COSTRUZIONE STRUMENTI OFTALMICI

FUTURE

Ophthalmic unit

INSTRUCTIONS FOR USE

DELUXE2 / DELUXE3

VIEWLIGHT POWERED BY INNOVATION

COSTRUZIONE STRUMENTI OFTALMICI

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IFU318EN01.00 - 02/2022

Colour Inside

EN

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1 INTRODUCTION

The device is the result of a long research period, conducted by experts to give the product technical innovation, quality and design.
Ophthalmic units are characterized by their practicality compatible with a wide range of devices for the modern ophthalmological diagnostic. Thanks to an attentive selection of the materials and a wide range of available colours and customizations, it is possible to create a harmonious and comfortable working environment both for the operator and the patient.

1.1 SYMBOLS

Within the information for use, on the package or on the device, there can be the following symbols:

Symbol	Meaning
	Caution
	Danger of electric shock
	Refer to instruction manual / booklet
	General obligation
	Note. Useful information for the user
	General prohibition sign
	Manufacturer

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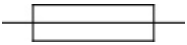
	CE Marking (EU Regulation 2017/745)
	Medical device
	Waste disposal in compliance with the Directive 2012/19/EU (WEEE), and 2011/65/EU (RoHS II)

1.1.1 DEVICE SYMBOLS

Symbol	Meaning
	Type B applied part
	Fuse

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1.2 GENERAL WARNINGS

THIS INFORMATION FOR USE REFERS TO OPHTHALMIC UNIT, MODEL FUTURE DELUXE ("DEVICE" FROM NOW ON).

THE ORIGINAL TEXT IS IN ITALIAN.

Before using the device or if you don't use it since a long time, read carefully this information for use. Read the instructions given in the information manual and reported on the device.

The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

Keep this manual close by for future consultation. If you should decide to sell this appliance to other people, remember to also include these instructions, complete and readable.

Keep the original box and packaging, as the free-of-charge service does not cover any damage resulting from inadequate packaging of the product when this is sent back to an Authorized Service Centre.

Verify the presence of damage signs on the device caused by the transport/storage, before using the device.

It is forbidden to reproduce, totally or partially, texts and images contained in this information for use without the written authorization of the Manufacturer.

The Manufacturer reserves himself the right to modify the contents of the information for use, without notice.

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1.3 NORMATIVE REFERENCES

1.3.1 COMMUNITY DIRECTIVES

- Regulation (EU) 2017/745 of the European Parliament and of the Council of 5th April 2017 on medical devices
- Directive 2012/19/EU on waste electrical and electronic equipment (WEEE)

1.3.2 TECHNICAL STANDARDS

- IEC 60601-1: 2005 + A1:2012 - Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
- EC 60601-1-2:2014 Edition 4 - Collateral Standard: Electromagnetic disturbances - Requirements and tests
- UNI CEI EN ISO 14971:2012 Medical devices. Application of risk management to medical devices.

1.3.3 QUALITY MANAGEMENT SYSTEMS STANDARDS

- UNI CEI EN ISO 13485:2016 “Medical devices. Quality management systems - Requirements for regulatory purposes".

1.4 WARRANTY

The Manufacturer is responsible for the device conformity to the Regulation (EU) 2017/745 of April 5th 2017 for:

- features
- safety and reliability
- CE marking

The Manufacturer refuses any responsibility for:

- installation and activation not activated in conformity to the indications and the precautions reported in the information for use
- use not in compliance with the information for use and precautions reported in the information for use
- use of accessories or spare parts not provided or suggested by the Manufacturer
- repairs and safety controls not effectuated by expert, qualified, trained and personnel authorized by the Manufacturer

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- electrical system of the space where the device is installed not in compliance with the technical standards, the laws and regulations in effect in the country of installation of the device
- direct or indirect consequences or damages to objects or persons, originating from the improper use of the device or erroneous clinical analysis originating from its use

The Manufacturer guarantees the device for 24 months after invoicing. The Warranty includes the substitution, at the Manufacturer's or an Authorized Service Centre, of components and materials and the relative labour. The shipping and transport fees are to be paid by the client.
The warranty does not cover:

- repairs of faults originating from natural disasters, mechanical shocks (fall, hit, etc), electrical system faults, negligence, improper use, maintenance or reparations carried out with non-original materials
- any other improper use or not intended by the Manufacturer
- damages caused by service lack or inefficiency, originating by causes or circumstances out of the Manufacturers control
- the parts subject to usage and/or deterioration originating from the normal use and those that might be broken because of an improper use or maintenance carried out by personnel non-authorized by the Manufacturer.

