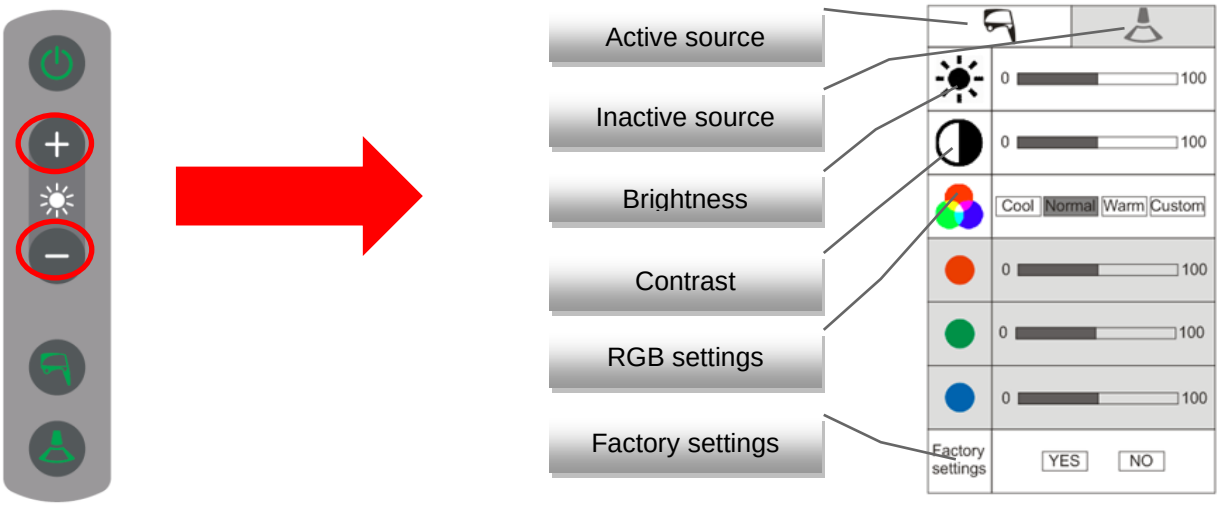
- **If only one external device (ultrasound) is connected to the GRACIE chair, pressing of the appropriate button on the control keyboard on the screen will display its image on the screen, regardless of whether HDMI or VGA input is used (the converter is able to identify it).**
- **If two external devices are connected to the chair, one into HDMI and the other to VGA input, pressing of the button on the control keyboard will display image primarily from HDMI input. Second pressing will switch over to image from VGA input.**

* Initialization takes place after the screen is switched on. The status is shown in the picture.



4.14.1 Operating the monitor

Basic functions of the monitor, such as brightness, contrast, RGB and reset of factory setting can be set in the menu. To access the menu, press + or − on the control panel of the monitor.



Settings are always adjusted for the currently selected source (colposcope or ultrasound). The current settings are in a white rectangle with an image of the input source. Inactive source is in a grey rectangle. RGB has three automatically pre-set values: ‘Cool’, ‘Normal’ and ‘Warm’; individual settings of these options can be accessed by pressing the ‘Custom’ tab.

Instructions

After activating the menu, you can move from one item to another vertically by using + (upwards) and − (downwards). The parameter is selected by pressing the ‘colposcope’ button. After the parameter is selected, the scale is activated where you can move horizontally by using + (to the right) and − (to the left), and again you confirm your selection by pressing the ‘colposcope’ button..

- **After 10 seconds of inactivity, the menu automatically switches off.**
- **Reset to factory settings will erase the current monitor settings!**

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4.14.2 Image from the video colposcope



After the chair is connected to power supply, initialization of the system of the video colposcope starts. This condition is indicated by fast flashing of a greed LED on the keyboard of the video colposcope as well as on the screen (duration of initialization: ca. 15 sec.).



When both diodes start flashing slowly, the system is ready for use and the video colposcope can be switched on.

Icon in the lower right corner informs whether the GRACIE chair is connected to the doctor's PC.



The chair is not connected to the PC.



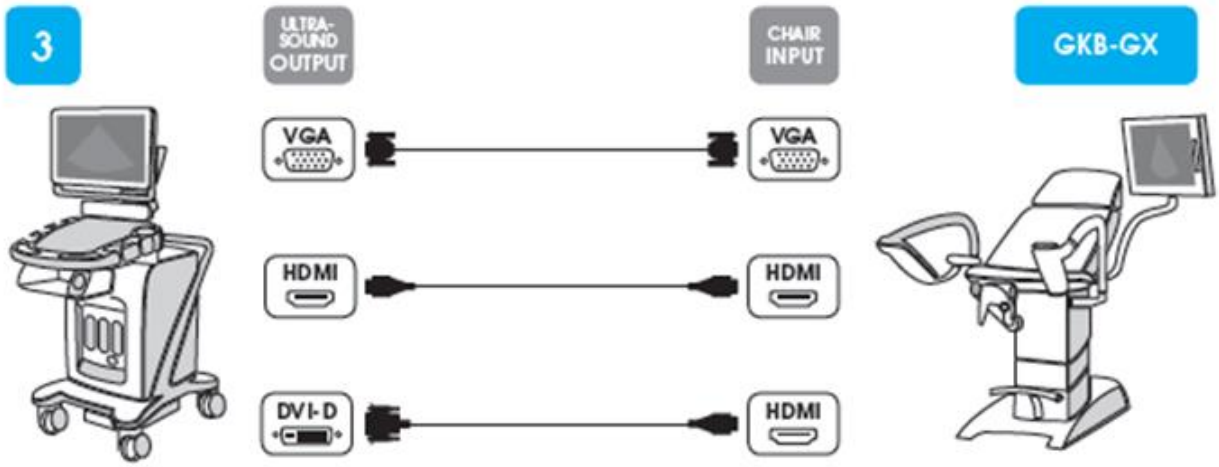
The chair is connected to the PC.

If an image is transferred to the doctor's PC, the green arrows in the icon start blinking.

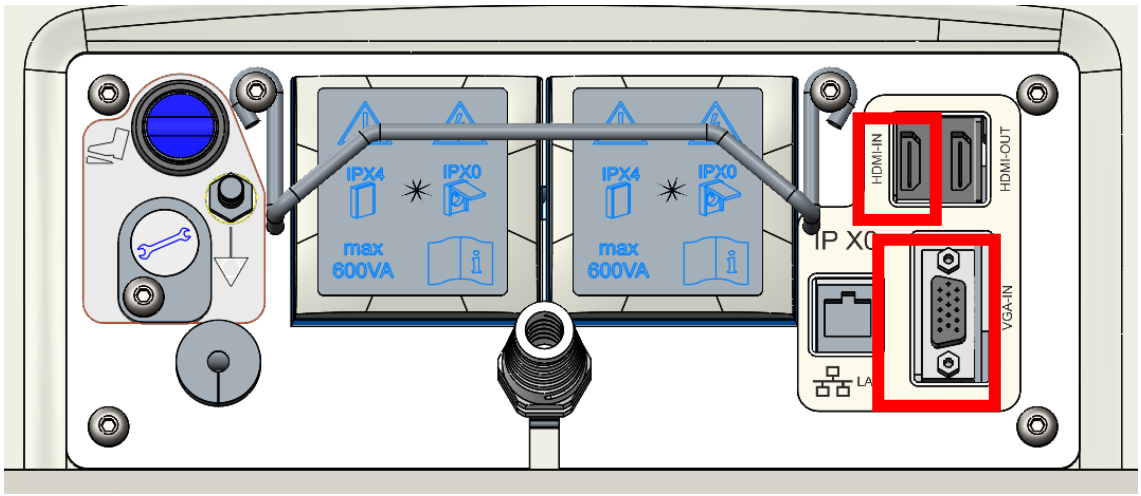


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4.14.3. Image from external input (ultrasound)



Remove rubber covers on the rear side of the chair base. Then it is possible to connect an external device using input located on the socket terminal on the rear side of the chair base (VGA input, HDMI input).



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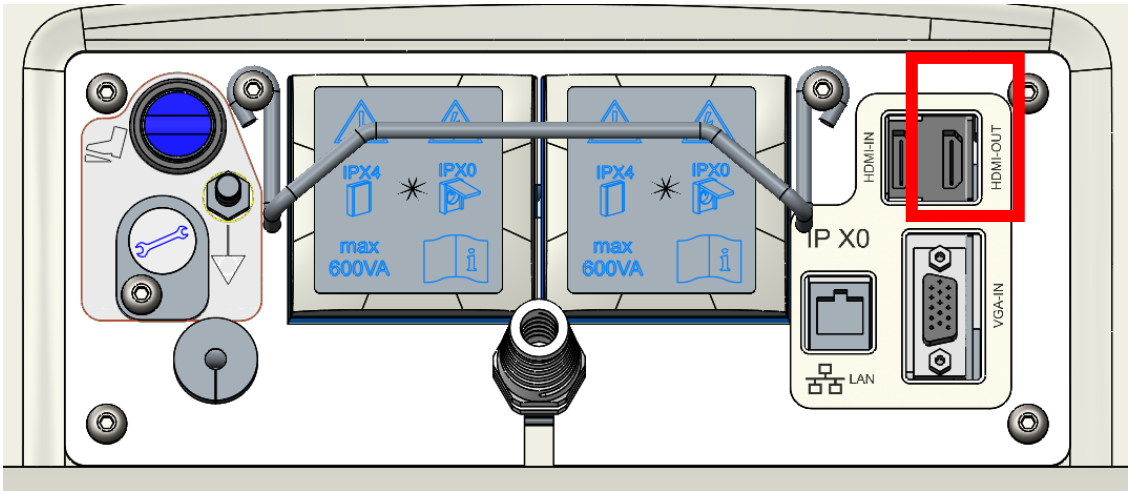
After the chair is connected to power supply, initialization of the system starts. This condition is indicated by fast flashing of a greed LED on the keyboard of the video colposcope as well as on the screen (duration of initialization: ca. 15 sec.).



When both diodes start flashing slowly, the system is ready for use. To display image from ultrasound on the screen press touch button for the selection of ultrasound image.

4.14.4. Connection of external screen in the office

Remove rubber covers on the rear side of the chair base. Then connect external TV via HDMI cable to the GRACIE chair (HDMI OUT output).



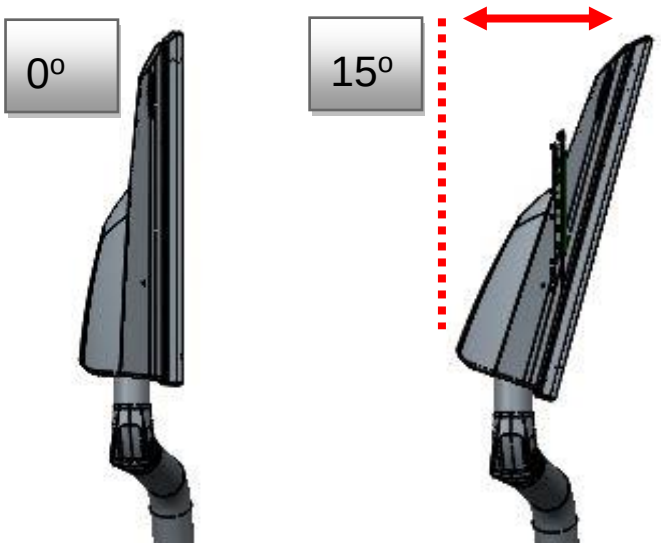


If image from the video colposcope is displayed on the screen, image from the video colposcope is displayed also on the external screen connected via HDMI output. If image from one of the inputs (HDMI or VGA) is displayed on the screen, the same image is displayed also on the external screen connected via HDMI output.

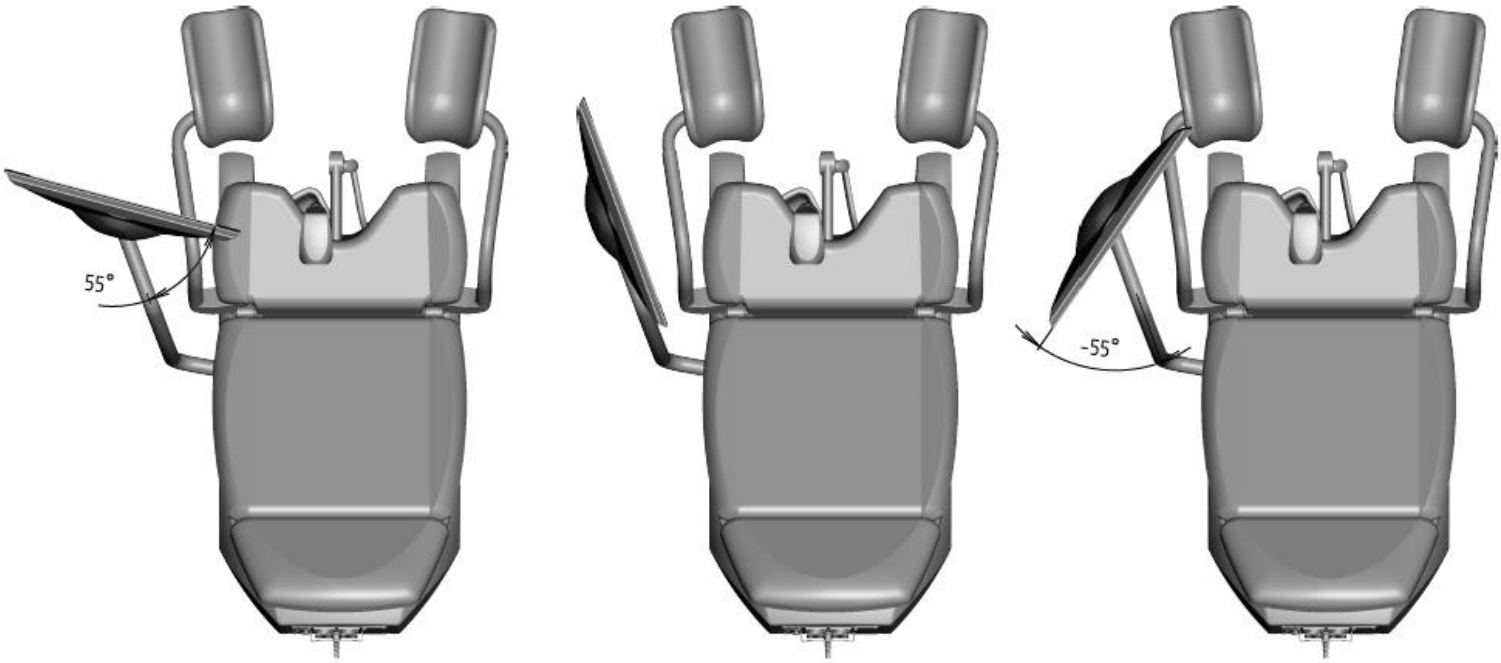
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Positioning

The screen can be tilted horizontally by 0º to 15º. Height adjustment of the screen is not possible. The arm with the screen moves along with the chassis of the gynaecological chair.



The screen can be tilted on the joint in the arm in the range from – 55º to + 55º.



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Maintenance and cleaning

- A regular yearly inspection of this medical equipment must be carried out.
- To ensure clear image, it is necessary to wipe the video colposcope lens with a microfiber cloth.

Maintenance of the screen



- **Disconnect the screen and chair from power supply before cleaning. This will prevent accidental pressing of buttons on the control panel.**
- **Clean the screen cover and control elements with a soft cloth slightly moistened in water with detergent. Do not use an abrasive sponge, cleaning powder or solvents like alcohol or gasoline!**
- **Prevent any contact with water!**
- **Do not touch, scratch or tap the screen with sharp objects like a pencil or screwdriver. Such contact may lead to scratching of the surface.**
- **Do not insert sharp objects or pour liquid into the openings in the screen. It could cause accidental fire, electric shock or failure.**
- **Connection of any other device is not possible!**
- **Do not attempt to repair the device by yourself. By opening the cover you may expose yourself to dangerous voltages or other possible risks.**
- **Do not place the screen near heat sources such as radiators or to places exposed to direct sunlight, places with high dust generation or near sources of mechanical vibrations or shocks.**
- **When the chair is connected to the network and the screen is in sleep mode, a LED diode is flashing.**



4.15 Digital Videocolposcope

4.15.1 Summary of basic parts (GKB-CX)

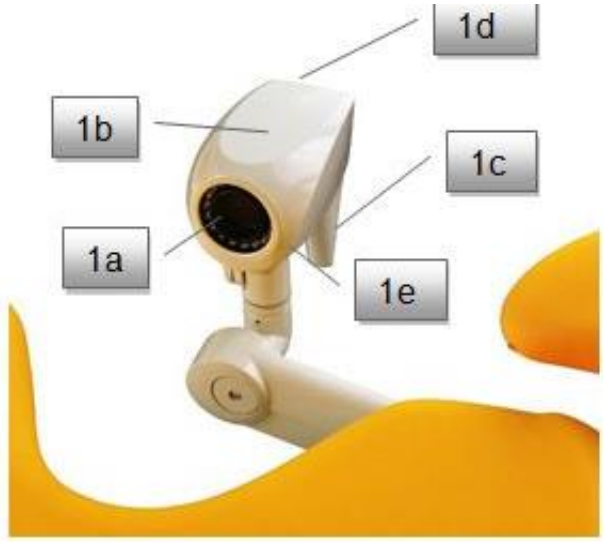


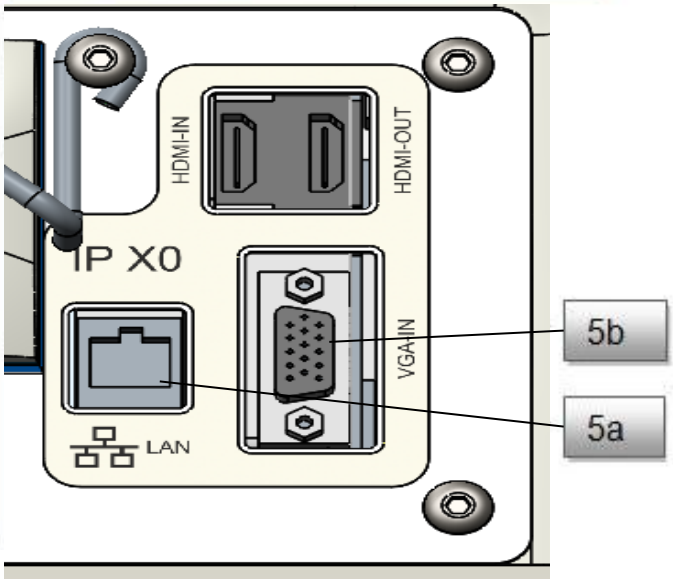
1	Video colposcope
1a	Camera with LED diodes
1b	Video colposcope body
1c	Video colposcope handle with control panel
1d	Control panel
2	Section of the video colposcope arm
3	Switch of input from the video colposcope or ultrasound
4	17" LCD screen
5a	LAN connector into PC
5b	VGA image input from external ultrasound

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4.15.2 Summary of basic parts (GKB-GX)







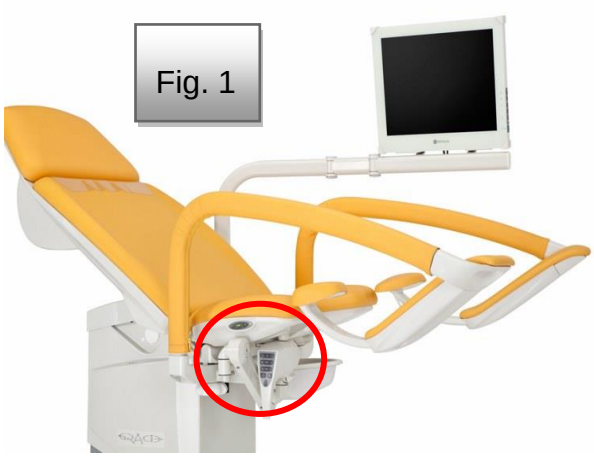
1	Video colposcope
1a	Camera with LED diodes
1b	Video colposcope body
1c	Video colposcope handle with control panel
1d	Control panel
1e	Polarization filter control knob
2	Section of the video colposcope arm
3	Switch of input from the video colposcope or ultrasound
4	17" LCD screen
5a	LAN connector into PC
5b	VGA image input from external ultrasound

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Setting up the video colposcope

The first option of setting up is in the case when video colposcope is in the passive (parking position). As evident in picture No. 1, the video colposcope is found under the seat of the Gracie examination chair. In such position the colposcope is turned off. In this position the colposcope does not create any space for pinching.

Fig. 1



The second option of setting up is in the case when video colposcope is parked out of the seat. Such parking can, however, create collision with surrounding objects.



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Procedure when removing the video colposcope from passive to active position is evident in the pictures



The colposcope is in parked position under the seat.



Gripping the handle, we pull the colposcope from under the seat out.



The colposcope is in active position.



- **During the patient´s sitting down and standing up, the colposcope must always be parked in passive position under seat.**
- **Maximum colposcope loading and display holder loading is 2 kg!**

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Potential collision situation

1. Collision situation of foot support and colposcope body or arm. Permanent damages to parts of the colposcope can occur.



2. Jam spot between colposcope arm and foot support of doctor. Personal injury can occur.

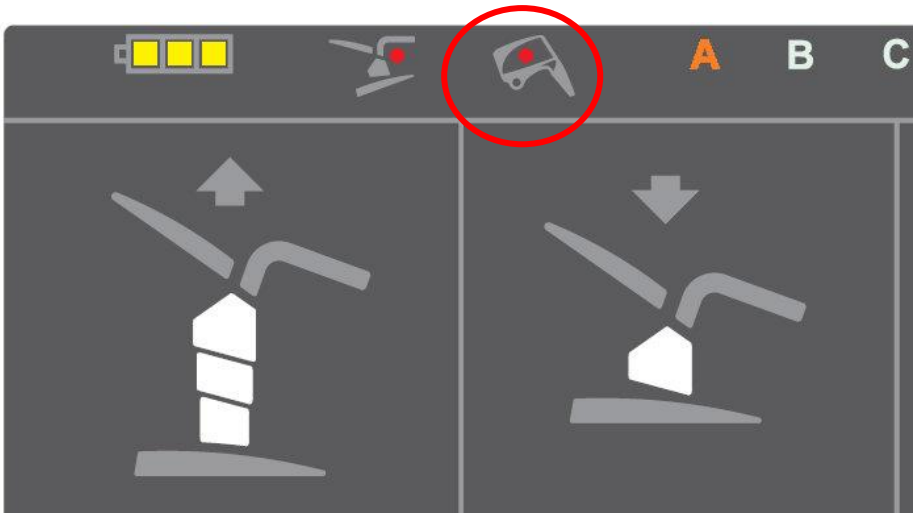


In such case the safeguard, which is placed under the seat of the chair, is activated. In case of collision it will prevent from footrest's further moving and this will prevent from permanent damage of video colposcope or shoulder of video colposcope by automatic switching off the move of the chair. Control of the chair does not work until the cause of the collision is removed.



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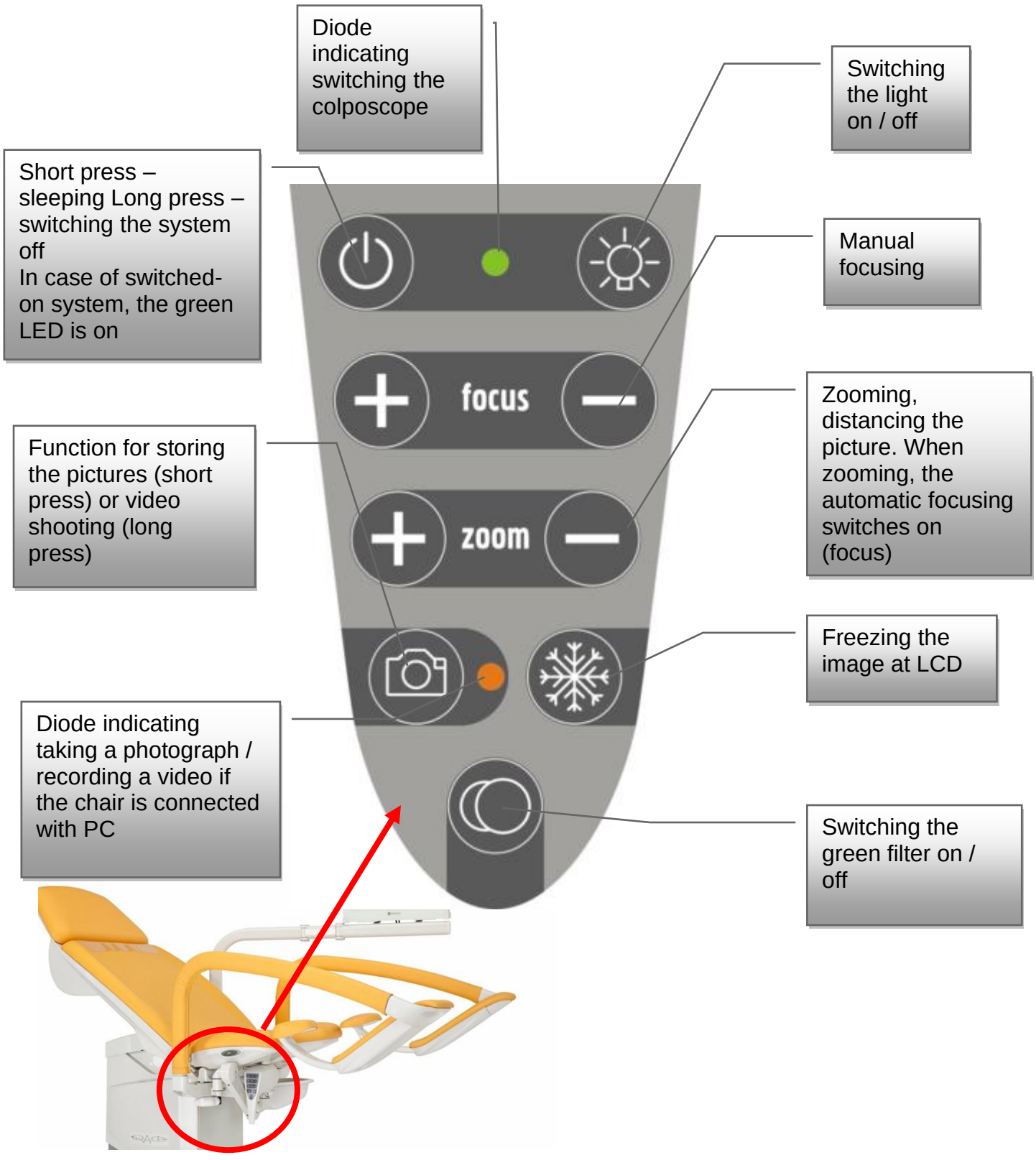
Indication of the collision is placed on the chair base and is described by the following picture:



Please remove the cause of the collision by lifting footrests and setting the video colposcope into its parking position. Then control of the chair can be assumed again.

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Colposcope control panel



Colposcope function



Colposcope is turned on by short press of left button in upper row. The turned-on colposcope is indicated by a green diode located right from the on/off button. Colposcope sleeping (passive mode) is then activated by repressing the same button. If we want to turn the colposcope completely off, we press the button long. If the colposcope is turned off and the chair is connected to the electrical power network, the green diode flashes.



To activate the colposcope LEDs, we press the right button in the upper row. Repressing the LED, we switch the light again on. The GKB-GX version additionally features two light intensities. Light intensities are switched by pressing the button.



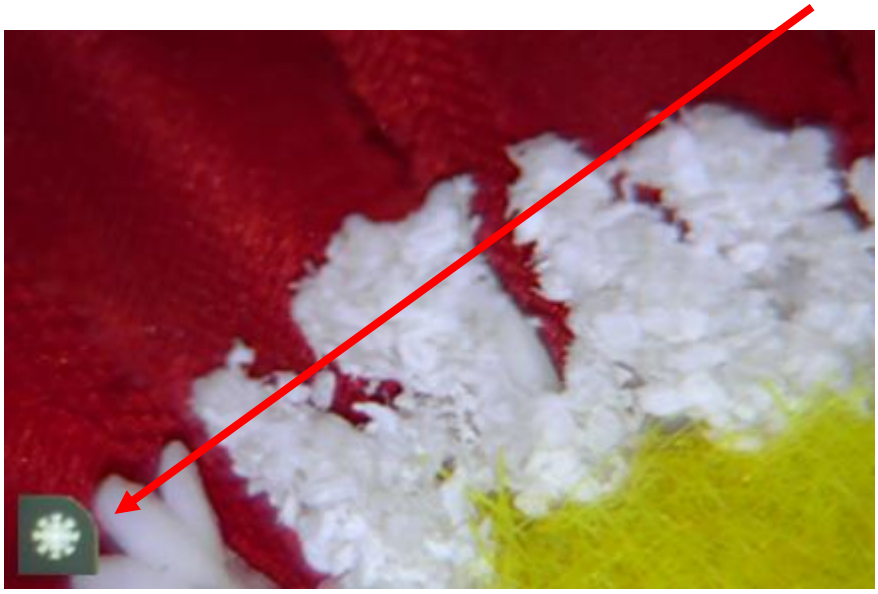
Colposcope is equipped with auto focus. Additional focusing can be set also manually using the buttons pair „focus“.



Zooming / distancing (alternation in zoom) is then possible using the buttons pair „zoom“. Pressing any of the buttons pair activates automatic focusing. When is the video colposcope turned on, the system remembers your previous zoom setting (only for version GKB-GX).



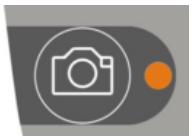
The button with snowflake icon activates the freeze function on the current image to allow deeper examination. Frozen image can be sent to the connected PC using the button with camera icon. Frozen image is indicated with a picture in the lower left corner of the screen (applicable for version GKB-GX).



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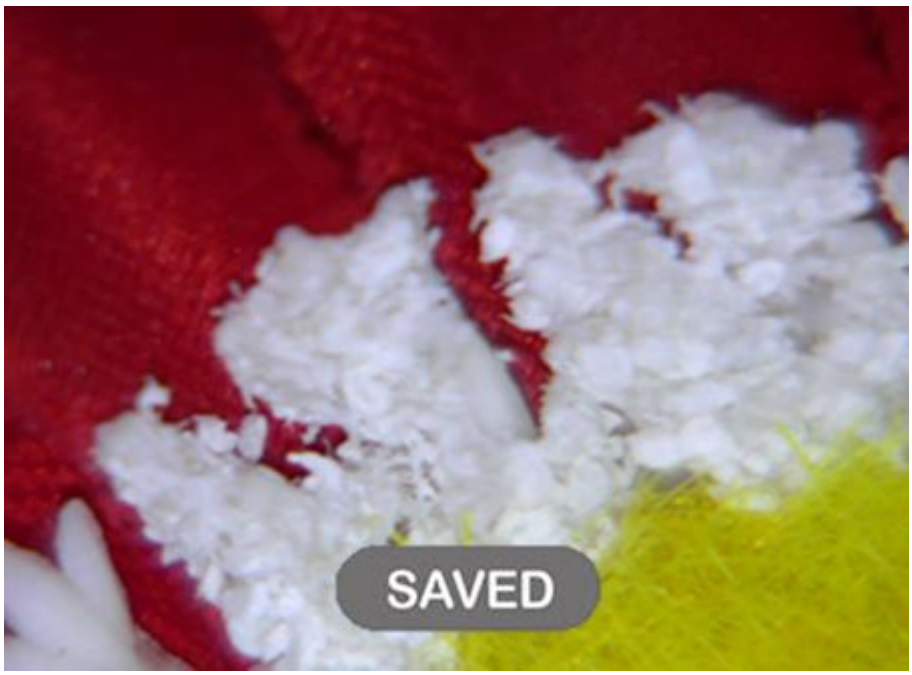


The undermost located button has function for switching the image to the green filter mode.



Short pressing of the button with camera icon allows you to store the current or frozen image to the memory of the GRACIE chair. LED diode on the right of the button is blinking when a photo is being taken. Upon long pressing of the button with camera icon, the LED diode lights up, indicating recording of a video sequence. Pressing the button with camera icon again stops the recording and the video sequence is stored into the memory of the GRACIE chair. Data are stored in ".jpg" (photos) and ".avi" (video) formats.

In the GKB-GX version the "SAVED" icon confirms by short blinking that photos/videos have been saved in the chair memory.





Colposcope works only when the chair plug is connected to the electric network.

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5 Connection of the GRACIE chair to a PC/MAC (GKB-AX / CX)



General security

- **For correct setting of the GRACIE chair into your PC it is recommended that your network administrator or a representative of your IT department is present.**
- **For correct functioning of WLAN or wired connection the chair must be connected to power supply.**
- **For safety reasons the chair must be placed firmly on the ground. Then it can be connected to a PC.**
- **Wired connection of images and videos is not encrypted. Data are protected by a network password, username and password. Choose your password carefully so that it cannot be revealed. Do not use the default password!**
- **In case of resetting all of your passwords to default settings. Freely accessible default passwords are restored and the folder with sensitive patient data may be accessible. It is necessary to set your new passwords immediately!**
- **It is recommended to implement suitable security measures to prevent unauthorized persons from accessing the device!**
- **You are recommended to backup your data (photos and videos) before every firmware update. Updating the firmware will cause their deletion!**
- **Do not connect two or more GRACIE chairs at the same time. Always perform the installation one by one.**
- **Maximum number of devices which can be connected to the GRACIE chair at one time is 5.**
- **Videos are recorded in "avi" format. APPLE MAC OS-X requires installing a player which is able to open this format.**
- **It is essential for the use of the GRACIE chair that the network connection with the doctor's computer is not blocked by a firewall. Communication with the http protocol and sharing of files in a Windows network (SMB protocol for Mac) must be enabled for proper functioning.**
- **Supported characters for all names and passwords for Wi-Fi network in the client mode are listed below. Name of the Wi-Fi network in the client mode may also contain the space character. Diacritical signs are not allowed.**

  a-z

  A-Z

  0-9

  ~!@#$%^&*()_-+={}[]:|;'\",./<>?

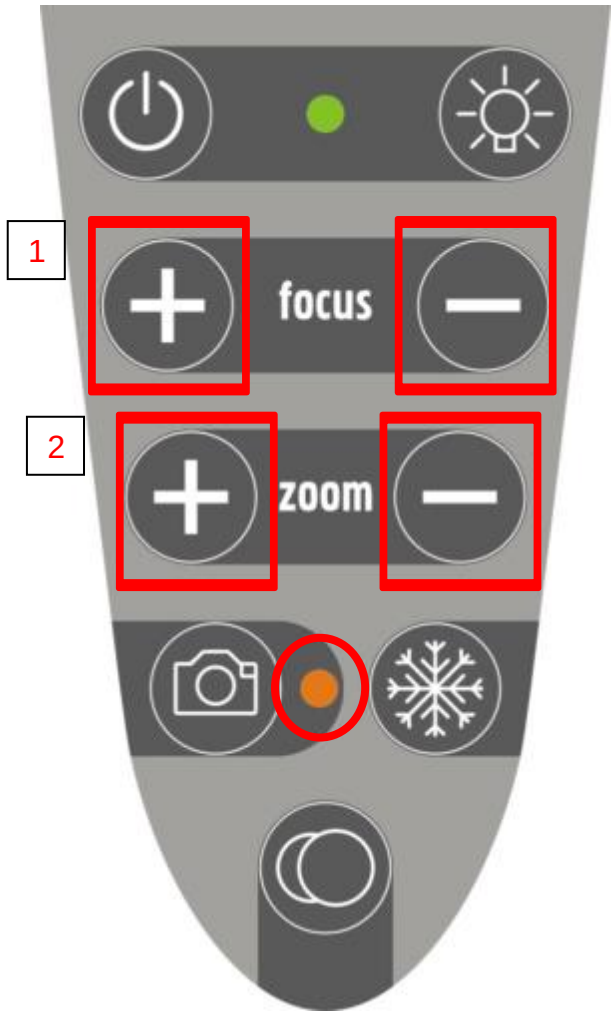
5.1 Initial steps

- Turn on the doctor's PC/MAC.
- The PC/MAC must have a WLAN module, otherwise you will have to use a USB WLAN adapter or connect the chair using Ethernet cable.

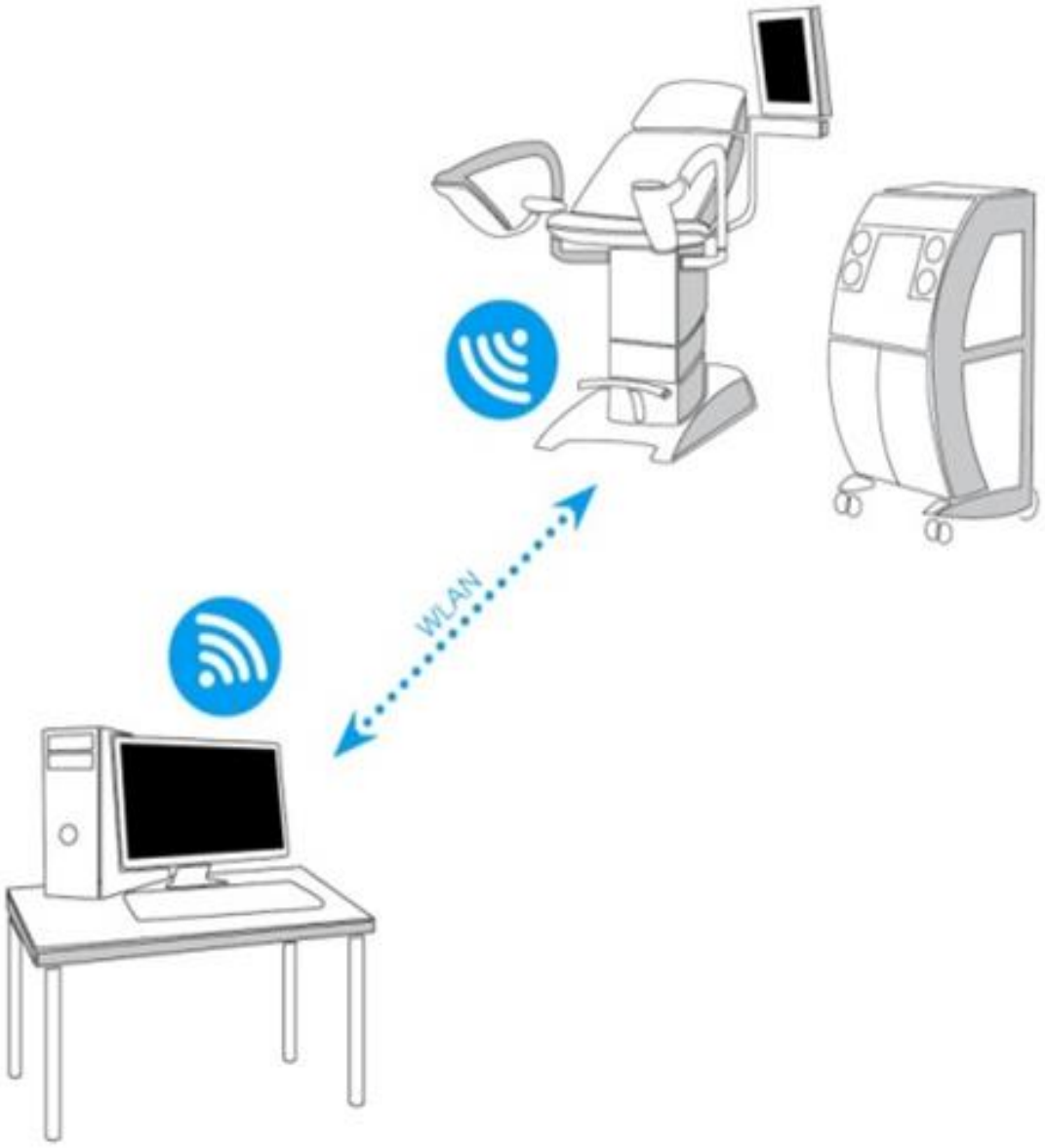
Switching the connection type on the video colposcope

The video colposcope is set to WLAN transmission in default. The video colposcope must be turned off if you need to change the connection type.

1) To switch to LAN module press the + and - FOCUS buttons and hold them, until an orange diode of the camera button lights up on the video colposcope.
2) To switch to WLAN module press the + and - ZOOM buttons and hold them, until an orange diode of the camera button lights up on the video colposcope.

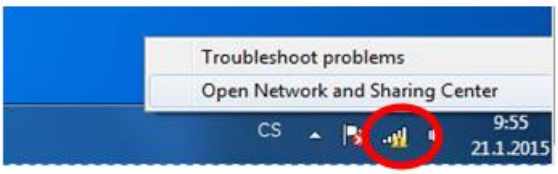


5.2 Direct connection of the GRACIE chair to the doctor's PC/MAC using WLAN



If you are using this type of connection, you will not be able to use WLAN for connection to the Internet on your PC/MAC. WLAN in your PC/MAC is able to receive only one signal - in this case from the GRACIE chair.

1. Connect the unpacked and correctly set-up chair to power supply.
2. After approximately one or two minutes the GRACIE chair will start to send WLAN signal, i.e. will create its own WLAN network.
3. Turn on your PC/MAC. Your PC/MAC must be equipped with an active WLAN module, otherwise it will not be possible to set up a wireless connection between the GRACIE chair and the PC/MAC.
4. Click on WLAN icon in the network settings of your PC/MAC.

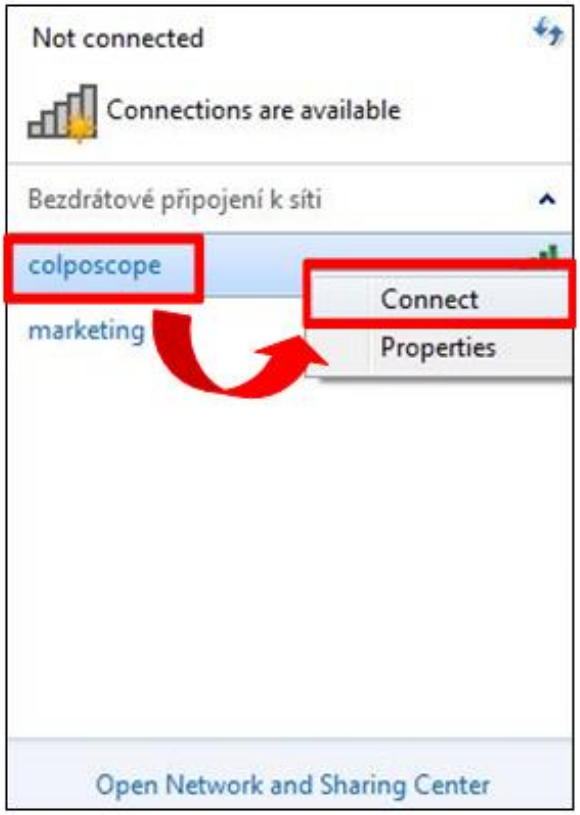


MS - WINDOWS

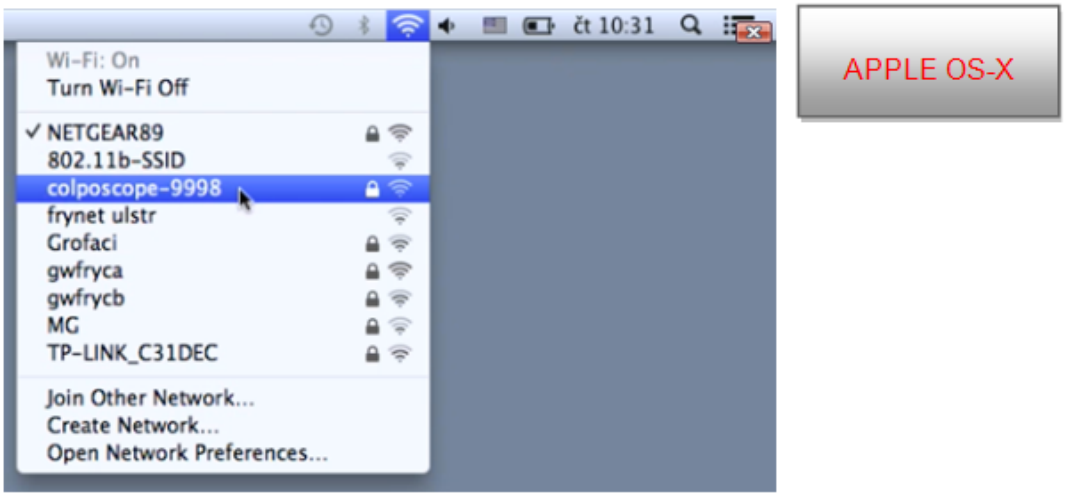


APPLE OS-X

5. Select the network "**colposcope-XXXX",** where XXXX is the serial number on the nameplate of the Gracie chair.
6. Click on "**Connect**" and you will be prompted to enter the network password.



MS - WINDOWS



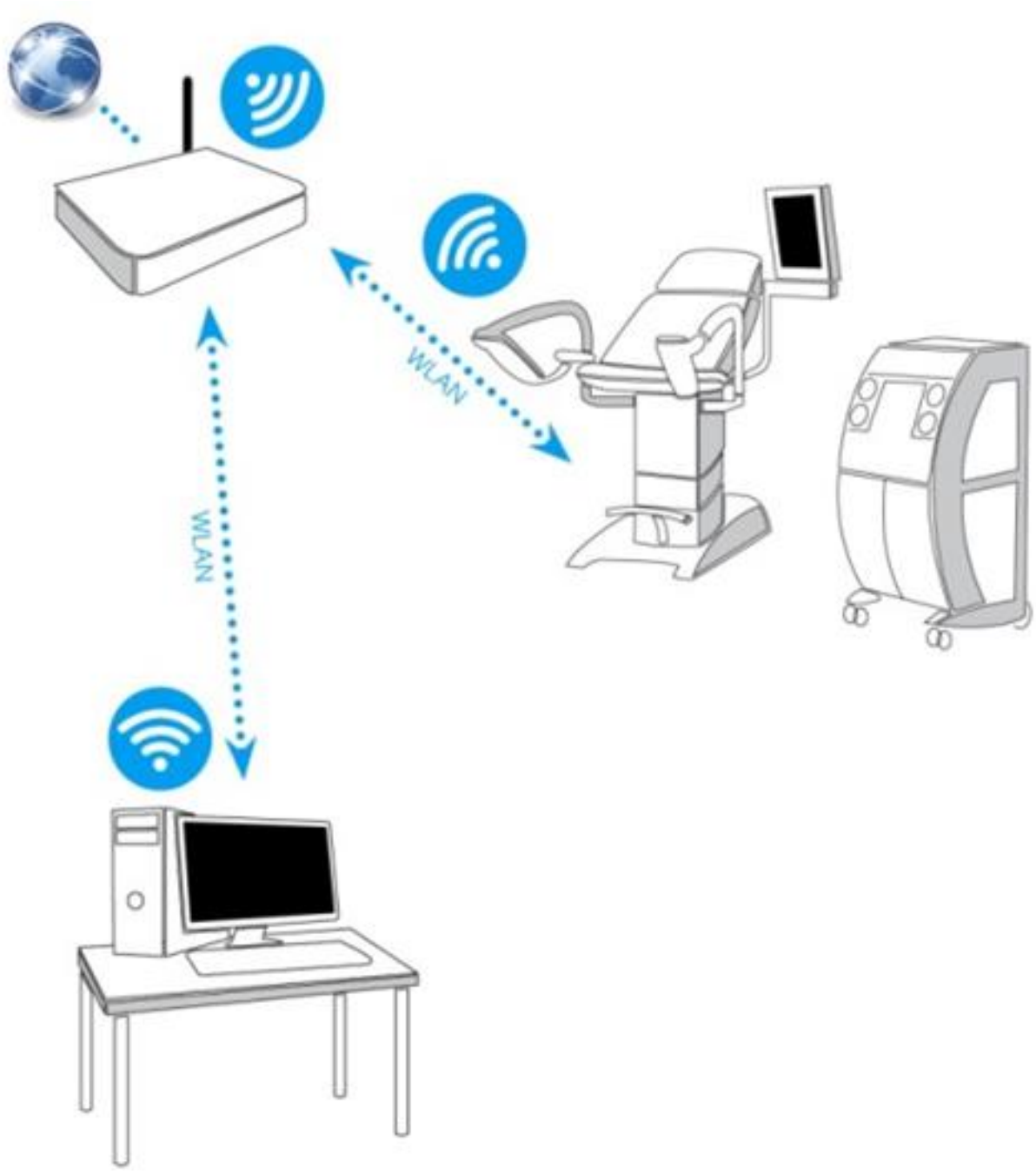
7. The default password is **12345678**. **To change the password refer to Section 5.8**
8. After entering the password, the doctor's PC/MAC is connected to the GRACIE chair. This process depends on the operation system of your PC/MAC. **Connection may take from one to two minutes.**

9. Successful connection is indicated by the WLAN network icon on the main panel. The icon can be marked with a yellow triangle indicating that the PC/MAC is not connected to the Internet. This is correct as you have connected to the GRACIE chair and not to the Internet.



10. Now the GRACIE chair is wirelessly connected to the doctor's PC/MAC. To set up a storage folder, refer to Section "**5.6 Connecting a network folder…"**

5.3 Direct connection of the GRACIE chair to an existing WLAN network in the office



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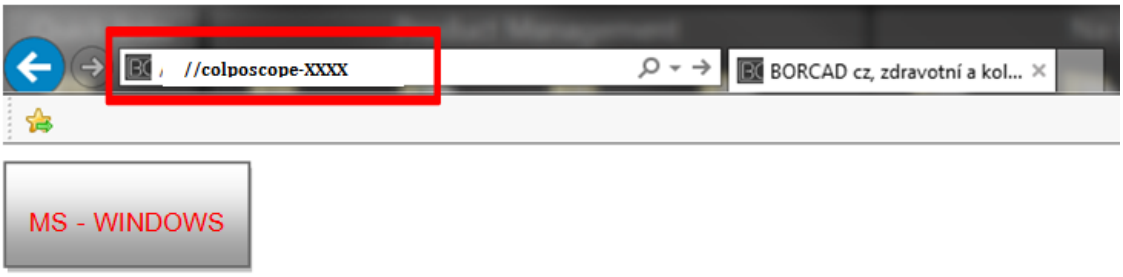
Use the same steps as in Section "5.2 Direct connection of the GRACIE chair to the doctor's PC/MAC using WLAN"

1. Open the Internet browser.



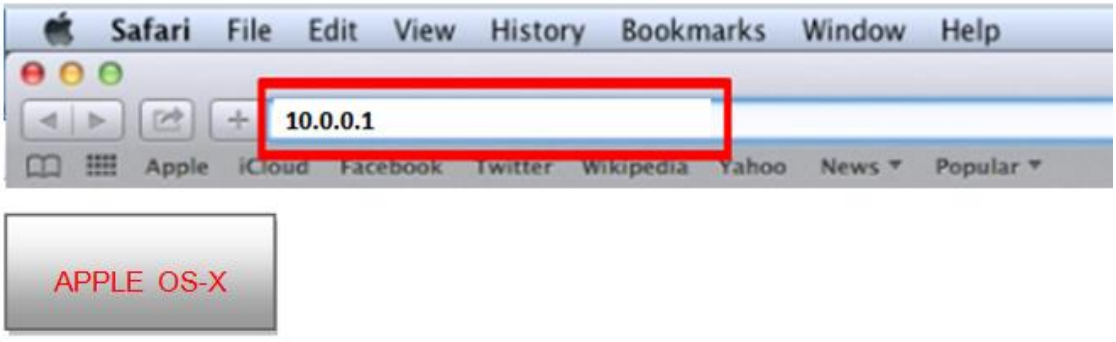


2. Type **//colposcope-XXXX** in the address bar, where XXXX is the serial number on the nameplate of the Gracie chair**.**



When typing the path into the address bar, make sure to use correct slashes!

Type 10.0.0.1 in the address bar.



3. Press ENTER on the keyboard of your PC/MAC or click on "Go" on the address bar.

4. You will enter the settings page of the WLAN module of the GRACIE chair. Verification of connection may take from two to three minutes. It depends on the operation system of your PC/MAC.