To ask maintenance interventions or to have technical information about the device, address to an Authorized Service Centre or directly to the device Manufacturer.

The client will not be refunded for damages originating from the device halt.

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1.5 MANUFACTURER IDENTIFICATION

C.S.O. SRL
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2 SAFETY

2.1 SAFETY WARNINGS

DANGER
Electric shock danger. Do not let water fall on any part of the device. Do not immerse any part of the device into the water or other liquids.

DANGER
Electric shock danger. If the power cables are damaged, they must be replaced in an Authorized Service Centre to prevent any risk.

DANGER
Electric shock danger. Unplug the power cable from the mains socket before disinfecting the device and before any maintenance operation.

CAUTION
Do not use the device if visibly damaged. Periodically inspect the device and the connection cables to verify if there are damage signs.

CAUTION
Falling hazard. Do not leave free cables which can represent an obstacle or a danger for the patient or the operator.

CAUTION
Danger of stumbling and falling. Do not let the power cables or the connection cables free in a place where people could walk.

CAUTION
Electric shock risk. Do not touch the power supply cables with wet hands.

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CAUTION
Electric shock risk. Do not leave the power supply cables in contact with sharp corners or objects. Always collect and fasten the power supply cables.

CAUTION
If you notice a wired odour or smoke coming out of the device or if it emanates heat, turn it off immediately. Do not keep using a damaged device or a damaged part. Danger of injuries.

CAUTION
The power grid must have a Residual-Current Circuit Breaker (IΔn=30mA) Thermal-Magnetic Circuit Breaker (Vn=230V) to protect the device. Place the device in such a way that the power socket is easily accessible.

It is forbidden to carry out any technical operation on the device that is not recalled or described in these instructions for use.

It is forbidden to place the device in humid, dusty places or environments subject to sudden temperature and humidity variations.

It is forbidden to use any extension cable not authorized by the device Manufacturer.

It is forbidden to use the device outdoors.

The device does not generate and does not receive any electromagnetic interference if it is placed near other electrical appliances. No preventive or corrective actions are required.

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2.2 DEVICE IDENTIFICATION

2.2.1 REGISTRATION DATA IN THE MEDICAL DEVICES REPERTOIRE

The device registration data can be verified on the Italian Ministry of Health website at this page:
Ministero della Salute - Ricerca dispositivi

2.2.2 DEVICE DATA PLATE

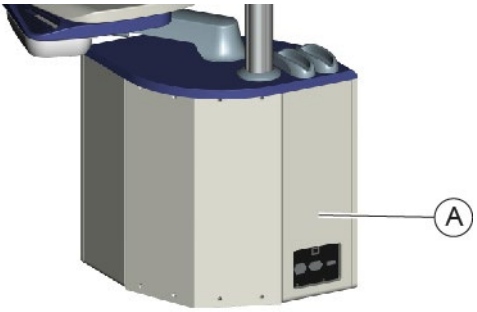

Fig 1 - Data plate position

Pos	Description
A	Data plate

Fig 2 - Data plate for device model DELUXE 2

Fig 3 - Data plate for device model DELUXE 3

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2.3 INTENDED USE

FUTURE, models DELUXE 2/DELUXE 3, is an ophthalmic unit equipped with the most sophisticated electronic controls that allows for the use of several devices. Through a controlled handling from microprocessor allows the optimal use of the equipment.
The device is equipped with an electrically movable table top, where 2 or 3 devices can be placed. A drawer is also provided for tonometer housing. A ceiling light with 3 LED lights is also provided.
The ophthalmic unit has two new generation, shatterproof, touch keypads, which are also backlit, easy to use and to clean. On the keypads, all commands are available and it is possible to memorize all the functions of the device for an easy and comfortable daily use.
Thanks to a microprocessor electronic control, the operator can program various phases and options during an exam.
It is possible to command the chair elevation directly from the unit keypad.
Some examples can be:

- LED ceiling light regulation, in such way that is turns off automatically (or reaches the minimum luminous level) when the table with the devices is placed near the patient (table closed),
- commands availability with the function of switch or bistable, so that it is possible to command electric users that do not belong to the ophthalmic unit,
- complete devices predisposition with table open or closed.