5. You will be promoted to enter the username and password.

   Username: **admin**
   Password: **borcad**

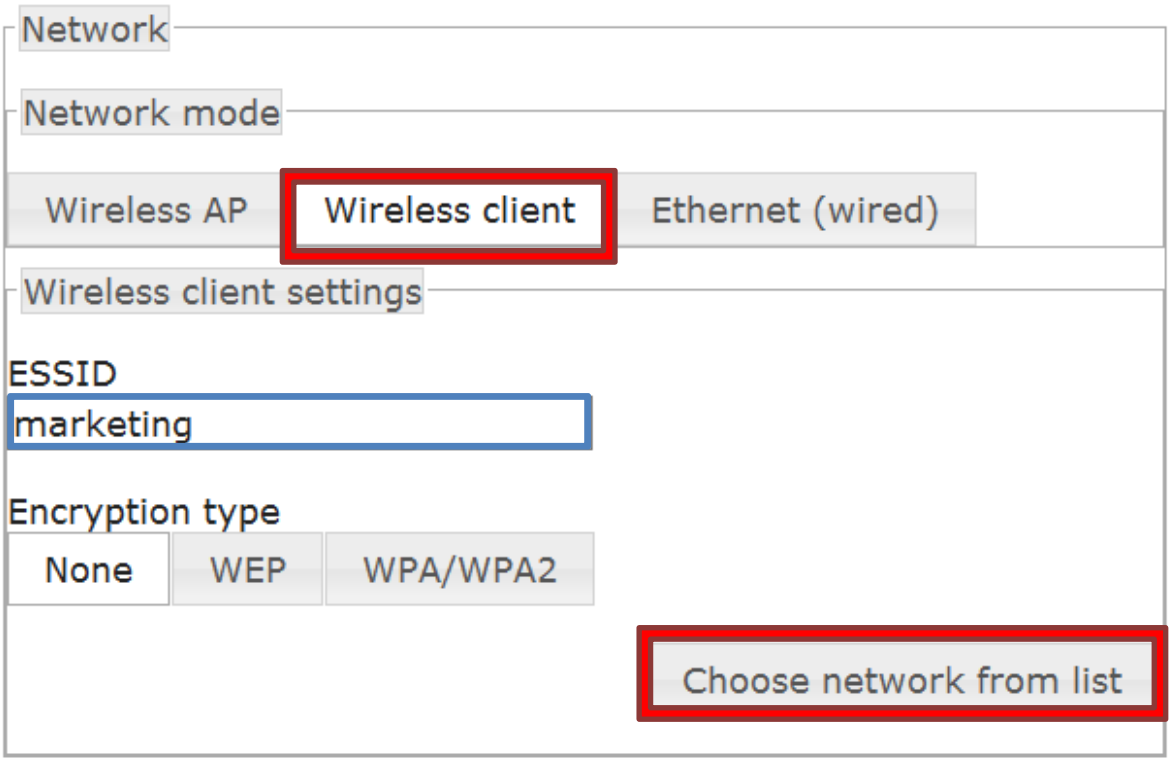
After entering the username and password, press **OK**. Your will enter the WLAN/LAN connection menu of the GRACIE chair.

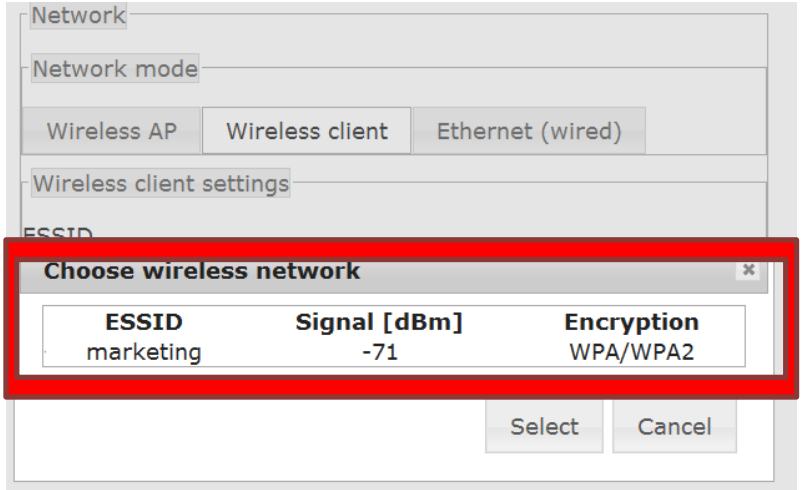




Passwords and accesses have been factory pre-set. It is recommended to change them, refer to Section 5.8

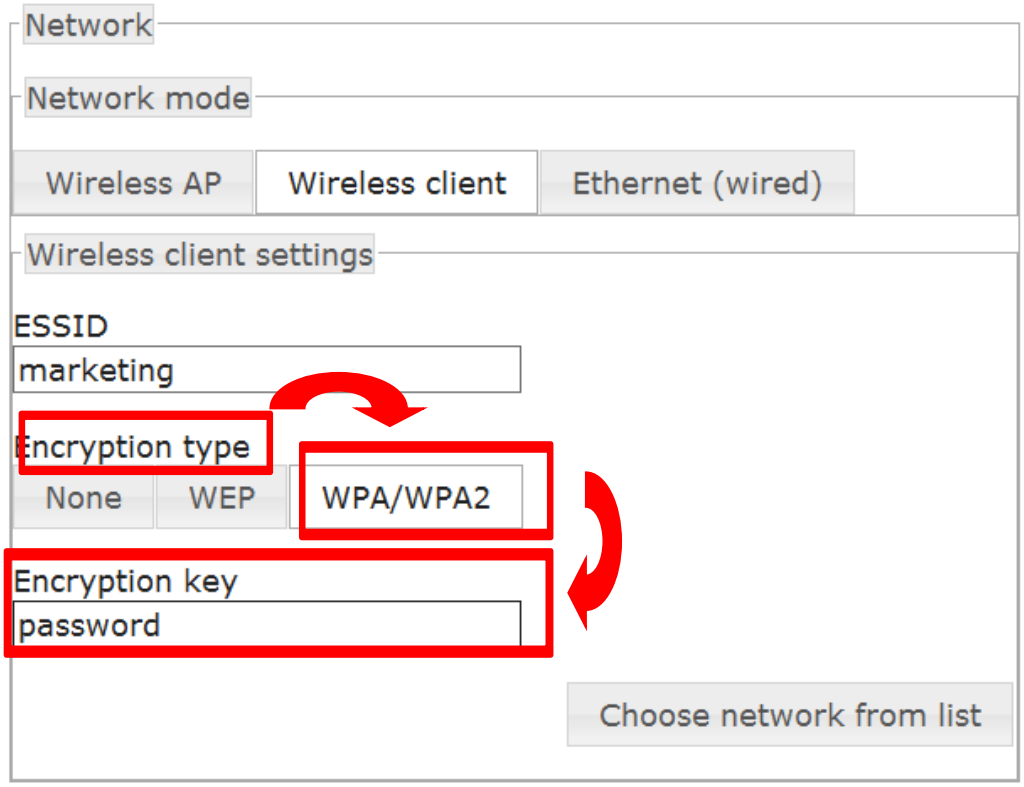
6. Go to the following path ***//colposcope-XXXX*** and click on "**Wireless client**" (see below in red) and type the name of the existing WLAN network in the office/hospital into the ESSID box (see below in blue). In this case the name of the network is "marketing".
7. If you do not know the name of the network, click on "**Choose network from list**". A window with available networks and their encryption will appear.





In "**Encryption Type**" click on **WPA/WPA2** and enter the new password to this network ("**Encryption key**", in this case it is "**password**".)

In case you do not know the password for the WLAN network you have selected, contact the administrator.

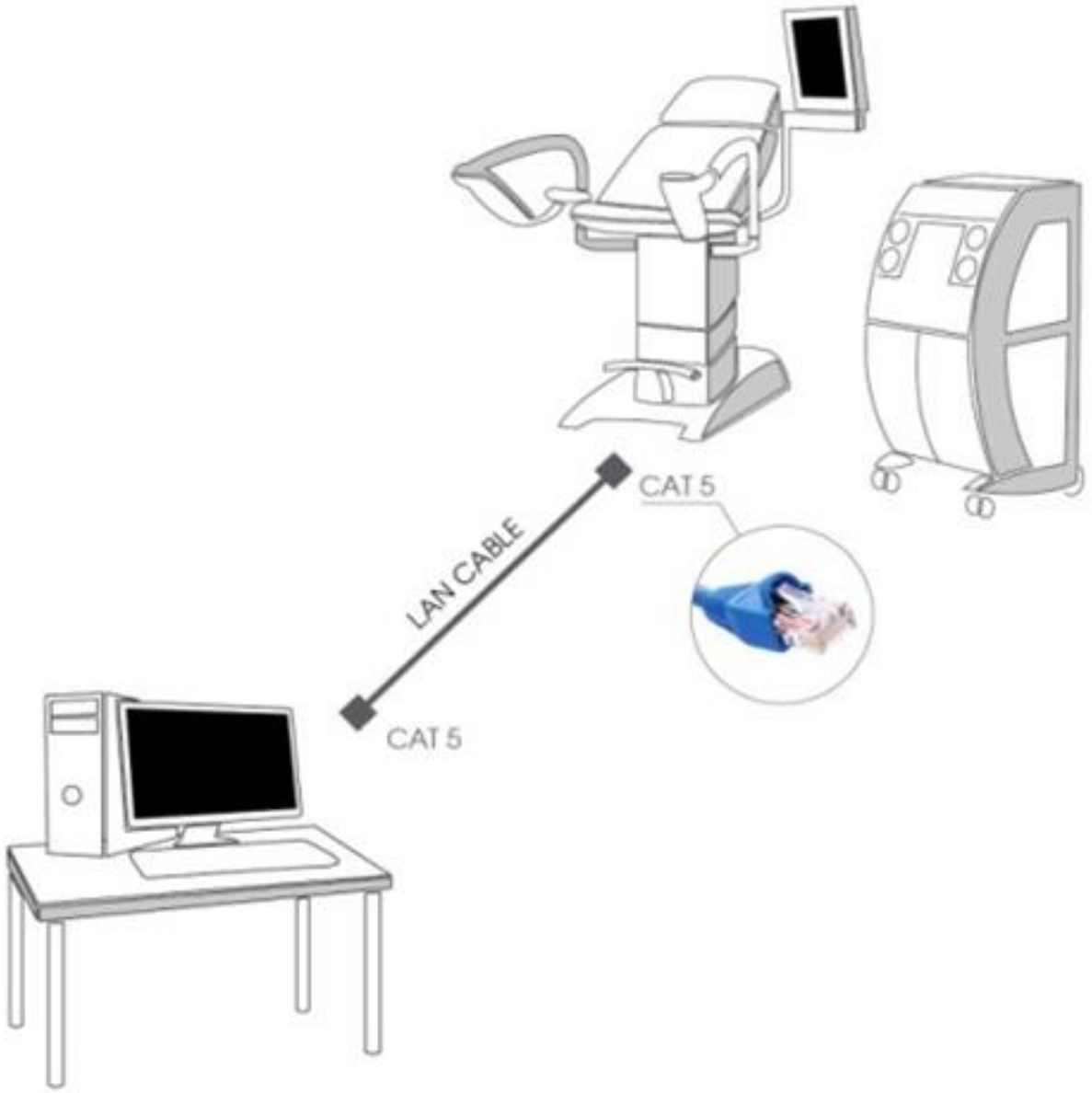


8. Clicking on **Save and apply** will save the changes.

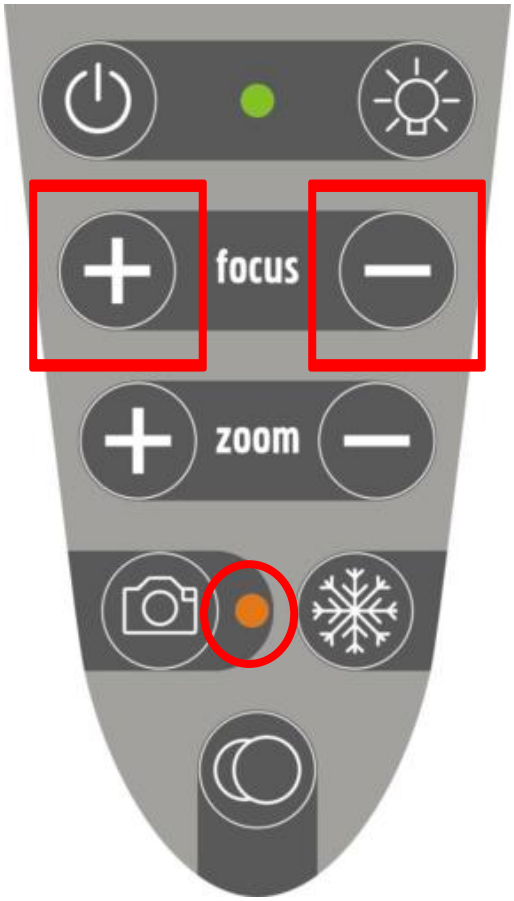


9. After saving the changes, the GRACIE chair will automatically connect to the selected WLAN network. For correct functioning of the connection it is necessary to connect the PC/MAC to the particular wireless network, in this case "marketing".

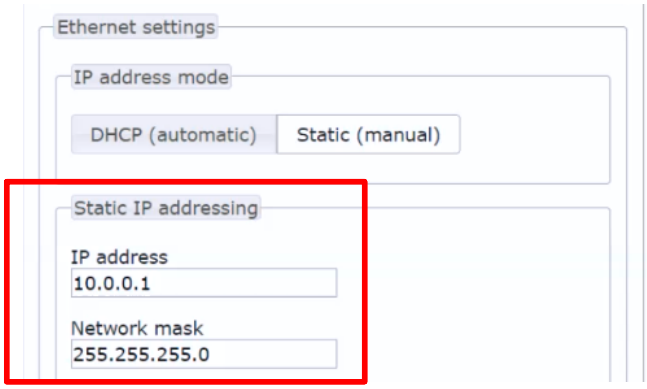
5.4. Direct wired connection of the GRACIE chair to the doctor's PC/MAC



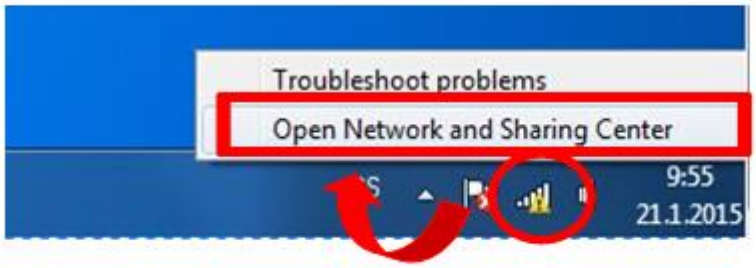
With the video colposcope turned off, first switch to the LAN module: This is done by holding both + and - FOCUS buttons. Hold the buttons until an orange diode of the camera button lights up on the video colposcope.



After pressing the buttons, static IP address and subnet mask will be automatically set in the GRACIE chair as follows: 10.0.0.1 / 255.255.255.0



1) At first, you need to set correct values in your PC/MAC. Open the "**Open Network and Sharing Center**"



MS - WINDOWS

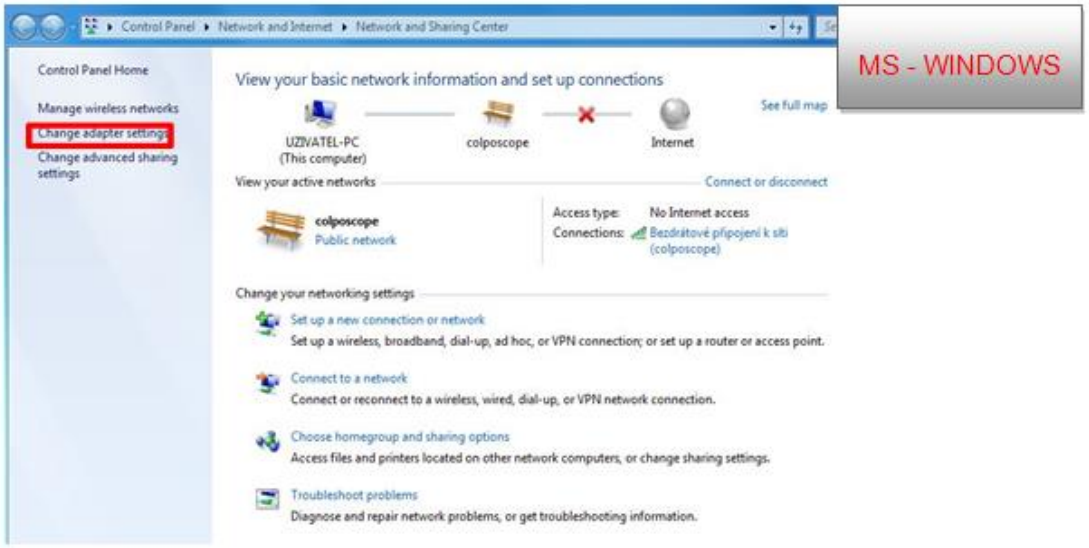
"Open Network Preferences"



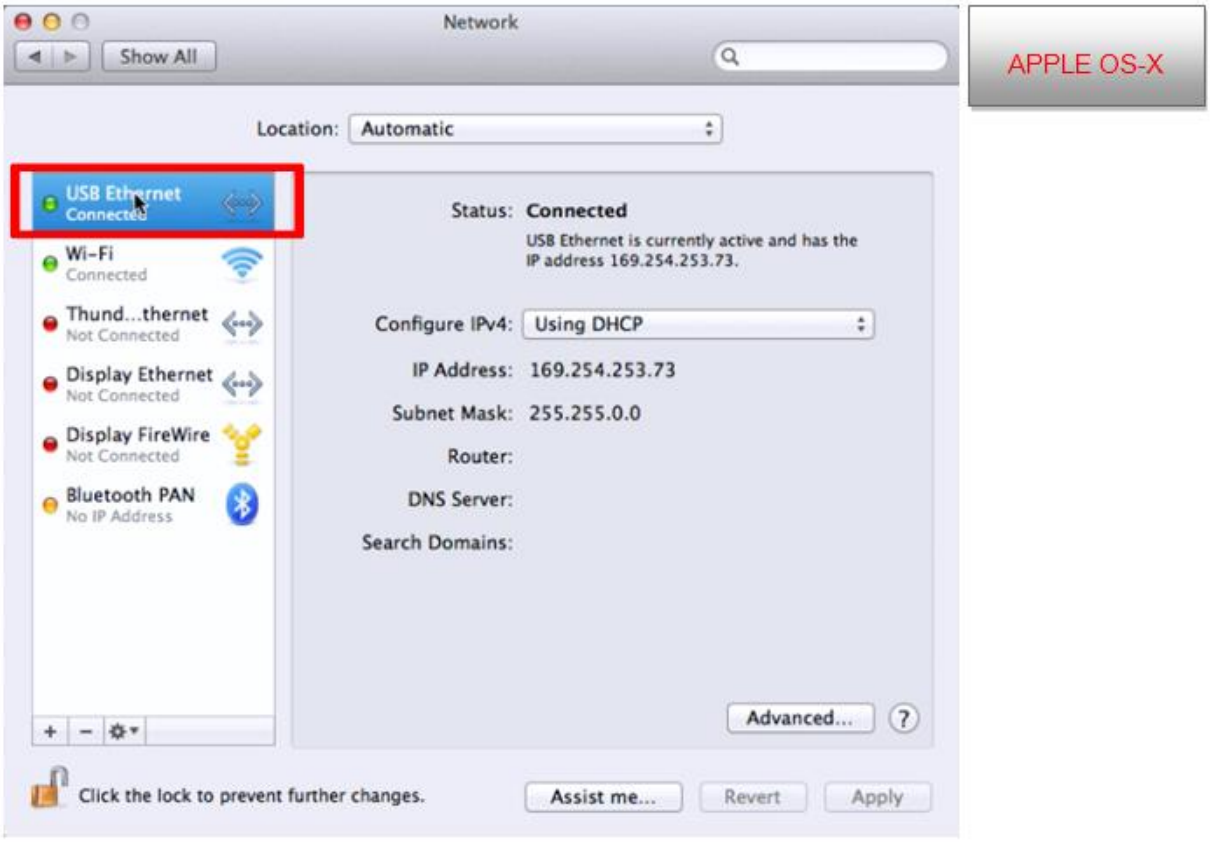
APPLE OS-X

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2) and click on "**Change adapter settings**" (see below).



Choose the Ethernet adapter through which your MAC is connected to the GRACIE chair.

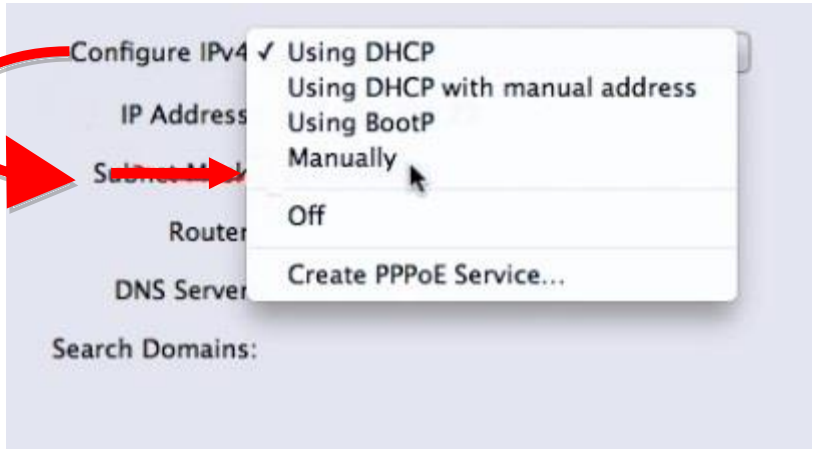


3) Choose "**Local Area Connection**".



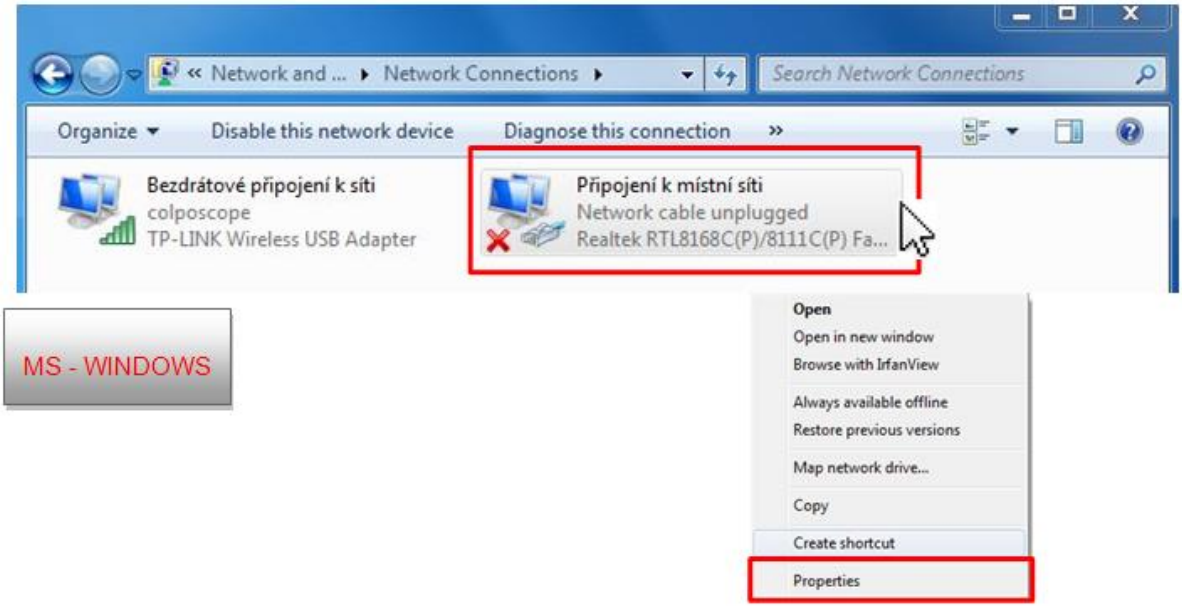
MS - WINDOWS

"Configure IPv4" and "Manually"

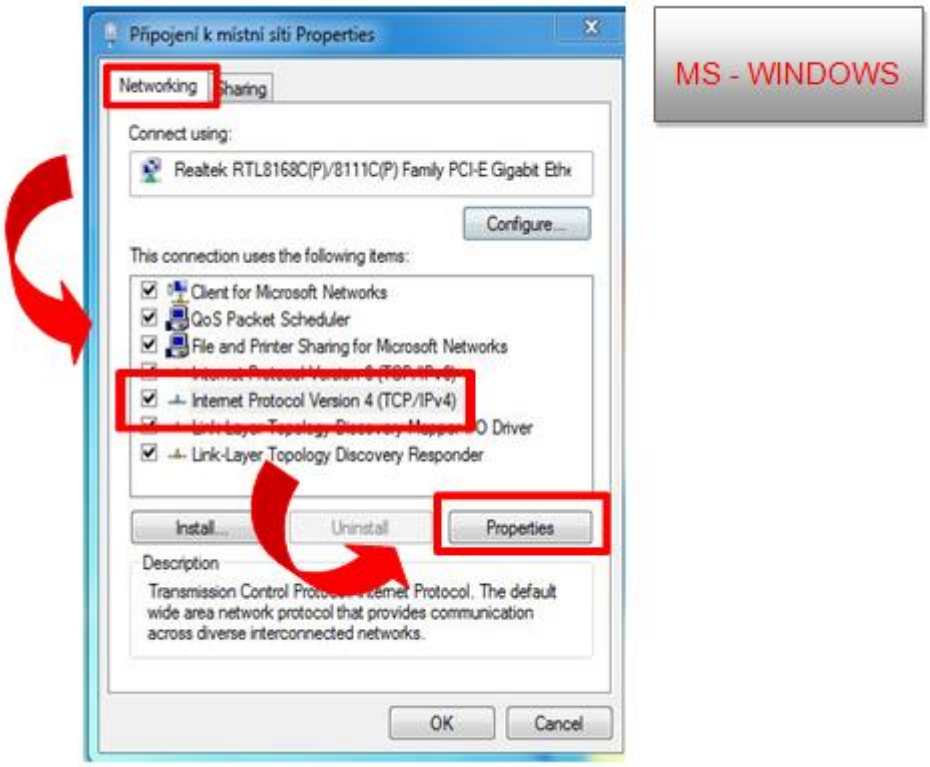


APPLE OS-X

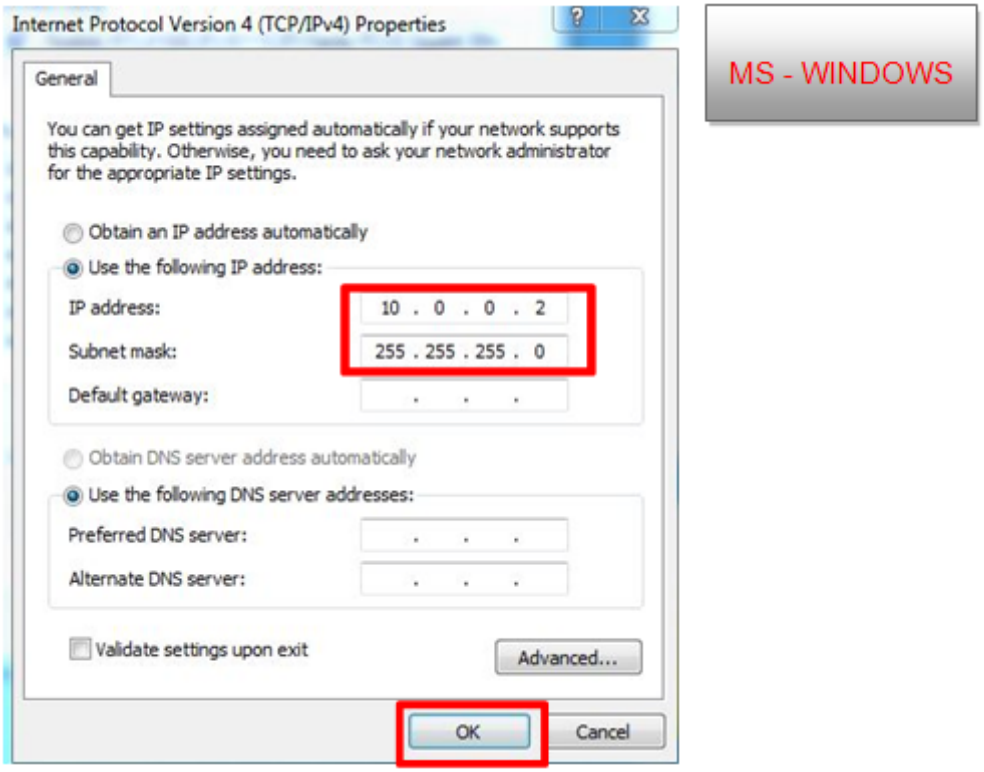
Choose "Local Area Connection". Right click on the icon and select "Properties".

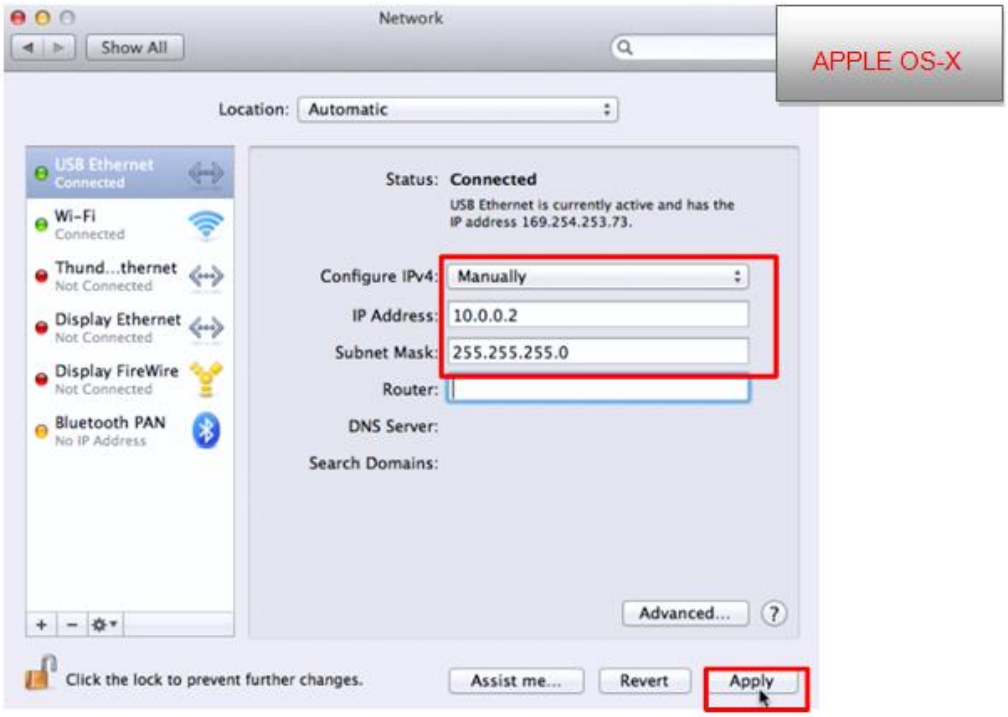


4) Select "**Internet Protocol Version 4 (TCP/IPv4)**" in the "**Networking**" tab and click on "**Properties**".



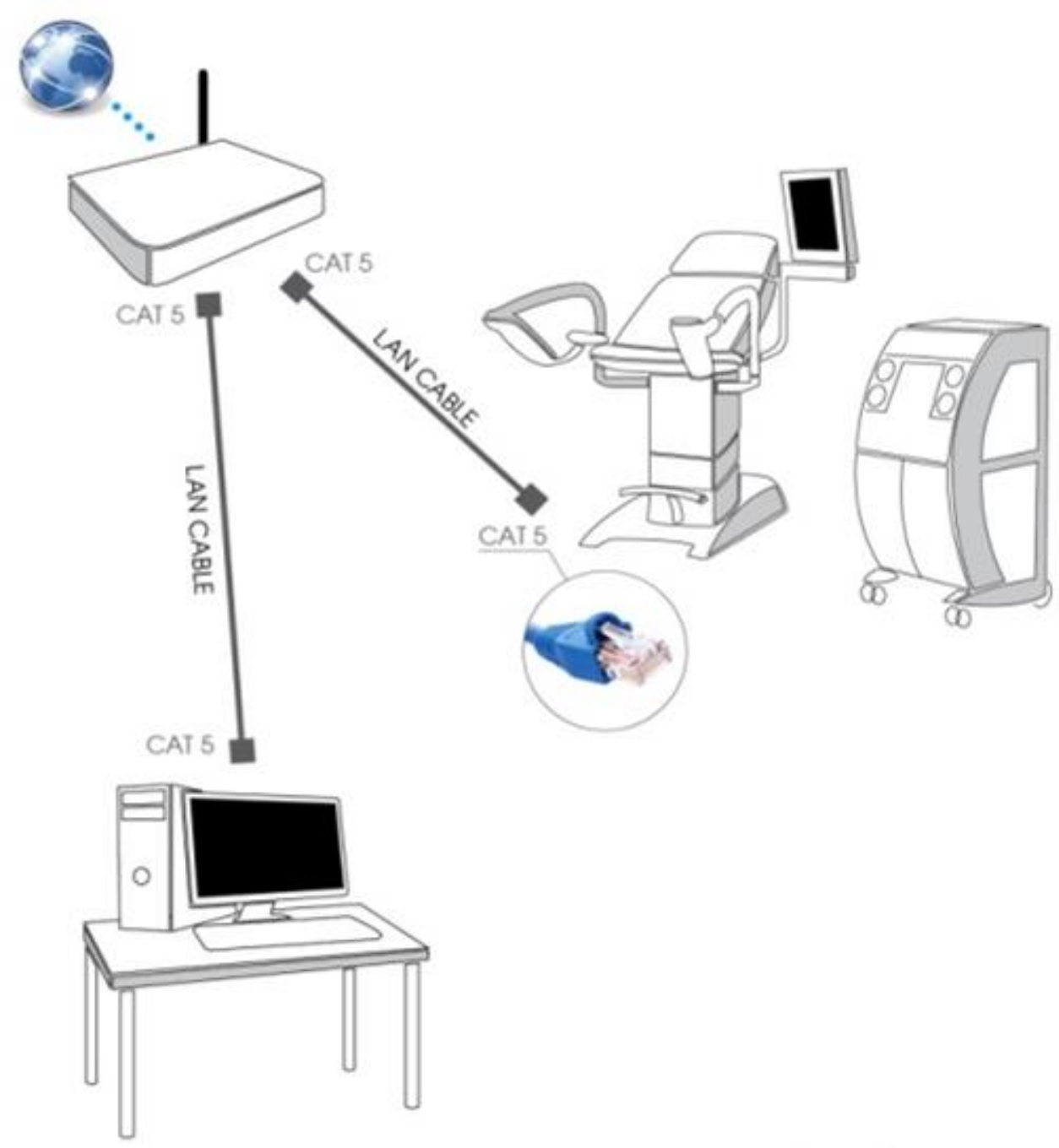
5) Type the values below into the table. Then click on **OK**.





Now you are connected to the GRACIE chair using direct Ethernet cable connection.

5.5 Connection of the GRACIE chair to the doctor's PC/MAC using an existing network connection



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The chair must be temporarily connected to the PC/MAC either using WLAN (Section 5.2) or directly using a cable (5.4).

5.5.1 Activation of wired connection to an existing network

1) Open the Internet browser.

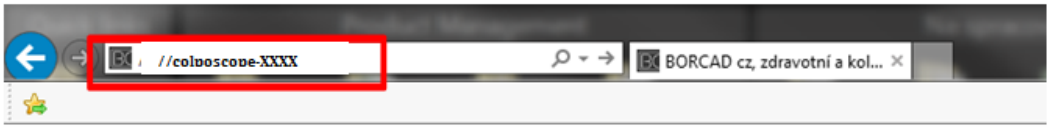


MS - WINDOWS



APPLE OS-X

2) Type **//colposcope-XXXX** in the address bar, where XXXX is the serial number on the nameplate of the Gracie chair.



MS - WINDOWS

When typing the path into the address bar, make sure to use correct slashes!

Type IP address (10.0.0.1) of the GRACIE chair into the address bar.



APPLE OS-X

3) Press ENTER on the keyboard of your PC/MAC or click on "Go" on the address bar.

4) You will enter the settings page of WLAN module of the GRACIE chair. Verification of connection may take from two to three minutes. It depends on the operation system of your PC/MAC.

5) You will be promoted to enter the username and password.

Username: **admin**
Password: **borcad**

After entering the username and password, press **OK / LOG IN**. Your will enter the WLAN/LAN connection menu of the GRACIE chair.



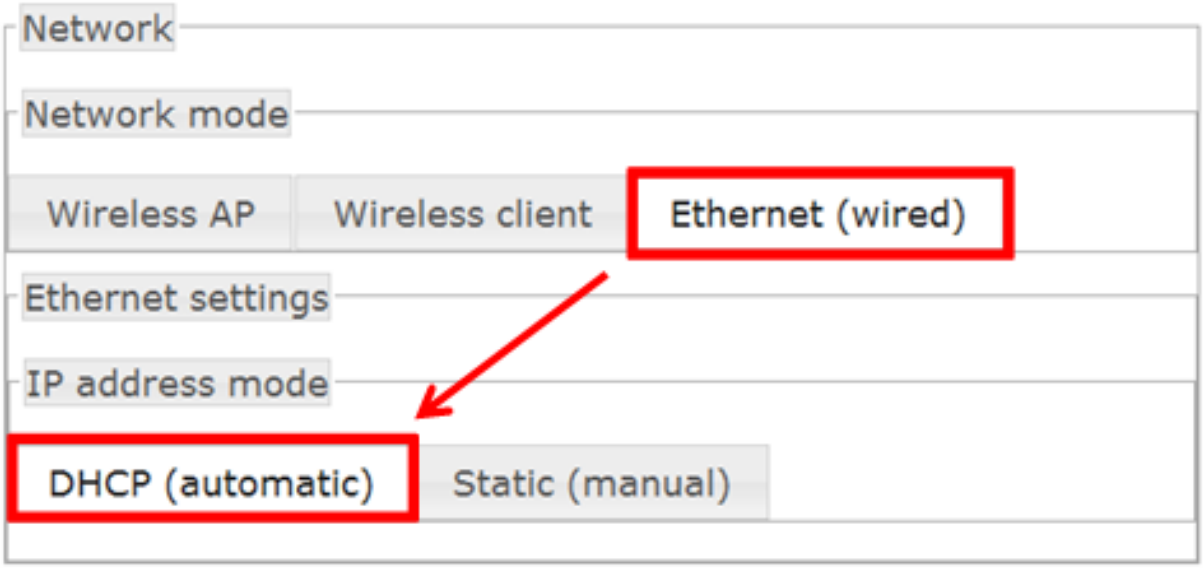
MS - WINDOWS



APPLE OS-X

Passwords and accesses have been factory pre-set. It is recommended to change them, refer to Section 5.8

6) Click on "Ethernet (wired)" (see below in red) and select "DHCP (automatic)".

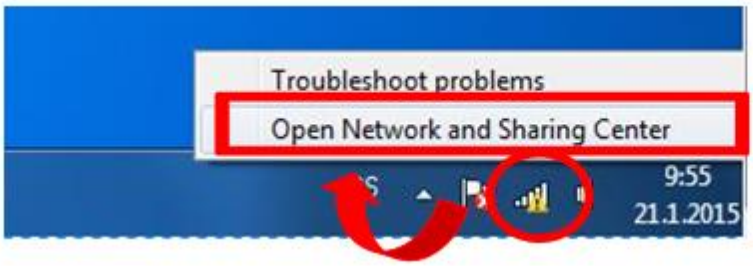


7) Now you need to save the changes by clicking on "**Save and apply**" in the bottom part of the screen.



8) After saving the changes, the GRACIE chair will automatically switch to wired connection mode.

9) Then you need to set correct values in your PC/MAC. Open the "**Open Network and Sharing Center**"



MS - WINDOWS

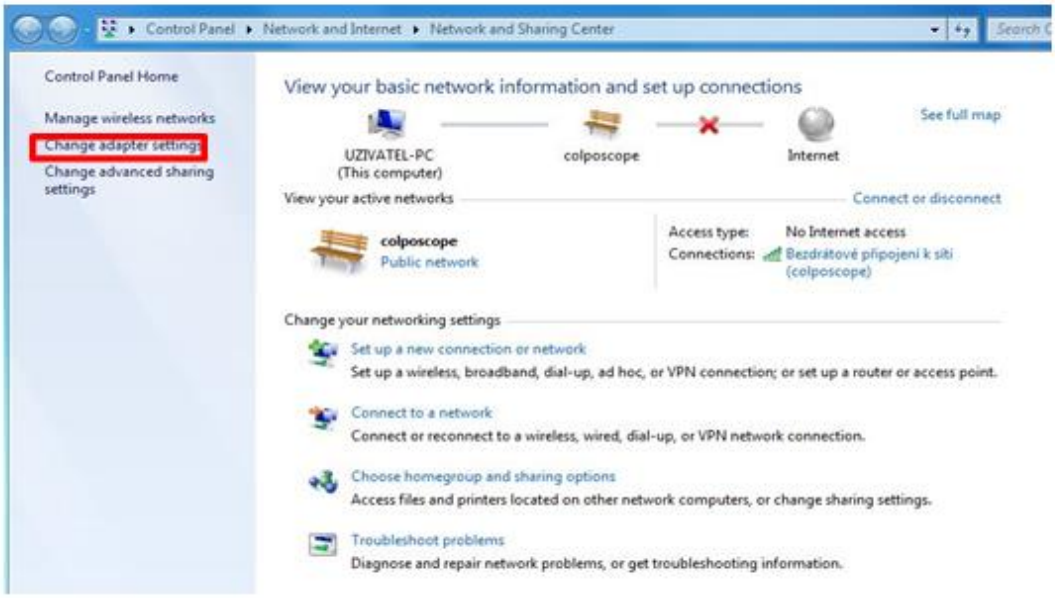
"Open Network Preferences"



APPLE OS-X

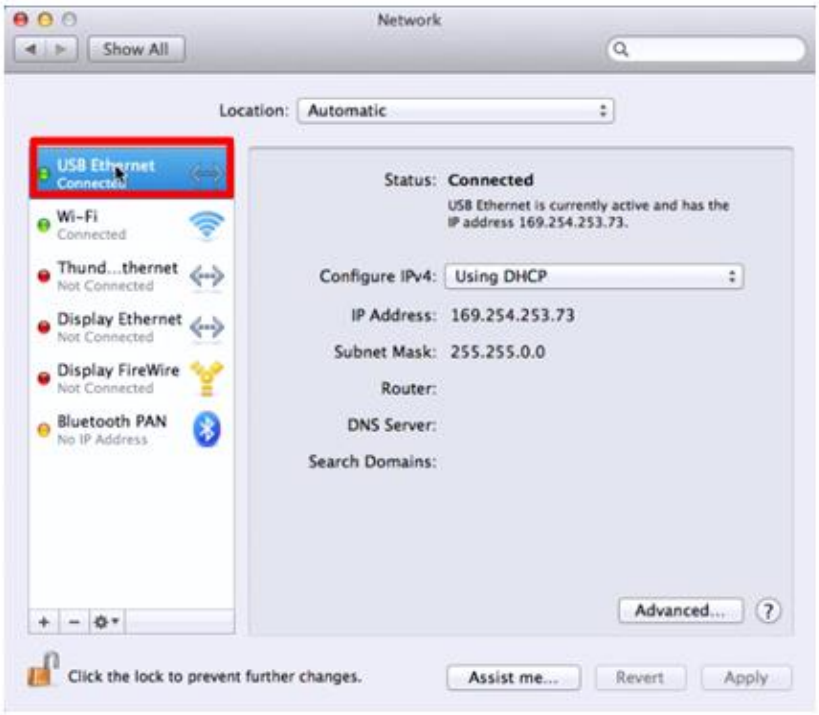
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and click on "**Change adapter settings**" (see below).



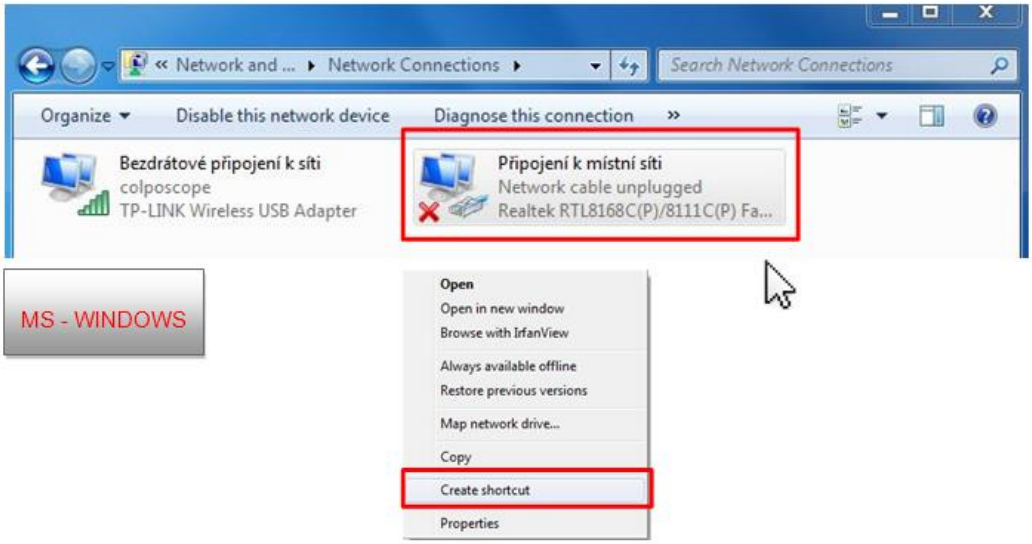
MS - WINDOWS

Choose the Ethernet adapter through which your MAC is connected to the GRACIE chair.

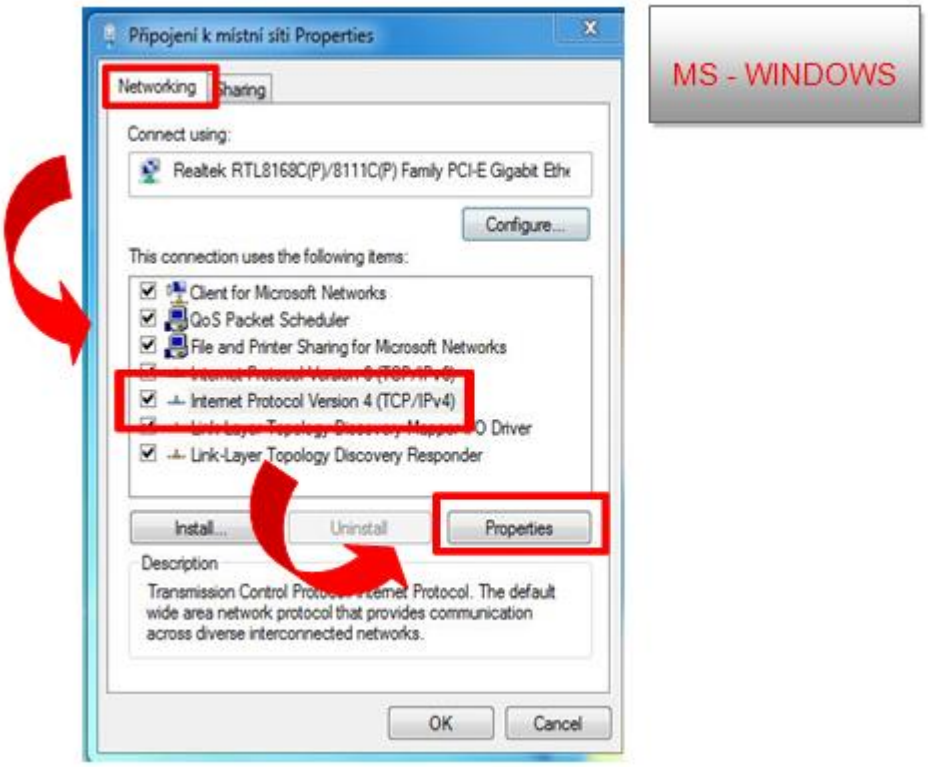


APPLE OS-X

10) Choose "**Local Area Connection**". Right click on the icon and select "**Properties**".

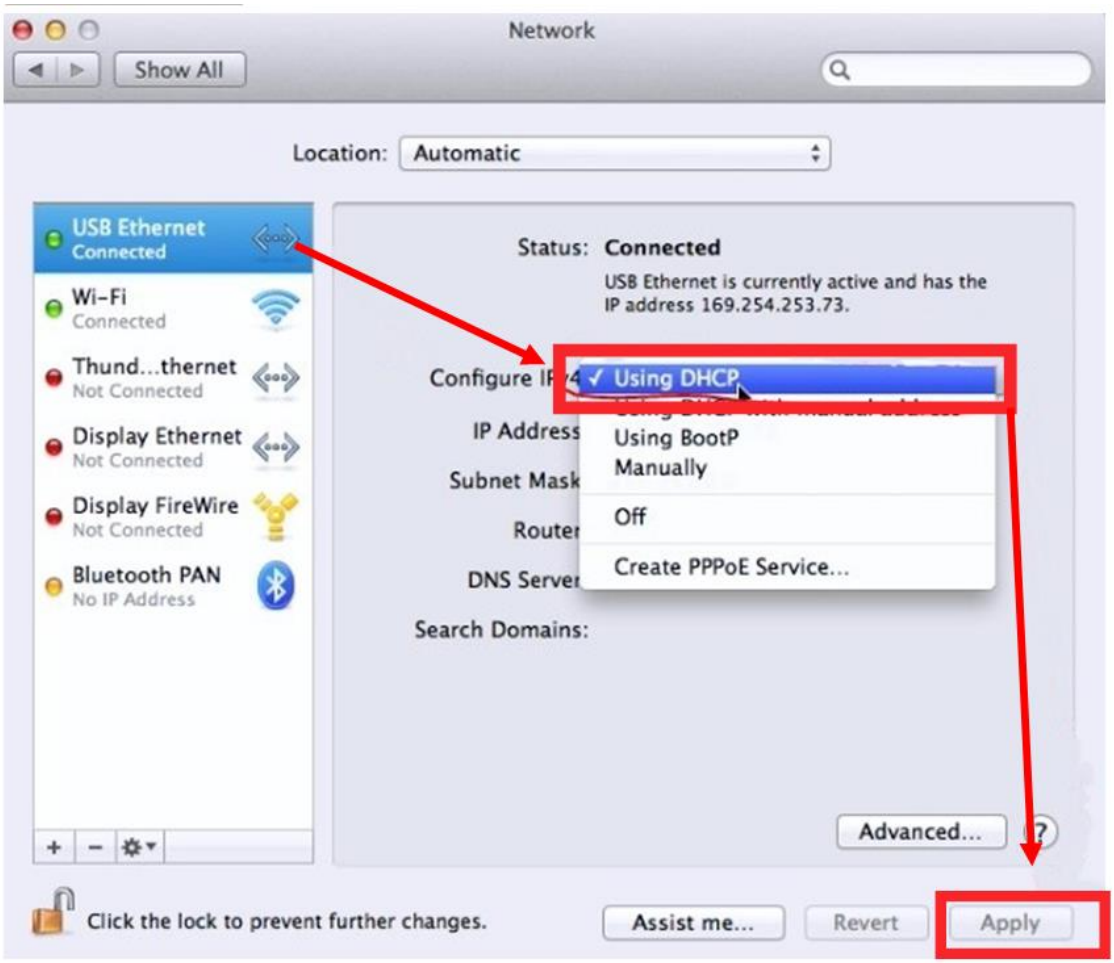


11) Select "**Internet Protocol Version 4 (TCP/IPv4)**" in the "**Networking**" tab and click on "**Properties**".



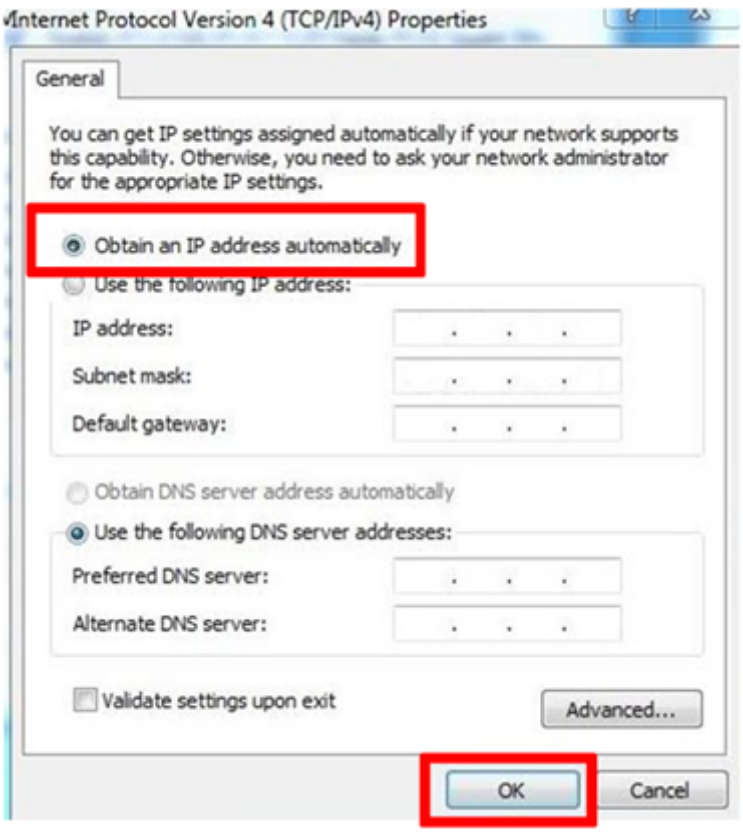
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"Configure IPv4" and "Using DHCP" and press Apply to confirm.



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Select "Obtain an IP address automatically" in the table. Then click on **OK**.



MS - WINDOWS

12) After clicking OK, the GRACIE chair will be connected to your PC/MAC.

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5.6 Connecting a network folder, placing a folder on the desktop, saving images into a shared network folder

1. After successful pairing of the GRACIE chair with your PC/MAC, you need to connect the folder where photos and videos taken from the video colposcope of the GRACIE chair are stored.

2. Open the Internet browser.



MS - WINDOWS



APPLE OS-X

3. Type **\\colposcope-XXXX\data** in the address bar, where XXXX is the serial number on the nameplate of the Gracie chair.



MS - WINDOWS

When typing the path into the address bar, make sure to use correct slashes!

Type 10.0.0.1 in the address bar.



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4. Press ENTER on the keyboard of your PC/MAC or click on "Go" on the address bar.



MS - WINDOWS

5) You will be promoted to enter the username and password.

Username: **admin**
Password: **borcad**

6) After entering the username and password, press **OK**. It will open the folder with your images.



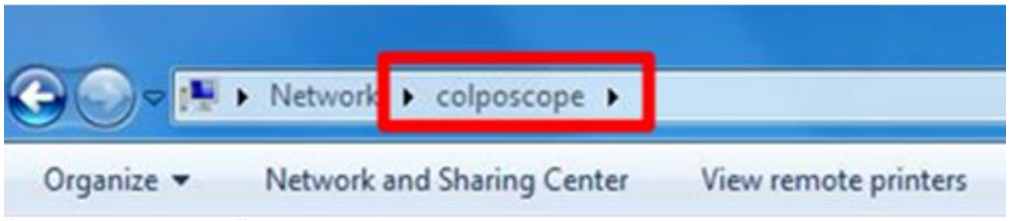
MS - WINDOWS



APPLE OS-X

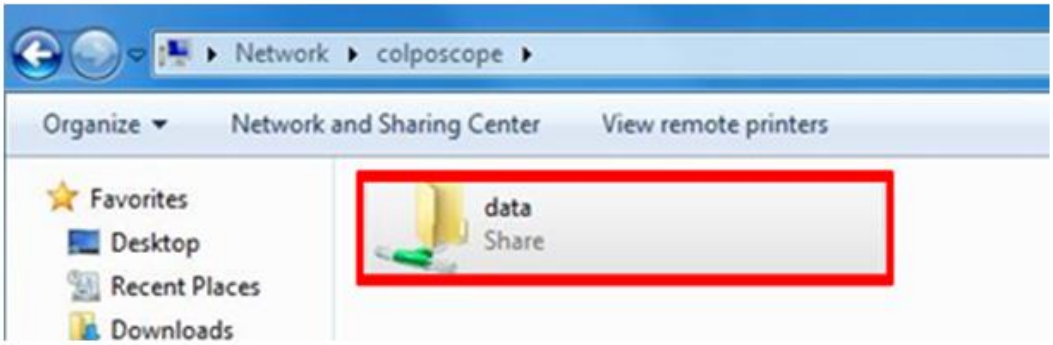
Passwords and accesses have been factory pre-set. It is recommended to change them, refer to Section 5.8

7) Click on "**colposcope-XXXX**" in the address bar.



MS - WINDOWS

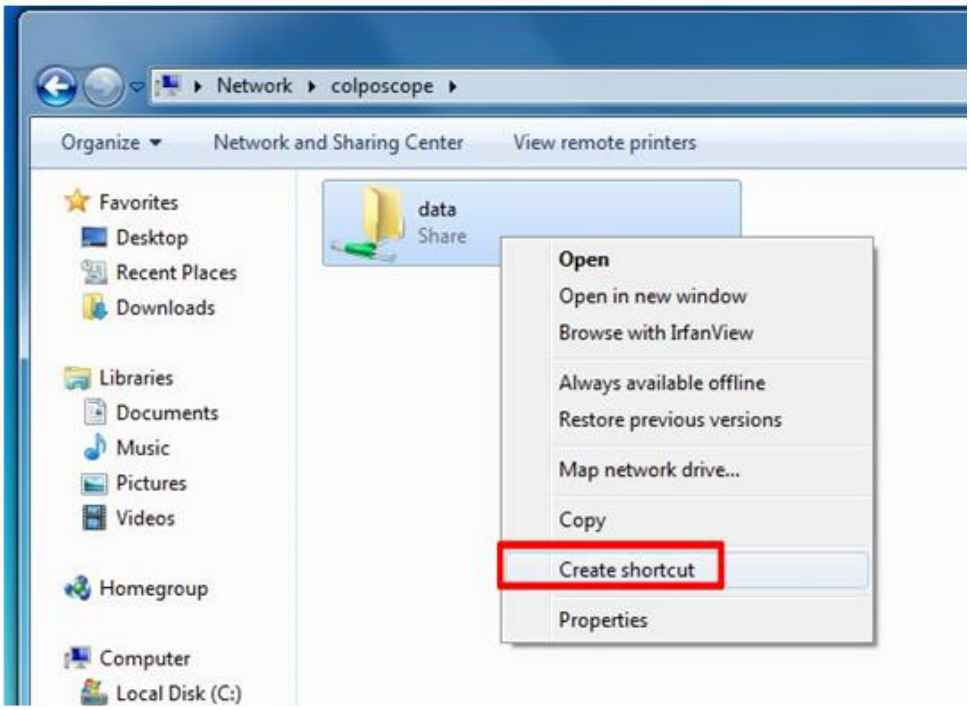
8) The folder "**data**" will now be displayed.



MS - WINDOWS

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9) You can place a shortcut of this folder on your desktop. Right click on the folder "**data**" and select "**Create shortcut**".



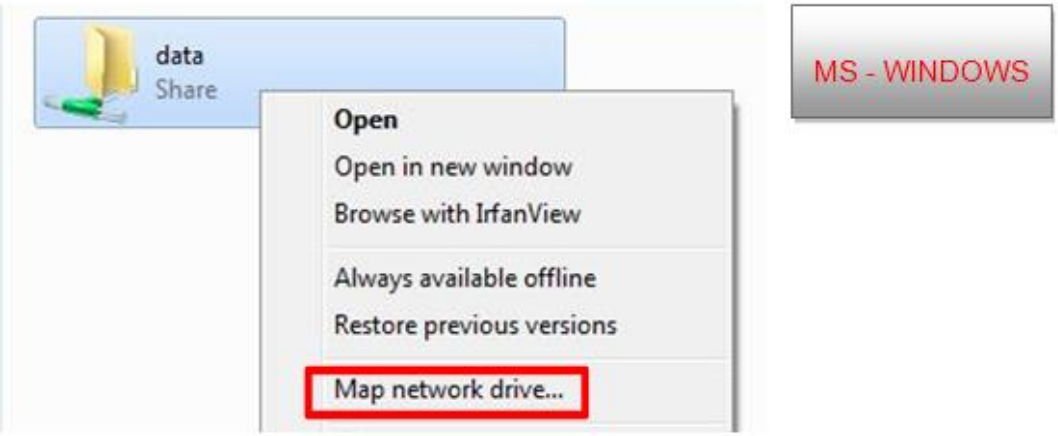
MS - WINDOWS

10) Shortcut of the folder "**data**" will be created on the desktop of your PC/MAC.

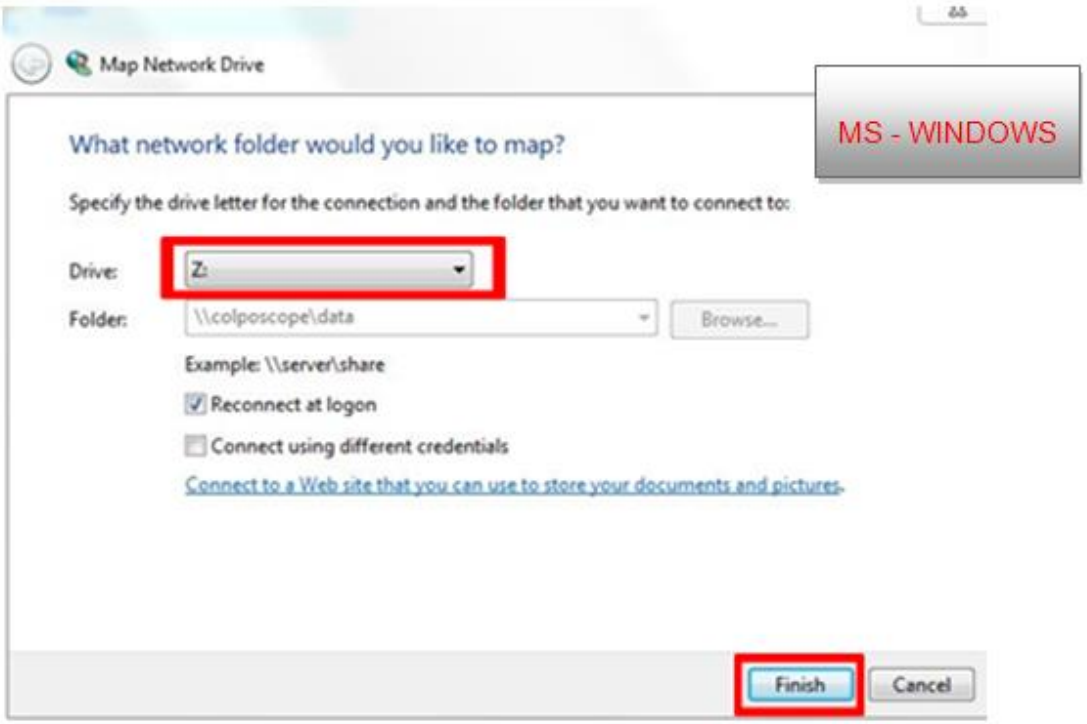
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You can also share a folder using the function "**Map Network drive**".

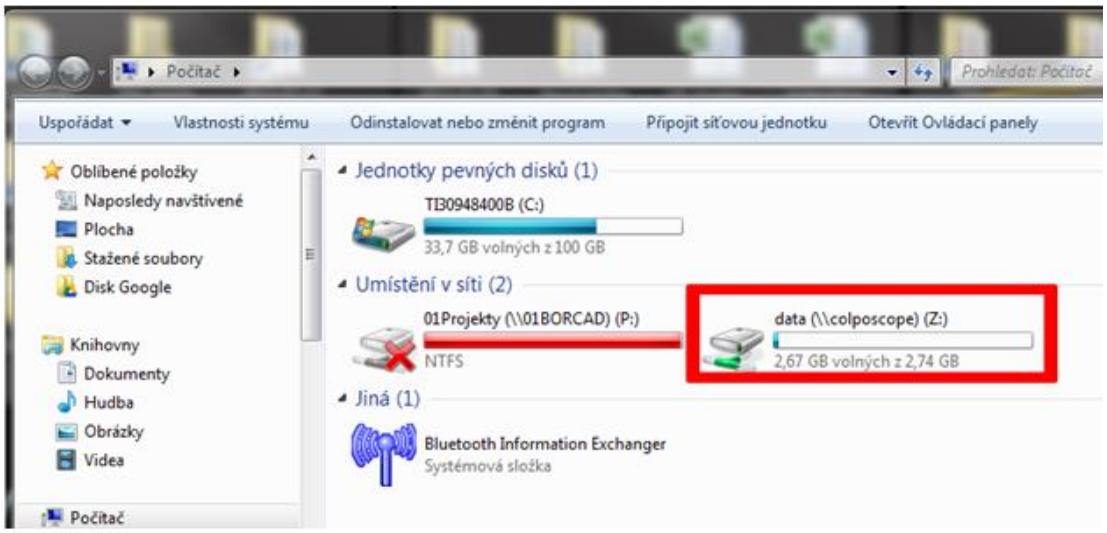
1) Right click on the folder "**data**" and select "**Map Network drive**".



2) Then select a drive, for example Z: (or other available drive) and confirm by pressing "**Finish**".



3) When you open "**My Computer**", network folder **"data (\\colposcope) (Z:)**" will be visible. The image shows the remaining storage space in the GRACIE chair.



MS - WINDOWS

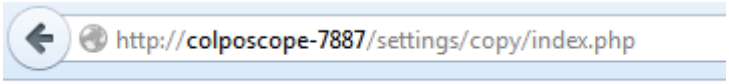
- **The memory is automatically erased when limit values are reached (GKB-CX 2.6 GB, GKB-GX 6.5 GB) so that you are able to continue taking new photos and videos. It is therefore recommended to backup your data after every examination!**

- **To share the folder with photos and videos in MAC OS-X on your desktop, we recommend you to contact your network administrator or a representative of your IT department.**

Saving copies of images into a shared folder in the doctor's computer (PC/MAC).

These settings can be used if it is necessary to save a copy of an image into a specific folder in the computer for easier communication with the patient data management software.

1. The setting is done via a webpage on the following address: http://"colposcope name or IP"/settings/copy. Confirm with Enter.



MS - WINDOWS

The setting is done via the webpage 10.0.0.1/settings/copy. Confirm with Enter.



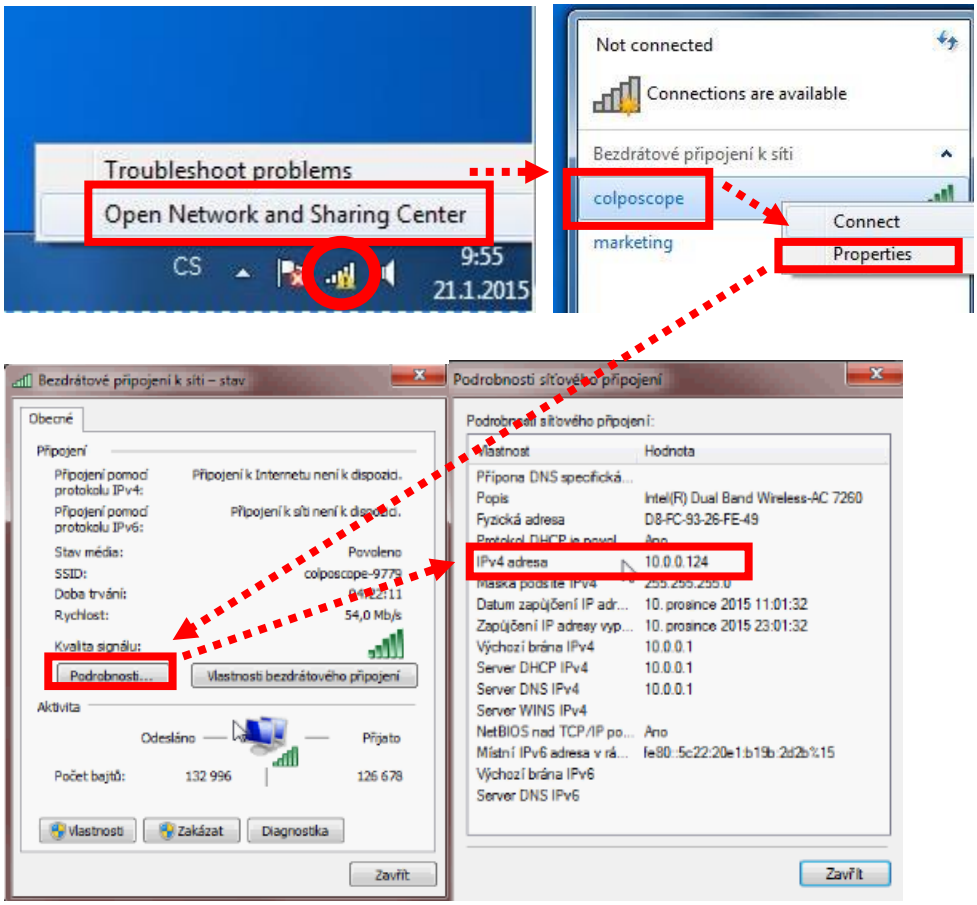
APPLE OS-X

Fill in the fields:

2. **Upload path** – Network address in the format "//IP address/folder name"

E.g. //10.0.0.124/shared

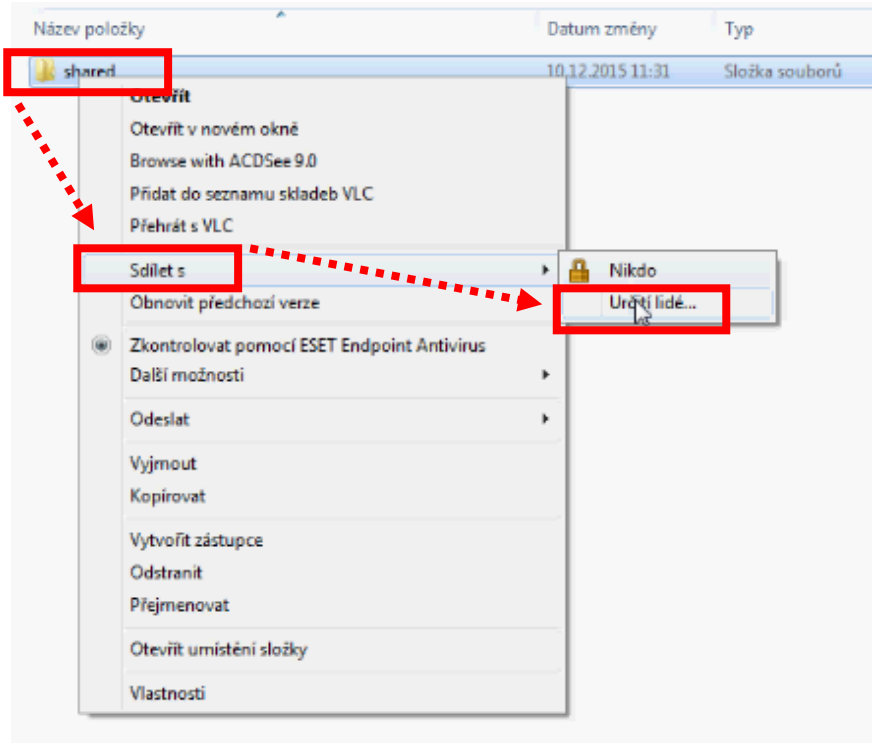
IP address = network address of the computer into which you are going to save the images.



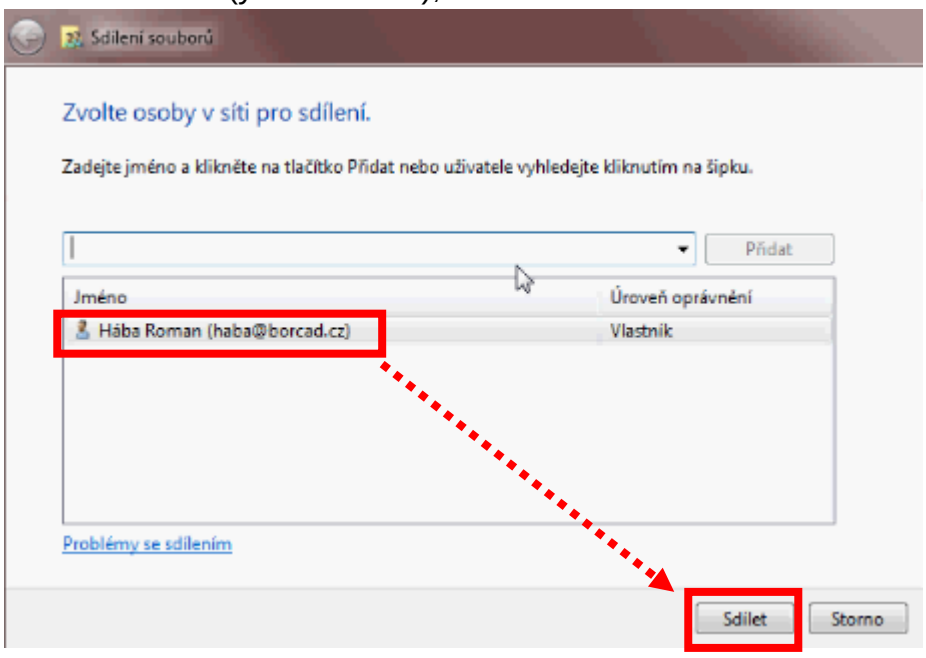
Here is how to find out the IP address of the doctor's computer in WiFi AP connection mode. When the chair and the computer are connected to a router, instead of clicking on "colposcope" click on the name of the network connection.

folder name = name of your shared folder.

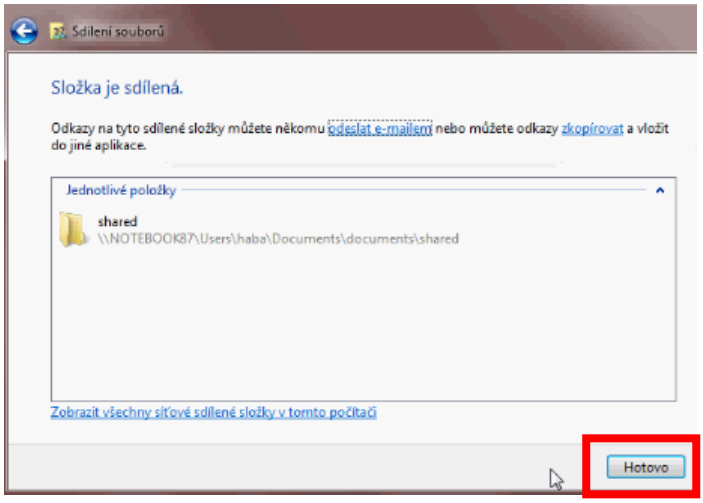
Right-click on the folder you want to share. In this case the name of the folder is "**shared**". Click on "**Share with**" and "**Specific people**".



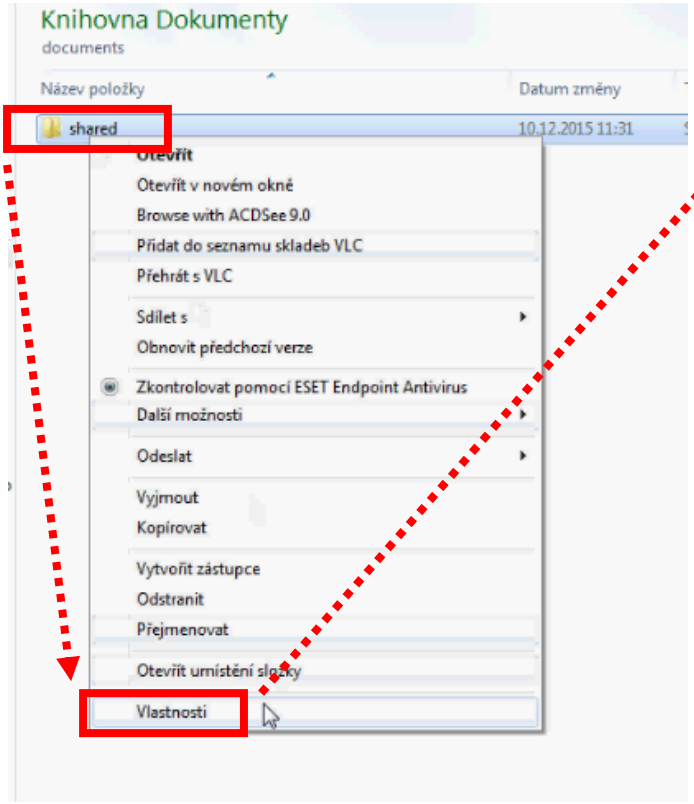
Select the user (your account), click on the user and then click on "**Share**".

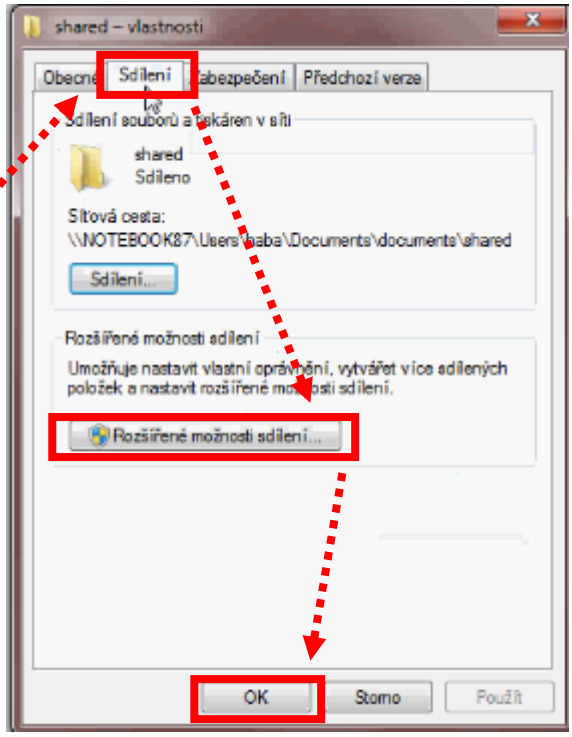


The folder is now shared. Confirm by clicking on "**Done**".

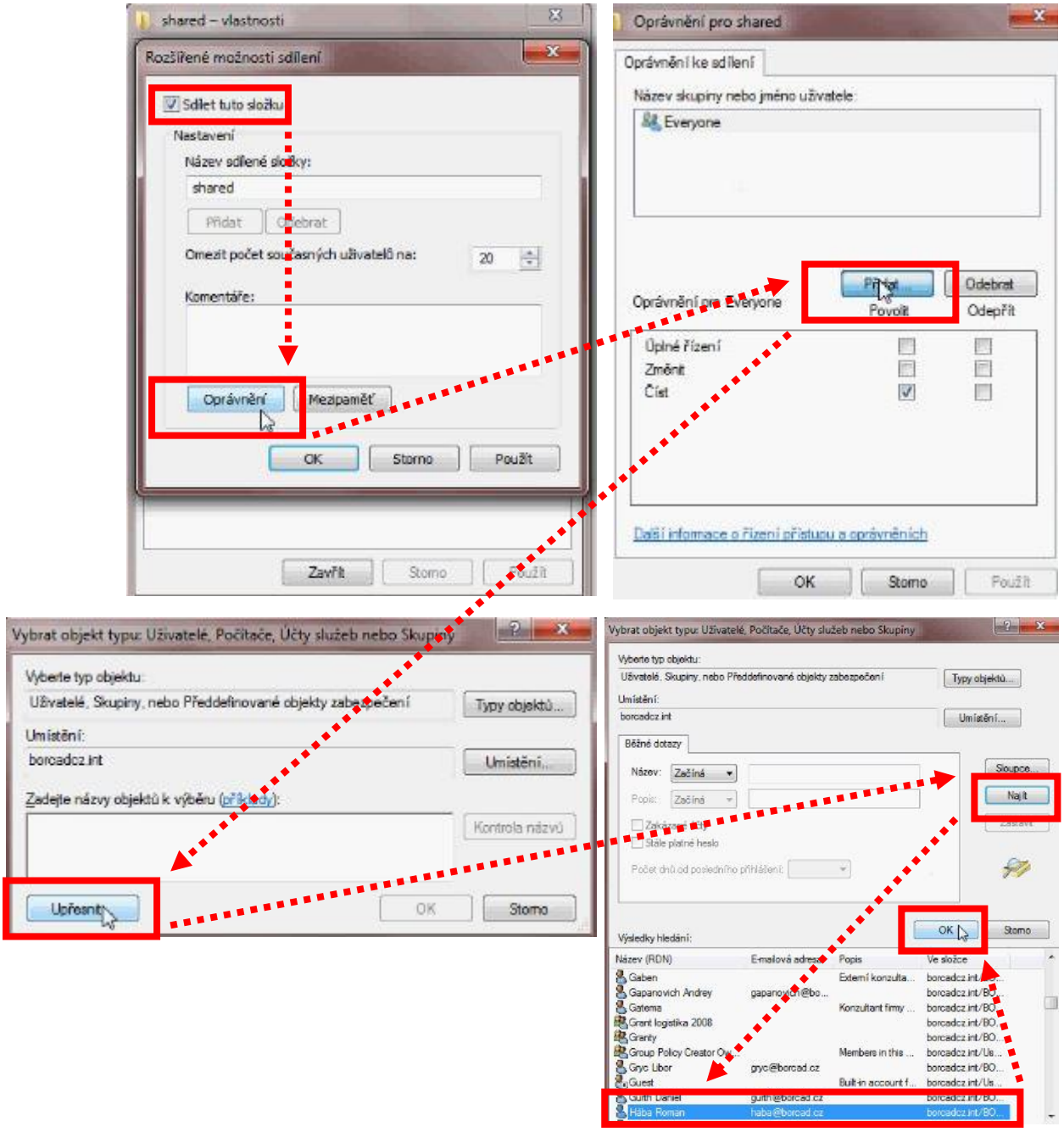


Now click on "**Properties**" of the folder. Then click on "**Sharing**" and "**Advanced sharing**" and "**OK**".



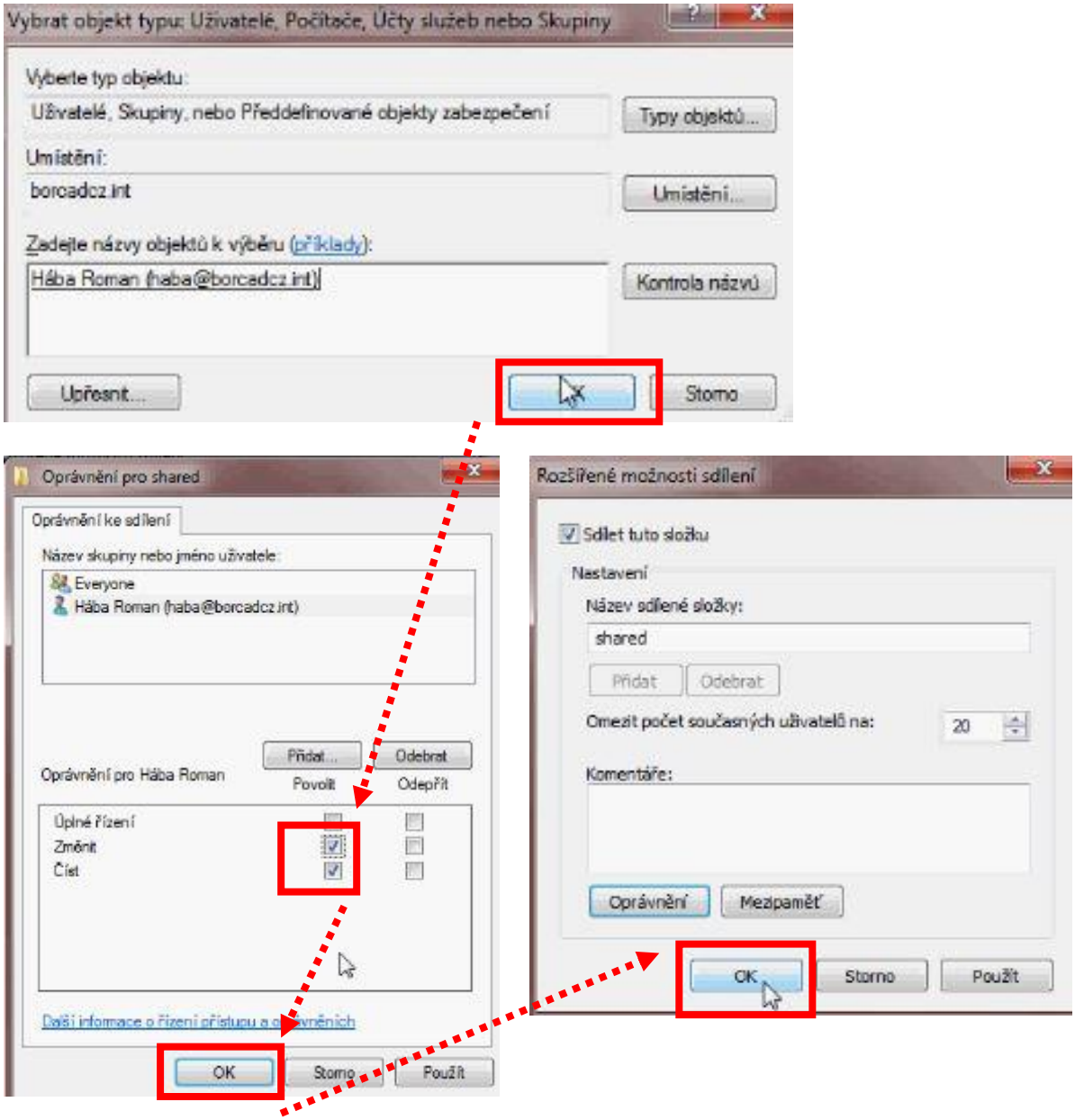


Click on "**Share this folder**", "**Certifications**", "**Add**", "**Advanced**", "**Find**". Select the user (your account), click on the user and then click on "**OK**".



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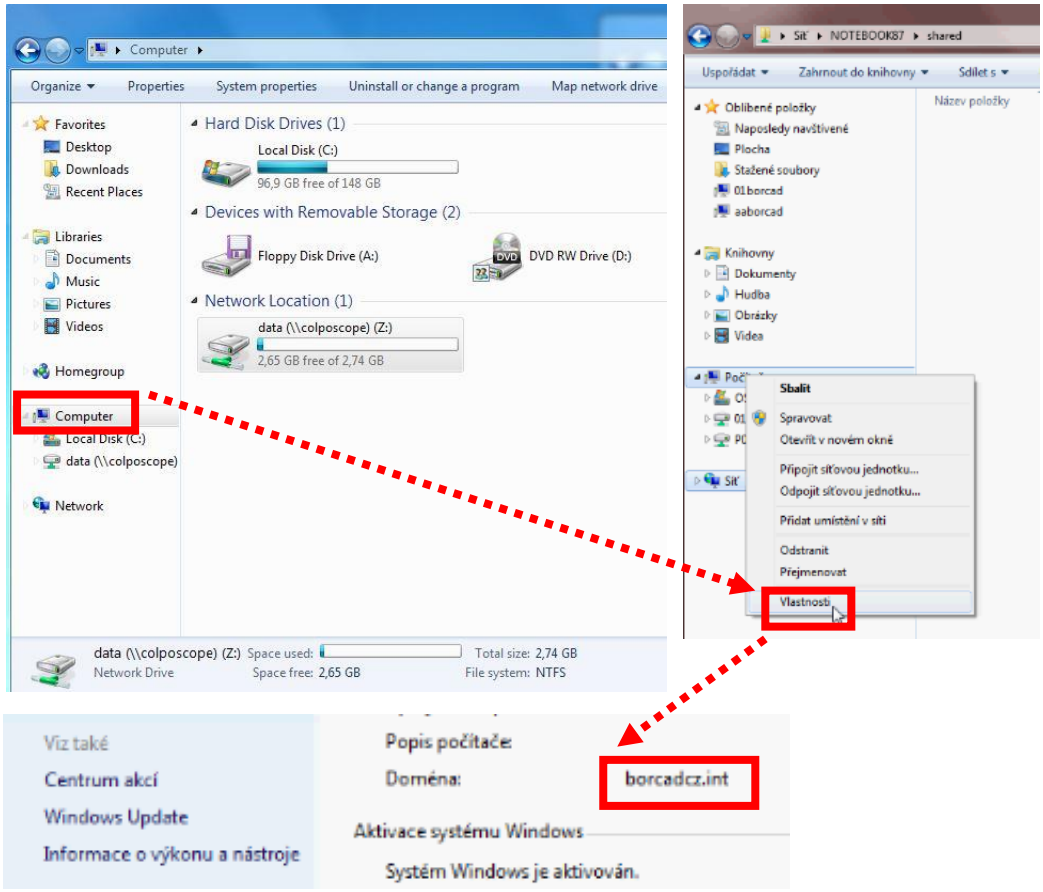
Confirm again with "**OK**", select **Change** and **Read** in Permissions. Confirm with "**OK**" twice. The folder is now shared and its name can now be typed into the **Upload path**.



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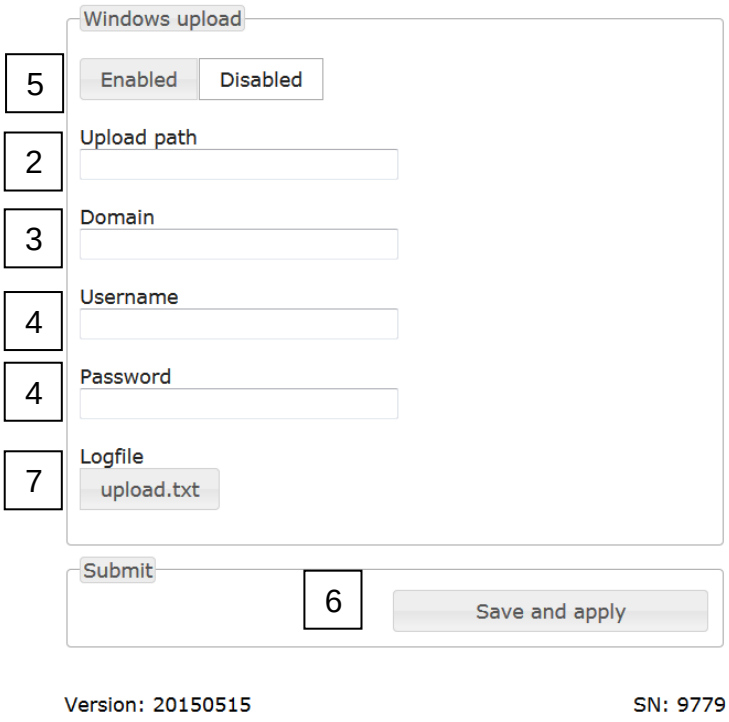
3. Domain – if the computer is connected into a network domain, the domain name must be filled in. If the computer is connected into a workgroup, it must not be filled-in. How to find out the network domain: Right-click on "**Computer**" and "**Properties**". The System properties window will open, where under "Domain" you will find a specific name of your domain.

E.g. "borcadcz.int"



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4. **Username, Password** – name and password of the user who has the right to write into the shared folder. Saving into a folder accessible for everyone is not allowed.
5. Enable the saving function **– Enabled** button.
6. Click on "**Save and apply**".
7. **Logfile** (file upload.txt) serves for your network administrator in case more detailed information is needed.



Note for MAC: To save images into a shared folder in a MAC system, the folder needs to be shared using the SMB protocol.

5.7 General settings

1) Open the Internet browser.



MS - WINDOWS



APPLE OS-X

2) Type ***//colposcope-XXXX*** in the address bar, where XXXX is the serial number on the nameplate of the Gracie chair.



MS - WINDOWS



When typing the path into the address bar, make sure to use correct slashes!

Type 10.0.0.1 in the address bar.



APPLE OS-X

3) Press ENTER on the keyboard of your PC/MAC or click on "Go" on the address bar.



MS - WINDOWS

4) You will enter the settings page of WLAN module of the GRACIE chair. Verification of connection may take from two to three minutes. It depends on the operation system of your PC/MAC.

5) You will be promoted to enter the username and password.

   Username: **admin**
   Password: **borcad**

After entering the username and password, press **OK**. Your will enter the WLAN/LAN connection menu of the GRACIE chair.



MS - WINDOWS



APPLE OS-X

Passwords and accesses have been factory pre-set. It is recommended to change them, refer to Section 5.8

5.7.1 Directory view settings - "Data directory structure"

1) Click on "**One directory for everything**" in the menu if you want to store all photos and videos into one common directory.

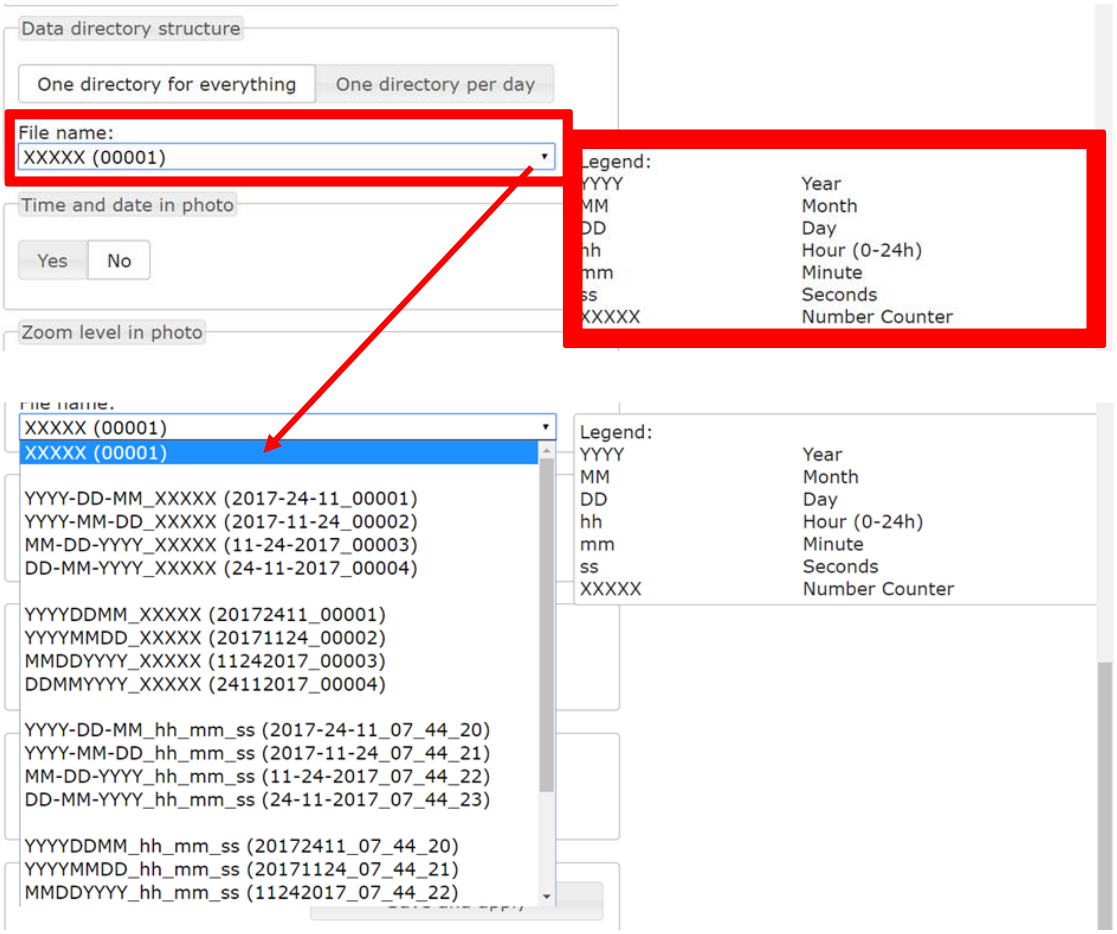
2) If you want to store data from the video colposcope of the GRACIE chair in directories with day names, click on "**One directory per day**".

To finish the changes click **SAVE AND APPLY**.



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Menu also offers optional storing the photos in a specific format (only for GKB-GX version). Click on "File name "and select the menu item. The explanation of abbreviations can be seen on the right side.

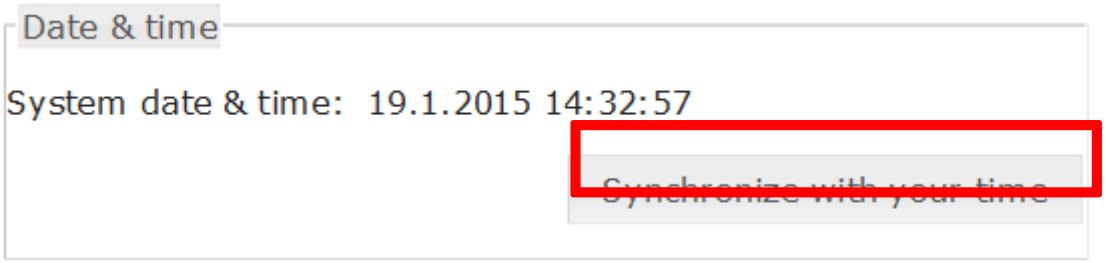


Confirm the selection by clicking on **SAVE AND APPLY**



5.7.2 Synchronization of date and time - "Date & time"

Click on "**Synchronize with your time**" in the menu to synchronize the time of taking the photo with the time currently set in the system of your PC/MAC.



To finish the changes click **SAVE AND APPLY**.



5.7.3 Photo and video timestamp settings - "Photo timestamp"

Click "**Yes**" in the menu if you want to save information about the exact time of taking the photo or video. Otherwise click on "**No**".

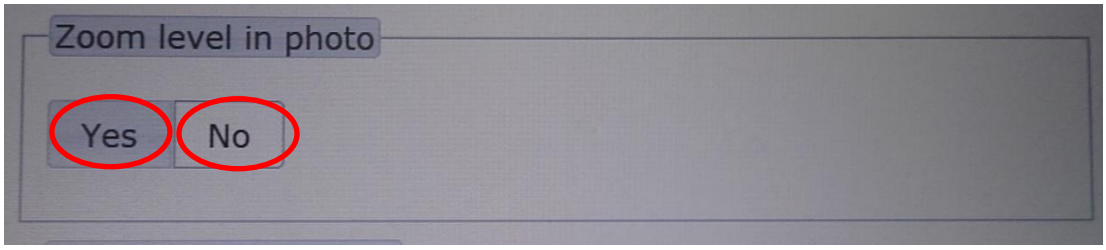


To finish the changes click **SAVE AND APPLY**.



5.7.4 Setting the information "Zoom level in photo"

Go to Menu and click on "**Yes**", if you want to store Zoom level in photo time, together with the photo. This information can be subsequently found in photo detail. If you do not want to store this information, click on "**No**".

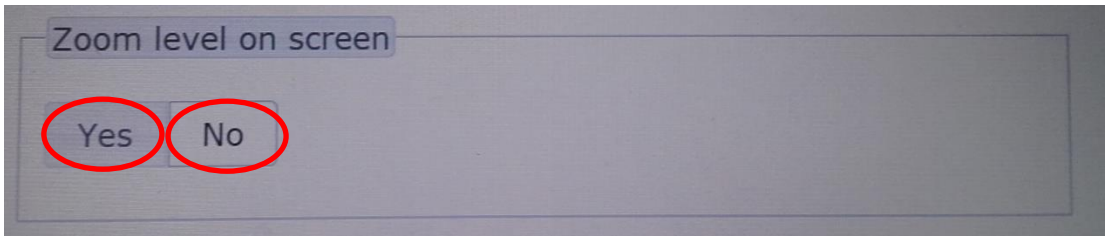


Press **SAVE AND APPLY** to confirm completion of the change



5.7.5 Setting the information "Zoom level on screen"

Go to Menu and click on "**Yes**", if you want to display zoom level on screen during the examination. Zoom levels response to your zooming in/out. If you do not want to display this information, click on „**No**".

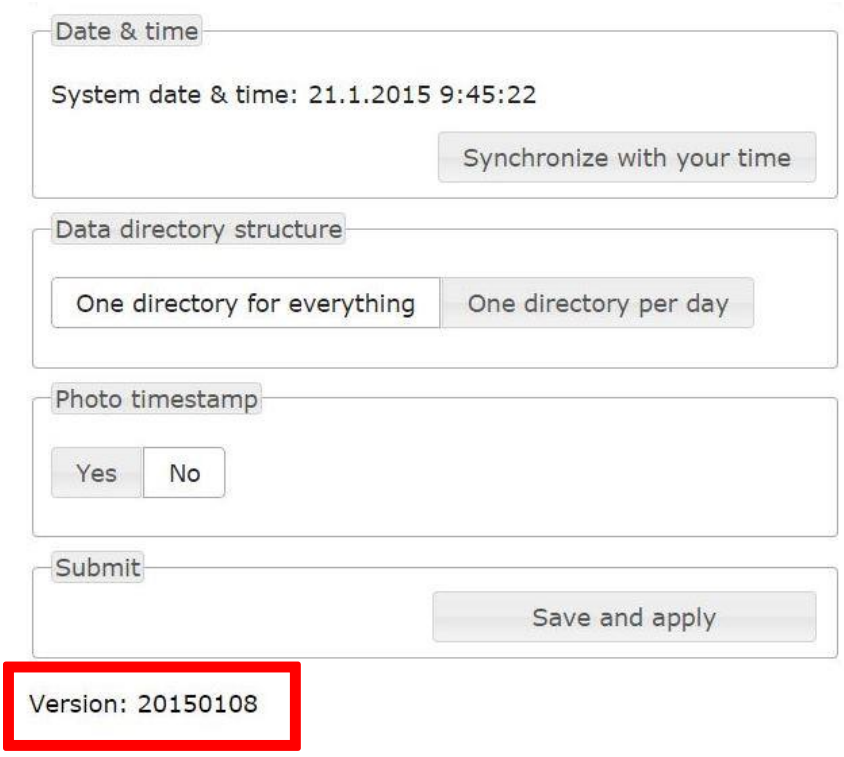


Press **SAVE AND APPLY** to confirm completion of the change



5.7.6 Revision number

You will find the revision number in the bottom part of the menu. The number is in the **YYYYMMDD** (year, month, day) format.



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5.8 Changing default passwords

1. Open the Internet browser.



MS - WINDOWS



APPLE OS-X

2. Type //colposcope-XXXX in the address bar, where XXXX is the serial number on the nameplate of the Gracie chair.



MS - WINDOWS



When typing the path into the address bar, make sure to use correct slashes!

Type 10.0.0.1 in the address bar.



APPLE OS-X

3. Press ENTER on the keyboard of your PC/MAC or click on "Go" on the address bar.



MS - WINDOWS

4. You will enter the settings page of WLAN module of the GRACIE chair. Verification of connection may take from two to three minutes. It depends on the operation system of your PC/MAC.

5. You will be promoted to enter the username and password.

   Username: **admin**
   Password: **borcad**

After entering the username and password, press **OK**. Your will enter the WLAN/LAN connection menu of the GRACIE chair.



MS - WINDOWS



APPLE OS-X

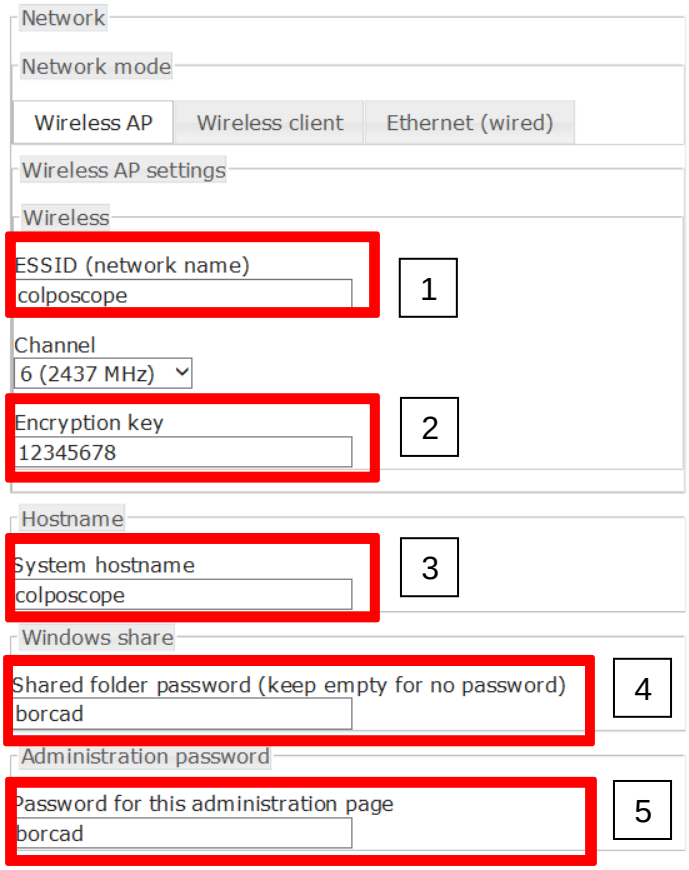
1. To change the network name change **colposcope-XXXX** to your chosen network name.

2. To change the default password for connection to the wireless network of the video colposcope (Wireless AP) change the password **12345678** to a new one.

3. To change the device (chair) name for identification in the network change **colposcope-XXXX** to a new name.

   For example **123** - you can then go to the menu by entering a command in the following format: //**123**/settings

   This name serves also for accessing the menu (//colposcope-XXXX) and the stored photographs and videos (\\colposcope-XXXX\data).



4. To change the default password protecting your photos and videos against access of unauthorized persons change the current password **borcad** to a new one.

5. To change the default password protecting the access to the menu of the microcomputer of the GRACIE chair change the current password **borcad** to a new one.

To finish the changes press SAVE AND APPLY.



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6 Accessories

Compulsory accessories

6.1 Video colposcope with polarisation filter

Only for version GKB-CX.

Video colposcope GKB-310 is provided with a reflection reduction system. The system is based on the technique of polarisation decreasing considerably the extent of reflections occurring in the fall of light on the device, e.g. mucus, gynaecological mirror or other surfaces. The system is placed inside of the body, enabling the user to get an image without reflections.

The system is controlled by the rotary ring which is placed at the bottom part of the video colposcope body. By moving finger from right to left, the ring can be rotated up to outer positions, after having reached them, it has to be rotated to the opposite side.



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PHOTO WITHOUT FILTER



PHOTO WITH FILTER



It is recommended that automatic focusing (see section 3.14) is activated again after the function for removal of reflections has been used. It is achieved by focusing the camera on the surfaces located under the layer reflecting light. In the event e automatic focusing is not sufficient, hand focusing can be used.

After the outer positions of the rotary ring have been reached, the ring must be rotated to the opposite side, otherwise there is a threat of damage of the polarisation system mechanism.

6.2 Standard leg supports (GKB-201.X)

Non-sectional leg supports are included in the basic product price.

6.3 Standard leg supports with a lamp integrated in the left leg support (GKB-202.X)

The leg supports are identical to the standard ones, but the left leg has a lamp built into it, which helps in illuminating the working area. The lamp is on a pivoting hinge, so it can be tilted to two positions and it is also on a “goose neck” so it can be positioned as required. The lamp switch is on the actual lamp body. This accessory cannot be combined with the chair version GKB-BX or a version which has an integrated colposcope.



Lamp in passive position



Lamp in active position

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6.4 Sectional leg supports (GKB-205.X)

Sectional leg supports allow their removal and make it easier especially for immobile patients to mount the chair.

Removal procedure:

1. Push the securing wire in the direction away from the chair (figure 1)
2. Lift the support by ca 30°and pull it out of the arm joint (figure 2)



Fig. 1

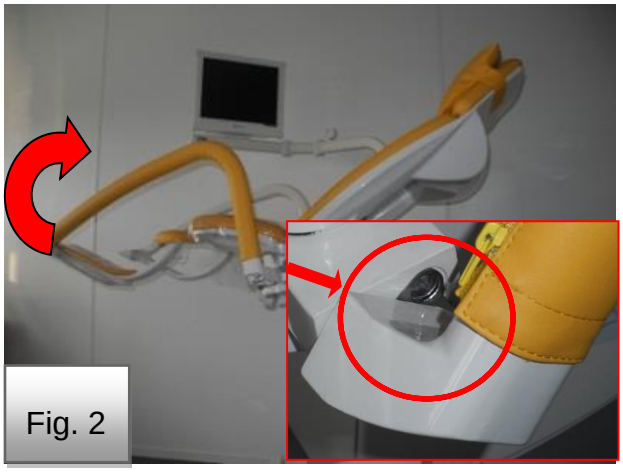


Fig. 2

Assembly procedure:

1. Fit the support when it is tilted by 30°C in relation to the support arm joint.
2. Push the support to the chair as far as possible, to keep the pivot of the joint fully inserted.
3. Slowly release the support downwards until you hear the securing wire lock into place with a snap.

6.5 Sectional leg supports with a lamp integrated in the left leg support (GKB-206.X)

The sectional leg supports can be removed to make it easier especially for immobile patients to mount the chair This version contains also an integrated lamp, which helps to illuminate the working area.

Removal procedure:

1. Pull the blue power supply cable of the lamp out of the leg support arm joint (fig. 1)
2. Push the securing wire in the direction away from the chair (fig. 2)
3. Lift the support by ca 30°C and pull it out of the arm joint (fig. 3)



Fig. 1



Fig. 2



Fig. 3

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Assembly procedure:

1. Install the support when lifted by 30° in relation to the support arm joint.
2. Push the support towards the chair as far as possible, until the joint pivot is fully inserted in.
3. Slowly release the support down, until you hear the securing wire snap in to place.
4. Now the leg support is properly fitted in and now we can install the lamp's blue connector to the leg support joint.



- **For the chair version equipped with a screen, take caution when assembling and removing leg supports. To facilitate access, tilt the screen away.**
- **For the chair version with a lamp, take caution when assembling and removing the leg supports because the lamp's power cable may get damaged. If the cable is damaged, the chair must not be used and the service centre must be contacted.**
- **After removing the leg supports, take caution regarding their storage. If the handling is not careful, the securing wire may get stuck and deformed.**
- **In the interest of safety, make sure the supports are properly fitted before use. Improper fitting of a support may lead to injury. If the supports are assembled properly, there will be no gap between the arm and the joint of the leg support.**





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6.6 Plastic bowl, rotary (GKB-139)

Bowl is included in the product basic price.



6.7 Asymmetric suspension bowl for the colposcope (GKB-097)

Bowl must be removed when the patient gets in and out. If the chair moves when the bowl is filled, its content may spill on the chair and floor. Bowl can be used together with the digital colposcope. Maximum permitted volume of the bowl is 3 litres. Maximum load of the bowl is 10 kg. Bowl holder does not allow an intermediate position, the bowl must snap in. Bowl is not included in the product basic price.



6.8 Leg rests Goepel type (GKB-207.X)

Non-sectional leg supports are included in the basic product price.

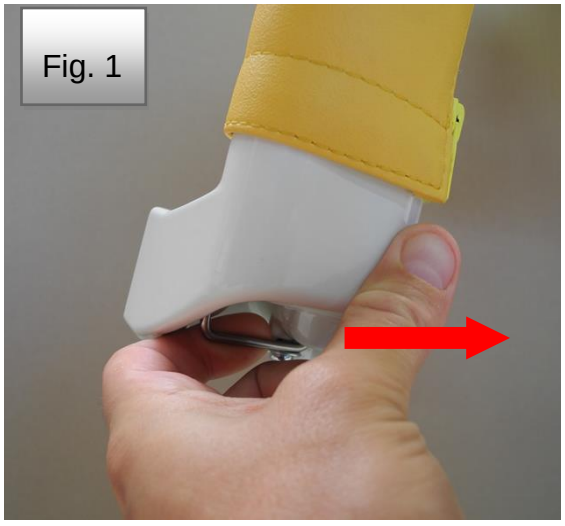


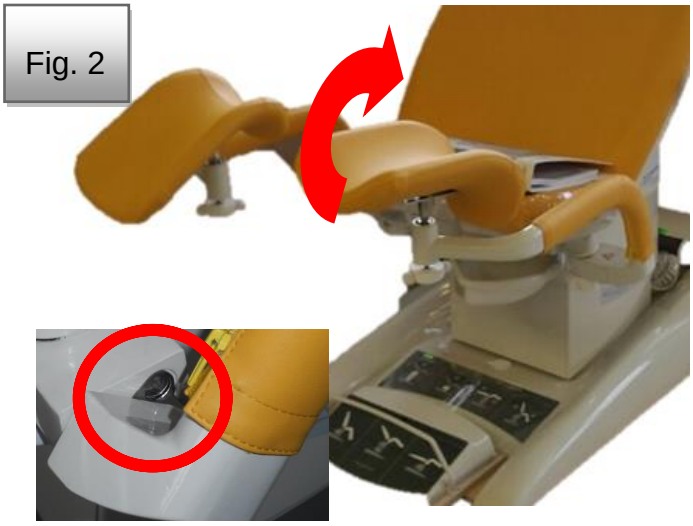
6.9 Sectional Leg rests Goepel type (GKB-208.X)

Sectional leg rests allow their removal and make it easier especially for immobile patients to mount the chair.

Removal procedure:

1. Push the securing wire in the direction away from the chair (figure 1)
2. Lift the rest by ca 30°and pull it out of the arm joint (figure 2)





Assembly procedure:

3. Fit the rest when it is tilted by 30°C in relation to the rest arm joint.
4. Push the rest to the chair as far as possible, to keep the pivot of the joint fully inserted.
5. Slowly release the rest downwards until you hear the securing wire lock into place with a snap.

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6.10 Connection to external display device (GKB-341 L /342 R)

The accessories serve to connect the integrated digital video colposcope GRACIE with external display device, e.g. TV, LCD, ultrasound and others. S-video socket is taken out of the column of the chair and it can be connected through a connection cable to a device having S-Video input. The socket can be taken out from the right or left side of the chair. In the event the display device is not equipped with this input a respective adapter must be used. Since the accessories do not contain monitor, in this case the VGA socket in the back part of the chair is not active.



GKB-342



GKB-341

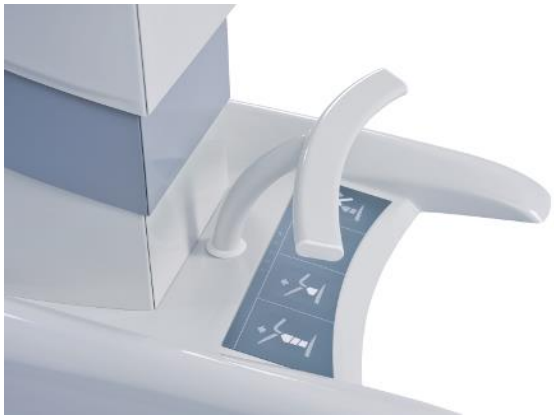


- **External display device must be connected in order to display video colposcope image, video colposcope cannot be used as a full-fledged tool without this connection. GKB-341/342 accessories do not include a monitor and cannot be combined with monitor.**

- **Take extra caution about the cable connecting the devices when connecting GRACIE with external display device. There is a threat of damage if the cable is caught when handling with the chair.**

6.11 Doctor´s foot support (GKB-021)

It serves for the doctor to support his or her feet during the examination.



6.12 Portable wire-less foot controller – additional (GKB-354)

(max. 3 pcs)



6.13 Fixation strap (ZP-25.X)

Pair. It is used for fixing legs of the examined women.



6.14 Eurolath, stainless steel right/left (GKB-040/041)

Maximum load – see the technical data. Ensure that when the chair moves up and down, the surrounding objects do not collide or get caught with the Eurolath.

The eurolath is used for placing the given accessories, such as armrests, hand control, infusion stand.



6.15 Head rest (GKB-092.X)



6.16 Head rest, semicircular (GKB-093.X)



6.17 PVC cover of foot support (pair) (GKB-098)

The cover with the graphics indicating the correct position of the foot on the foot support. The cover can be removed.



6.18 PVC underseat cover (GKB-077)



6.19 PVC underseat cover (GKB-163)



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6.20 Flat bowl for instruments (plastic) (GKB-054)

A plastic bowl is moved to its service position using a turning holder with locking. Locking in the service position is automatic. You can remove the bowl very easily from the holder in order to clean it. Bowl is made of a material that can withstand temperatures exceeding long of 65°C.



6.21 Rotary instrumental bowl, stainless steel – left (GKB-055)

The maximum permitted load is 10 kg.



6.22 Rotary instrumental bowl, stainless steel – right (GKB-065)

The maximum permitted load is 10 kg.



6.23 Doctor´s chair, ergonomic - high adjustment by hand (GKB-075)

Adjustable height; hand lock



WARNING!

- Do not use excessive force when operating the drive!
- Check the functionality of the control - piston stroke.
- The maximum static load is 120 kg.



6.24 Doctor´s chair, ergonomic - high adjustment by foot (GKB-076)

Adjustable height; foot lock



WARNING!

- Do not use excessive force when operating the drive!
- Check the functionality of the control - piston stroke.
- The maximum static load is 120 kg.



6.25 Doctor´s chair - high adjustment by hand (ZK-05.X)



WARNING!

- Do not use excessive force when operating the drive!
- Check the functionality of the control - piston stroke.
- The maximum static load is 150 kg.



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6.26 Roll holder (GKB-116)

It is used for attaching a paper roll. The recommended width of the paper role is 50 cm, length 50 m. The roll holder is not to be used when handling the chair. The maximum permitted load is 5 kg.



6.27 Euro lath for back rest Left / Right (GKB-117 / GKB-118)

The back strip (dimensions 300 x 25 x 10 mm) is used for placing the given accessories, such as armrests, hand control.



6.28 Laying board (GKB-115)

This equipment is used to create a flat laying surface, suitable for patients in supine position during longer interventions. Installation procedure:

1. Set the board end to the stop toward footrests (according to Fig. 2) so that a safety gap remains between the board and sitting part (according to Fig. 3).
2. Tighten the screws to secure footrests (according to Fig. 4) so that the board is safely fitted in place.



Fig. 1





Fig. 3



Fig. 4



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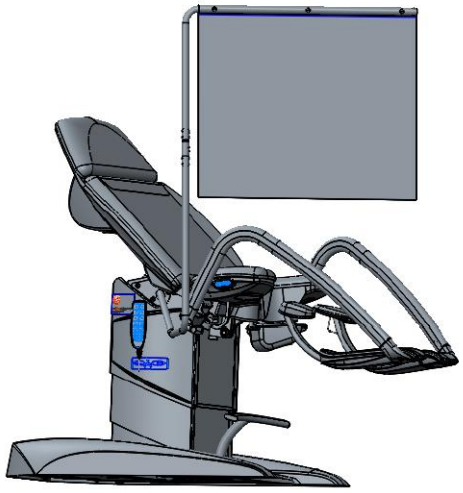
6.29 Protection sheet in front of a patient

No things are to be hanged up on the divider. Maximum load of the protection sheet arm is 5 Kg!

Protection sheet placed in front of a patient is to avoid eye contact between the doctor and his patient that is to be examined. Divider dimensions (680 mm height, 800 mm width). Color of the artificial leather upon order request.

Two types of attachment to your chair:

1) Attachment to the chassis of the chair for version GKB-AX (GKB-127 for the left side and GKB-128 for the right side).

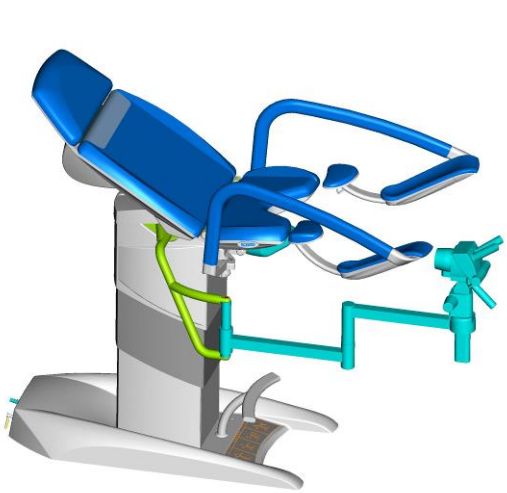


2) Attachment on the screen arm for version GKB-CX with screen (GKB-129).

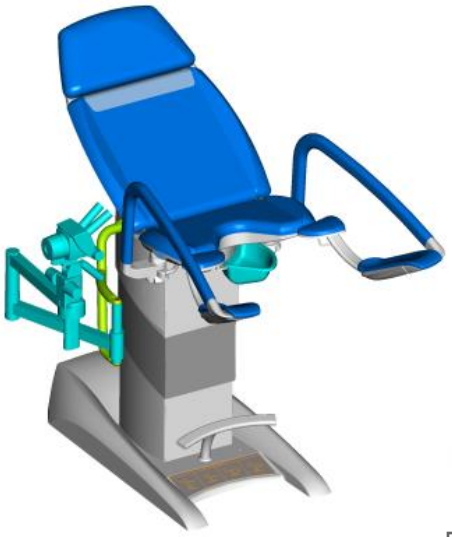


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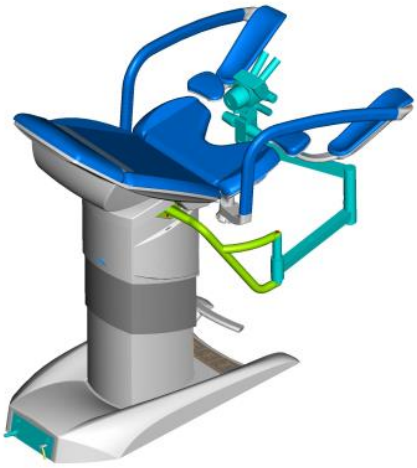
6.30 Colposcope holder - Leica (GKB-080 left / 081 right)



Maximal position

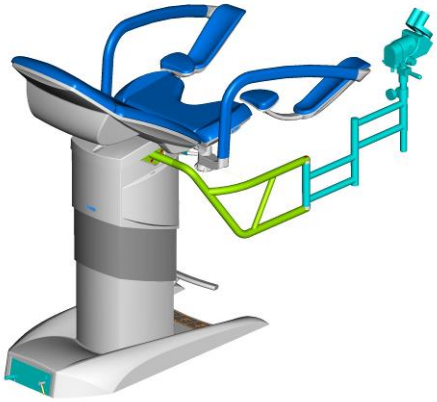


Parking position

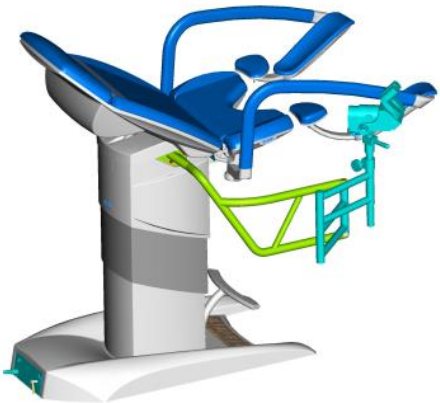


Examination position

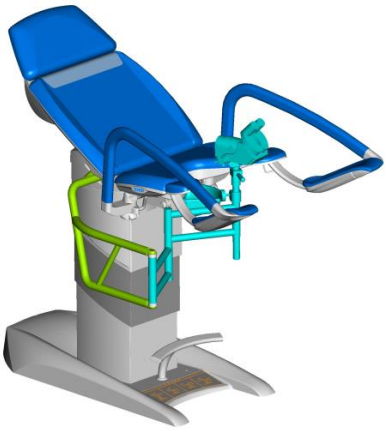
6.31 Colposcope holder - Leisegang (GKB-082 left / 083 right)



Maximal position



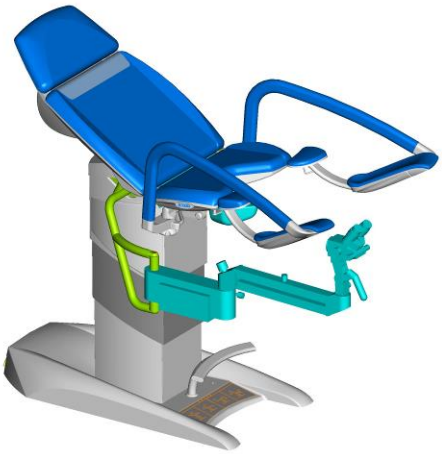
Parking position



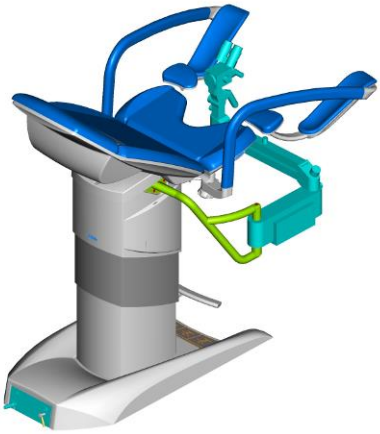
Examination position

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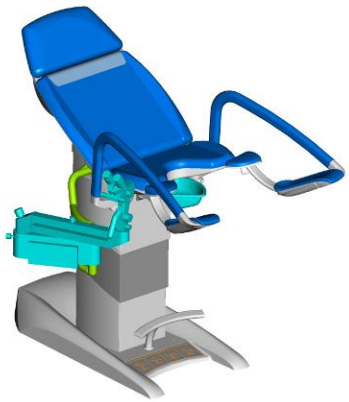
6.32 Colposcope holder - Zeiss (GKB-084 left / 085 right)



Maximal position

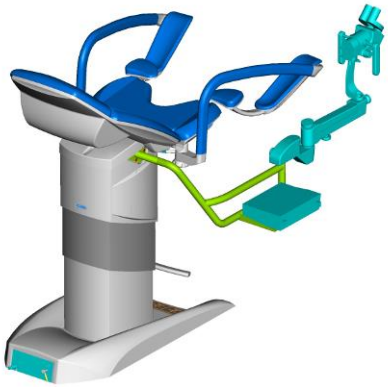


Examination position

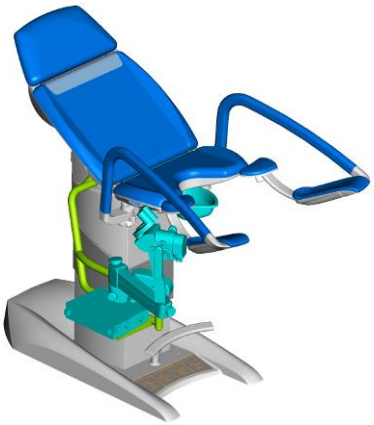


Parking position

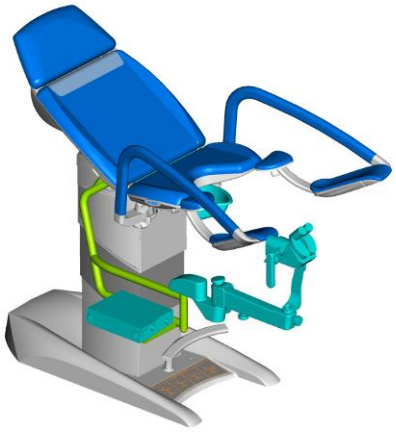
6.33 Colposcope holder – Olympus (GKB-086 left / 087 right)



Maximal position



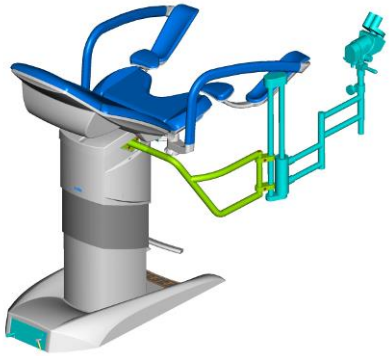
Parking position



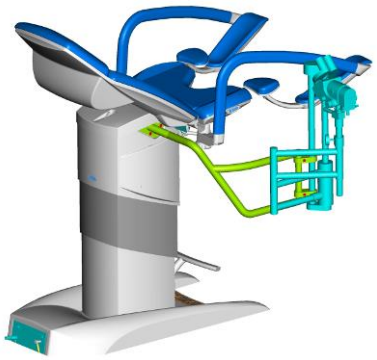
Examination position

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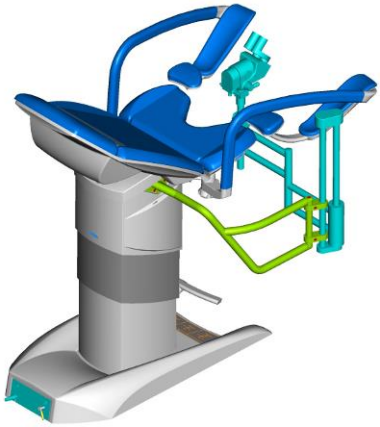
6.34 Colposcope holder – Leisegang (GKB-088 left / 089 right)



Maximal position



Parking position

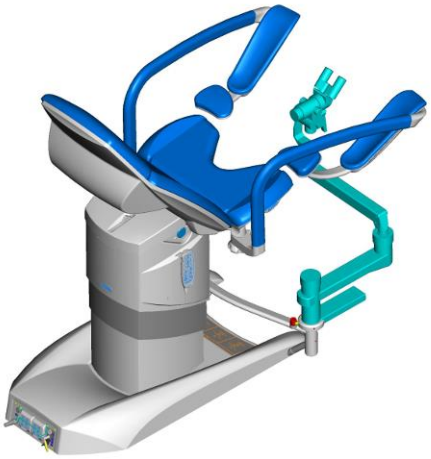


Examination position

6.35 Colposcope holder – OPTOMIC (GKB-094 left / 095 right)



Parking position

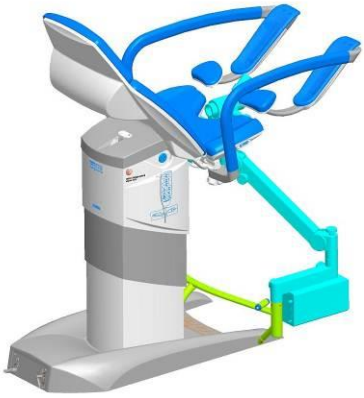


Examination position

6.36 Colposcope holder – ECLERIS (GKB-106 left / 107 right)



Parking position

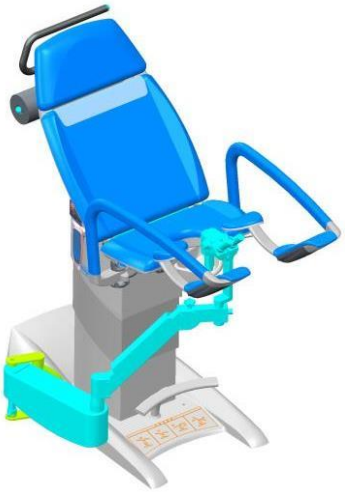


Examination position

6.37 Colposcope holder – Kaps (GKB-132 left / 133 right)



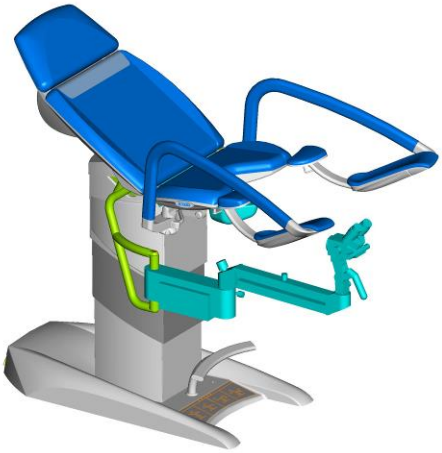
Parking position



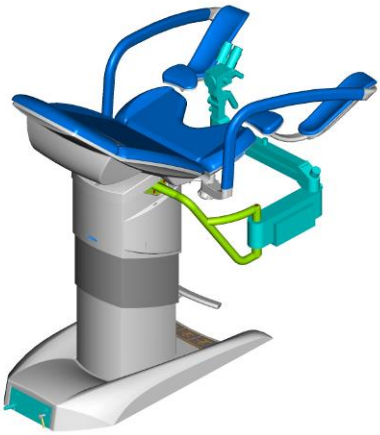
Examination position

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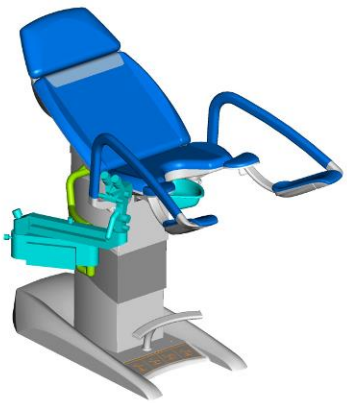
6.38 Colposcope holder – Atmos (GKB-100 left / 101 right)



Maximal position



Examination position



Parking position

When completing tasks with named colposcopes, the colposcope always needs to be “parked” in safe position “parking position” so that collision of the chair with colposcope does not occur.

6.39 HDMI cable 3m (GKB-410.97)

Only for version GKB-AX/GX.



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7 Cleaning and Disinfection

CAUTION!
Risk of injury due to accidental chair movement!

- When cleaning, always deactivate the function keys between the chassis and the bed.



WARNING!
Risk of damage to property due to incorrect cleaning / disinfection!

- Do not use washing machines.
- Do not use pressure or steam cleaners.
- Follow the instructions and the dosage recommended by the manufacturer.
- Make sure that disinfectants are selected and used exclusively by qualified hygiene professionals.
- When cleaning and disinfecting, pay attention to the materials used! See the following table for information.

Chair components	Materials used
Frame construction	Powder coated steel (powder is epoxy - polyester)
Columns	Oxidized aluminium alloy
Chassis cover, seat, backrest, upper frame covers, leg holders	ABS
Keyboard	Polyester, MP adhesives
Padding	PVC

Cleaning (Gracie)

Prepare the chair for cleaning as follows:

- Raise the chair to the highest position.
- Adjust the backrest so that you have access to the reverse side.
- Disconnect the chair from the mains.

Daily cleaning

Clean the following parts of the chair:

- All controls for chair adjustment
- All handles
- Freely accessible padding surfaces

Complete cleaning and disinfection

Clean the following parts of the chair:

- All controls for chair adjustment
- Support areas comprising a head cushion starting from the head section towards the bottom section
- Hangers and handles

- Leg holders
- Chair frame
- Lift the left plastic chassis cover and clean the contaminated areas
- Infusion stand and holder
- Wheels and brake pedals

For safe and gentle cleaning:

- Do not use any strong acids or bases (optimal pH range is 6 - 8).
- Use only cleaning agents that are suitable for cleaning medical equipment.
- Do not use abrasive powders, steel wool or other materials and cleaning agents.
- Never use any corrosive or vitriolic cleaning agents.
- Never use cleaning agents that cause calcium carbonate to settle.
- Never use cleaning agents with solvents that could affect the structure and consistency of plastics (benzene, toluene, acetone, etc.).
- Carefully clean the electrical components and allow them to dry completely.
- Never immerse SCU in water or clean it with steam.
- Follow local guidelines for infection control.
- Do not use open flames when working with cleaning and disinfecting agents!
- Make sure that all cleaning agents used are approved:

Recommended disinfection (disinfectants for wiping)

RTU- Ready-to-use non-diluted products – spray or foam,		
Active substance	How to use	Example of disinfectant
Amine, Alcohol up to 30%	Spray and wipe	Incidin foam
Hydrogen Peroxide	Spray and wipe	Incidin OxyFoam S
Alcohol till 30%	Spray and wipe	Bacillol 30 Foam
Disinfection wipes		
QAS	Wipe	Sani cloth active
Hydrogen Peroxide	Wipe	Incidin OxyWipe S
Amine, Alcohol up to 30%	Wipe	Bacillol 30 tissues
Concentrated disinfectants, to be diluted		
Active substance	Concentration of the prepared solution of the disinfectant	Example of disinfectant
Glukoprotamine	0,5%	Incidin plus
Amine, QAS	0,5-1%	Terralin protect
Oxygen, QAS	1%	Desam OX
Oxygen, QAS	1%	Incidin Oxydes

Amine, QAS	0,5%	Incidin pro
Amine, QAS	0,5%	Surfanios premium
Oxygen	0,5%	Anios Oxy Floor
Oxygen	1%	Incidin Active
Oxygen	1%	Perform

Warning! Do not use disinfectants with active substance: alcohol over 30%, active chlorine, iodine, aldehydes.

As a result of the hygienic preparation process, gynaecological facilities are responsible for ensuring that all equipment and medical facilities they use must be cleaned or disinfected directly and immediately after occupation to prepare the premises for a new patient. This means that such cleaning will affect all parts of the chair. Due to the rapid change of patients in one place, the increased demand concerns the best possible balance between the necessary and possible cleaning processes. The procedure must be reviewed and agreed with, or supplemented with, hospital guidelines, recommendations for hygiene plans, and implemented measures. After patients with a known infection, special cleaning and disinfection measures must be used. Such procedures are subject to the above-mentioned hospital guidelines and must be clarified accordingly. Regarding infection control, the use of prefabricated protective coatings and / or cover fabrics is recommended, which additionally cover the hygienically sensitive components of the chair - seat, backrest, and leg section, in order to avoid contact of the patient's skin with the padding.

8 Maintenance



The battery voltage (without load) must be checked within the scope of regular annual revisions of the medical equipment. If the measured voltage is below 12 V (24 V in case that two battery cells are measured at a time), the battery must be replaced without delay. To ensure proper chair operation, we recommend replacing the battery at least once every 3 years.

8.1 List of error, fault and generated messages

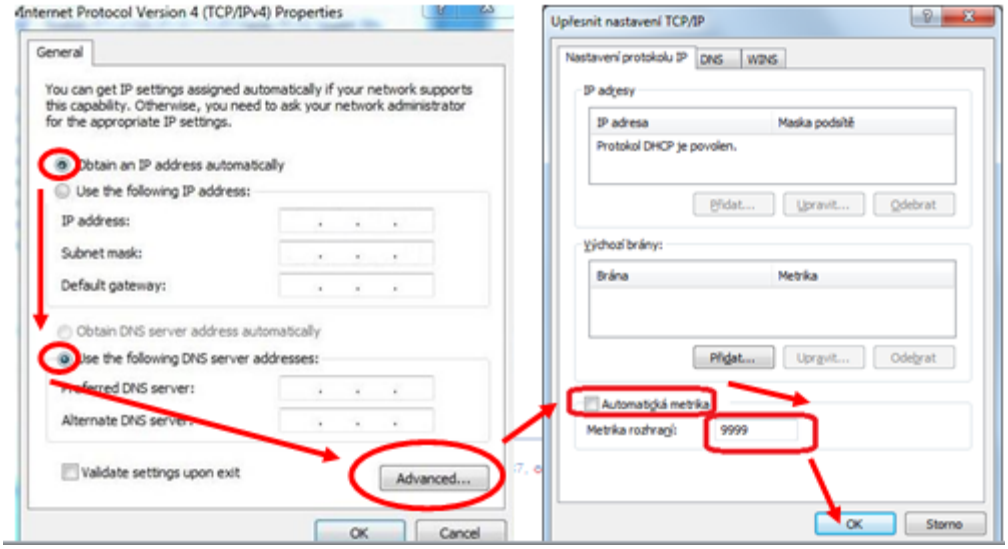
Problem description	Probable cause	Activities of the operator to correct the problem	Activities of the qualified service personnel
Chair does not react to commands of controllers. No foot control indicator light is on.	Chair is probably not plugged in the electrical network and the battery is already discharged.	Plug the power cord to the electrical outlet (battery is fully recharged after 8 hours).	Check whether the electrical network is under power and whether the outlet is functional. Use a different outlet.
Chair does not react to commands of the wireless foot control.	Switch of the wireless controller located on the rear chair panel is in position "0" (OFF).	Set this switch to position "I" (ON).	
Battery light icon turns on and off.	Discharged battery in the remote foot control.	Replace batteries in the remote foot control.	Check whether the chair operates with other remote foot control. If so, replace the remote foot control.
Chair does not react to pressing the memory function.	Loss of position (stalling) of any of the engines	Set the chair to end positions using the hand control (backrest to the upper position, lifting column to the lower position, footrests to the lower position).	Perform diagnostics of the control box. Replace defective components.

The chair does not respond to the pushed memory function	The safety SLS switch is probably not active. It is under the chair. On the chair base the red warning diode is lit.	Check, if there is no uneven surface under the chair and if the chair is in horizontal position. Possibly screw in the legs, to move the chair base closer to the floor	Perform diagnostics of the control box. Replace defective components.
Chair does not react to commands of controllers. All foot control indicator lights are on or flash.	Control box reports an error.	Reset the control box. CONTROL BOX RESETTING: Press simultaneously and hold the buttons controlling the column up-and-down movement – you must hear an intermittent audible signal. Hold the button as long as the acoustic signal disappears. If the signal does not sound, repeat the whole procedure.	Perform diagnostics of the control box. Replace defective components.
The colposcope image does not display on the screen	The screen is switched to the ultrasound image, or to one of the inactive inputs	Use the INPUT SELECT button on the screen to switch to the colposcope image	Remove the rear cover of the screen and make sure the video cable is attached.
Colposcope image is not displayed on the monitor.	One of the cables located under the seat part is disconnected.	Remove the seat part and make sure that the cables are connected.	Remove the monitor back cover and make sure that the video cable is connected.
Colposcope image on the monitor is black and white.	Video cable located under the seat part is connected insufficiently.	Remove the seat part and make sure that the cable is connected.	Remove the back cover of the monitor and make sure the video cable is connected.

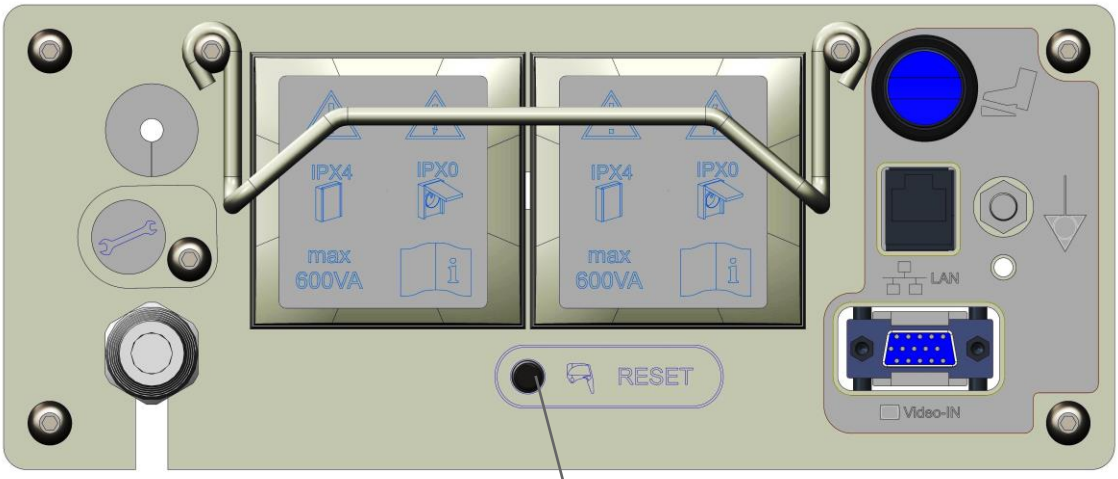
Colposcope diodes and buttons do not light.	Power cable located under the seat part is connected insufficiently.	Remove the seat part and make sure that the cable is connected.	Check the colposcope fuses located at the chair lower part. Replace fuses if damaged.
Seat part heating does not operate.	Power cable located under the seat part and leading to the seat heating base plate is connected insufficiently.	Remove the seat part and make sure that the cable is connected.	Check whether the heating operates with other base plate. If so, replace the base plate.
5 LED indicators of the seat part heating flash and a warning signal sounds.	Seat part is overheated.	Let the seat part cool down for approx. 1 hour.	Check whether the seat gets overheated with other base plate. If so, replace the base plate.
4 LED indicators of the seat part heating flash.	Seat part is defective or badly connected to the base plate.	Remove the seat part and make sure that the cable is connected.	Check whether the heating operates with other seat connected. If so, replace the seat.
3 LED indicators of the seat part heating flash.	This is an internal error of the control device.	Remove the seat part and make sure that the control device cable is properly connected.	Check whether the heating operates with other control device connected. If so, replace the control device.
Image from the video colposcope is not visible on your PC (only black/blue picture)	Frozen control unit of the video colposcope	Reset of the video colposcope is necessary	Video colposcope hardware in the GRACIE chair must be replaced
If image is frozen on the screen	The button "freeze image" is pressed on the video colposcope 	Press the "freeze image" button once to deactivate the function	

Buttons on the video colposcope do not work	Frozen control unit	Reset of the video colposcope is necessary	Video colposcope hardware in the GRACIE chair must be replaced
LED diode does not flash or light up after pressing the button for taking a photo/video on the video colposcope	Initialization of the failure in the micro computer of the chair	Reset of the video colposcope is necessary	Video colposcope hardware in the GRACIE chair must be replaced
You are unable to connect to configuration page of the chair.	Network connection error.	You must disconnect from the "colposcope" LAN network and reconnect. Then wait for up to 5 minutes and try to type http://10.0.0.1 into your browser.	Video colposcope hardware in the GRACIE chair must be replaced.
You are unable to connect to the network directory in the shared memory of the chair (with images and videos) from your PC after typing \\colposcope-XXXX\data	Password for access to the shared directory was changed.	Log out from Windows. Then log in again and test connection.	Video colposcope hardware in the GRACIE chair must be replaced.
You are unable to connect to the network directory in the shared memory of the chair (with images and videos) from your PC after typing \\colposcope-XXXX\data	Reaction time of the operation system of your PC.	First you need to start connection to the configuration page. Then open My Computer. Type \\colposcope-XXXX\data in the address bar. If the shared directory is not accessible, try to type \\10.0.0.1 in the address bar.	Video colposcope hardware in the GRACIE chair must be replaced.
Internet connection was lost after connecting to the chair.	If more network adapters are installed in the computer and one of them is connected to the Internet, Internet	To make both connections (to the chair and to the Internet) work, you need to manually set the network connection metrics (see no. 9999)	

	connection may be lost after the second adapter is connected to the chair. This is most likely to happen when the computer is connected to the Internet using static IP address.	and confirm with OK.	
You forgot your password for accessing photos stored in the memory of the GRACIE chair.	You may not have stored your password for automatic login in your computer.	Press the buttons for WLAN (ZOOM + and –) simultaneously on the video colposcope body. The chair will be reset to default settings. Then continue according to instructions in chapter 5.8.	



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Video colposcope reset button on the rear socket terminal of the GRACIE chair **(GKB-CX)**



Video colposcope reset button for version (GKB-AX).
Press through a hole in the column cover with a thin non-metallic object.

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8.2 Basic technical data

Total length of loading area (in lying position)	1780±5mm
Total length of the seat (in seating position)	1700±5mm
Overall width (over footrest)	760±5 mm
Padding width (max.)	630±5 mm
Padding thickness	30±2 mm
Seat height in lower - loading position	520±5 mm
Max. seat height	1150±5 mm
Stroke	500±3 mm
Lifting speed	30 mm/s
Angle range of backrest	-7°±2°/+50°±2°
Angle range of seat part	+5°±2°/+10°±2°
Trendelenburg position	-12°±2°
Angle range of footrest pedals - vertical	0°±2°/+36°±2°
Angle range of footrests - vertical	-18°±2°/+19°±2°
Width setting of footrests - horizontal min/max	200±5/980±5mm
Height of foot pedal above the ground min	250±5 mm
Patient load	180 kg
Maximum chair load	210 kg
Permitted load of backrest (125 mm from the edge)	60 kg
Permitted footrest load	40 kg
Labels, stickers - made from polymeric PVC	
Product weight - standard version	130 kg
Permitted load of hanging bowls (GKB-097)	10 kg
Maximum load of ledge (GKB-040 / GKB-041)	15 kg
Volume of hanging bowl (GKB-097)	3 l
Nominal value of the fuse in the control unit (230 V)	1.25 AT
Nominal value of the fuse in the control unit (100/120 V)	2.5 AT
Protection type	B
Protection class	I
Ingress protection	IPX4
Ingress protection of the foot controller	IPX6
Method of operation	Int.2/18 min
Ambient temperature	+5° to + 40°C
Loss of programmed functions - without power - after battery discharge	after 10 minutes
Consumption in Standby mode (chair version with colposcope)	20VA (13W)
Consumption max. (chair version with sockets)	2000VA
Consumption max. (chair version without sockets)	290VA
Noise level	Less than 56 dB (A)
Frequency (100 V)	50 Hz
Frequency (120 V)	60 Hz
Frequency (230 V)	50/60 Hz

Video colposcope technical parameters

Max length of colposcope unloaded from the front (cutout) of the seat	550±5 mm
Max length of colposcope unloaded from the side of the seat	225±5 mm
Max distance of colposcope from top surface of the seat (lens axis)	-150±5/+185±5 mm
Max length of monitor holder unloaded from the front of the seat	330±5 mm
Max length of monitor unloaded from the side of the seat	-90±5/+705±5 mm
Max height of monitor from top surface of the seat	850±5 mm
Max height of monitor from the ground	1 900±5 mm
Angle setting of the first colposcope arm - horizontal	0°±2°/+90°±2°
Angle setting of the second colposcope arm - horizontal	0°±2°/+180°±2°
Angle setting of the second colposcope arm - vertical	-40°±2°/+55°±2°
Angle setting of the camera - horizontal	0°±2°/+180°±2°
Angle setting of the camera - vertical	-20°±2°/+20°±2°
Angle setting of joints of monitor arms - horizontal	-28°±2°/+28°±2°
Tilt angle of the monitor	0°±2°/+15°±2°
Maximum colposcope load	2 kg
Maximum load of monitor holder	2 kg
Maximum load of the first colposcope arm until deformation occurs	35 kg
Colposcope weight – GKB-210.01	2.4 kg
Weight of holder with monitor – GKB-210.02	11.5 kg
Optical Zoom	1.5x - 20x
Digital Zoom	10x
Diameter of visible area	30 mm (10x zoom)
Working distance	240 – 330 mm
Depth of field	10 mm
Focus	auto, manual
LCD size	17“
Resolution	1280x1024
Light source	LED (cold+warm)
Light intensity at 30 / 10 cm from videocolposcope (GKB-210)	1800 Lux / 5000 Lux
Light intensity at 30 / 10 cm from videocolposcope (GKB-310)	900 Lux / 2600 Lux
Separate light switch	yes
Filter for venal examination	green
Image freeze	yes
Polarizing filter	yes
Image resolution	640x480 px
Video resolution	640x480 px
Output	WLAN, LAN
External input	VGA
Protection class	I

Battery operation:

- If the battery capacity is below 50%, there is a beep after 2 seconds every time the controls are used
- If the system is activated and the plug is pulled, the system stops. In contrast, if the system is running on batteries and the power cable is plugged in, the system will continue operating.
- The charging indicator light may blink when the system is operating with high load causing a voltage drop and due to the fact that the battery begins to charge.
- CB20 with backup battery begins to charge only when connected to the mains.
- Control box with battery should be recharged at least once every 6 months. However, the maximum lifetime is reached if the battery is fully charged.
- The battery should be charged at least 12 hours before use.

Full HD Video colposcope

Max. length of the outreached colposcope from the front (cutout) of the seat	550±5 mm
Max. length of the outreached colposcope from the side of the seat	225±5 mm
Max. distance of the colposcope from the upper surface of the seat (lens axis)	-150±5/+185±5 mm
Max. length of the outreached screen holder from the front of the seat	235±5 mm
Max. length of the outreached screen from the side of the seat	-70±5/+510±5 mm
Max. height of the screen from the upper surface of the seat	815±5 mm
Max. height of the screen from the floor	1870±5 mm
Adjustment angle of the first arm of the colposcope - horizontal	0°±2°/+90°±2°
Adjustment angle of the second arm of the colposcope - horizontal	0°±2°/+180°±2°
Adjustment angle of the second arm of the colposcope - vertical	-40°±2°/+55°±2°
Adjustment angle of the camera - horizontal	0°±2°/+180°±2°
Adjustment angle of the camera - vertical	-20°±2°/+20°±2°
Adjustment angle of the screen arm joints - horizontal	-55°±2°/+55°±2°
Adjustment angle of tilting of the screen	0°±2°/+15°±2°

Maximum loading of the colposcope	2 kg
Maximum loading of the screen holder	2 kg
Maximum loading of the first arm of the colposcope before deformation	35 kg
Weight of the colposcope – GKB-412	2.4 kg
Weight of the holder with screen – GKB-410/411	8.3 kg
Optical zoom	20x
Diameter of visible area	30 mm
Working distance	240 – 330 mm
Depth of focus	10 mm
Focus	auto, manual
Screen size	21“
Resolution	1920x1080
Light source	LED (3000K)
Autonomous light switching	yes
Light intensity in a distance of 30 cm (1-2 degree)	2700Lux-5600Lux
Separate light switch	yes
Polarizing filter	yes
Filter for venal examination	green
Photos Resolution	1920x1080 px
Image size – common gynaecological scan	2.8MB
Storing internal memory for photos and videos	Approximately 6.5GB
Video Resolution	1920x1080 px
Output	WLAN,LAN
External input	HDMI, VGA
Protection class	I

8.3 Enclosed parts

Identification of attachments (type B)
All parts of the chair (and accessories) that the patient can reach are type B attachments.

- **Padding / mattress**
- **leg holders**
- **heel supports**
- **monitor**
- **colposcope**



8.4 Transport, Operation and Storage conditions

Storage and transport conditions: 10°C – 40°C, 30% – 75%, 795 hPa – 1060 hPa

Operation conditions: -10°C – 50°C, 20% – 90% (non-condensing),
795 hPa – 1060 hPa



After the chair has been unpacked and set up in place for use, it must be allowed to acclimatize for 2 hours.

8.5 Service and Repairs

The product is provided with a 2-year warranty under conditions of regular annual revisions.

For all medical equipment produced by the BORCAD Medical a.s. company, the operator must ensure regular technical safety inspections according to the producer's recommendation. The inspections must take place at least 1x per year or after the carrying out of any repair of the medical equipment or after any malfunction of the electrical system of the medical equipment. The details about the scope, parameters and procedures of the technical safety inspection are specified in the service manual of the medical equipment.

If any other discrepancies occur, please contact (preferably in English language) directly the manufacturer at the following address:

Manufacturer address:

BORCAD Medical a.s.
Fryčovice 673
739 45 Fryčovice
Czech Republic
Tel.: +420 558 640 632, +420 736 628 209, +420 736 628 211
Fax : +420 558 668 087
e-mail : service@borcadmedical.com

When repairs are undertaken, exclusively use BORCAD Medical a.s. original parts and take advantage of the skilled service technicians with authorization to repair this product type. Unskilled repairs will be considered as an essential violation of the warranty conditions and at the same time, the manufacturer renounces its responsibility for further possible damages to this product resulting from an unskilled action.

Additional assembly of video colposcope on gynecological chair – accessories (GKB-066.01) and display holder (GKB-066.02) can be done only by a competent person that checks electrical safety and general functionality subsequently and approves using the product.

Extended guarantee does not include:

- PUR surfaces of the chair (A warranty of 2 years is given for these parts)
- upholstery of the chair (A warranty of 2 years is given for these parts)
- batteries (These are provided with guarantee for 6 months)



- **All revisions, service inspections, or technical inspection must be done by technician trained by BORCAD Medical a.s.**
- **Diagrams, parts lists, descriptions or other information to aid service personnel in the repair of product parts, repairable by service personnel in opinion of the manufacturer, are available on request at the manufacturer**

9 Disposal

Estimated service life of this medical device is 15 years.

9.1. Environment Protection

The company BORCAD Medical is aware of the importance of environmental protection for future generations. Within this company the environmental management system is applied in accordance with the internationally agreed standard ISO 14001.
The compliance with this standard is annually tested by the external audit executed by an authorised company.

Materials used in this product are not environmentally hazardous. BORCAD Medical products meet valid requirements of national and European legislation in the areas of **RoHS** and **REACH**, so they do not contain any prohibited substances in excess quantities.
None of the wooden parts is made of tropical wood (such as mahogany, rosewood, ebony, teak etc.) or made of timber from the Amazon region or from similar rainforests. Product noise (sound pressure level) meets requirements of the regulations for the protection of public health against undesirable effects of noise and vibration in protected interior spaces of buildings (according to standard IEC 60601-2-52). Used packaging materials are in accordance with requirements of the Packaging Act.
For disposal of packaging materials after installation of products contact your sales representative or manufacturer´s customer service about the possibility of a free take-back of packaging through an authorized company (more details on **www.linet.cz**).

9.2. Disposal

9.2.1. Within Europe

To dispose of the equipment:

► The equipment must not be disposed of as household waste.

► Dispose of this equipment at designated collection points or take-back points.

BORCAD Medical participates in a collective system with take-back company REMA System
(see **www.remasystem.cz/sberna-mista/**).
By bringing electric and electronic equipment to a take-back point, you participate in recycling and you save primary raw material resources while protecting your environment from effects of unprofessional disposal.

9.2.2. Outside Europe

► Dispose of the product or its components in accordance with local laws and regulations!
► Hire an approved waste disposal company for disposal!





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CERTIFIED MANAGEMENT SYSTEM
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