It is possible to connect other accessories to the device through the analogical or digital interfaces.
The accessories (printer, modem, scanner, etc) must be installed outside the patient area.

The accessories must be compliant to the norm IEC 60950-1 Information technology equipment - Safety - Part 1: General requirements.
If the accessories are installed in the patient area it is necessary to install an isolation transformer compliant with the directive IEC 60601-1:2005 + A1:2012 - "Medical electrical equipment - Part 1: General requirements for basic safety and essential performance".

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The device must be only used by specialist practitioners and operators (such as optometrists), within the limits of the law and the regulations for the exercise of the profession.

Patient area: any volume in which a patient with applied parts can intentionally or unintentionally come into contact with other electro-medical devices or electro-medical systems or with foreign masses and masses or with other people in contact with these elements.

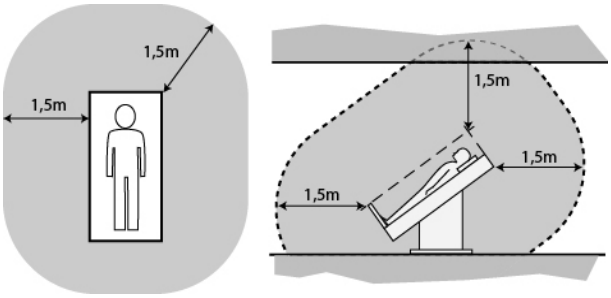

Fig 4 - Patient area

2.4 MEDICAL DEVICES CLASSIFICATION

Technical data	Value
Classification in compliance with the attached Regulation (EU) 2017/745	Class I

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2.5 MEDICAL ELECTRICAL DEVICES CLASSIFICATION

Classification complying with the standard EN 60601-1:2005 + A1:2012

Technical data	Value
Type of protection against the direct and indirect contacts	Class I
Applied parts	Type B
Protection degree against humidity	IP20 (no protection against liquid infiltration)
Sterilization or disinfection method	This device can be disinfected
Protection degree in presence of anaesthetics or inflammable detergents	No protection
Electrical connection degree between device and patient	Appliances with applied part on the patient
Use conditions	Continuous functioning

2.6 ENVIRONMENTAL CONDITIONS

Phase	Technical data	Min	Max
Transport	Temperature	-40°C	+70°C
	Atmospheric pressure	500 hPa	1060 hPa
	Relative humidity	10%	95%
Storage	Temperature	-10°C	+55°C
	Atmospheric pressure	700 hPa	1060 hPa
	Relative humidity	10%	95%
Use	Temperature	+10°C	+35°C
	Atmospheric pressure	800 hPa	1060 hPa
	Relative humidity	30%	90%

CAUTION

Danger of device damages. During transport and storage, the device can be exposed to the environmental conditions for a maximum period of 15 weeks, only if kept in the original packaging.

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2.7 DISPOSAL AT THE END OF THE USEFUL LIFE

Instruction for the correct disposal of the device according to European Directive 2012/19/EU, and 2011/65/EU about the reduction of use of dangerous substances in the electrical and electronic equipment, as well as waste disposal.
At the end of its useful life, the device must not be disposed of as urban waste. The device can be delivered to the appropriate separate waste collection centres set up by municipal administrations or to retailers that offer this service. Separately disposing of an electrical device prevents possible negative consequences for the environment and health, caused by its improper disposal, and lets the materials it is made of to be recycled so as to achieve significant savings of energy and resources. On the label of the device there is the symbol of the of the crossed-out wheeled bin. The graphic symbol of the crossed-out wheeled bin, indicates the obligation to collect and dispose separately the electrical and electronic equipment at the end of their useful life.

The user has to consider the effects potentially dangerous for the environment and the human health originating from an improper disposal of the whole device or its parts.

In case the user wishes to dispose of the device used at the end of its useful life, the Manufacturer facilitates the possibility of its reuse and the recovery and recycling of the materials contained therein. This to prevent the release of hazardous substances into the environment and to promote conservation of natural resources. Before disposing of the device, it is necessary to take into consideration the European and national regulations that order what follows:

- not to dispose as urban waste but collect it separately and address to a firm specialized in the disposal of electrical and electronic equipment or to the local administration in charge for waste collection.

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- in the event that a new device is purchased from the same Manufacturer to replace an old one placed on the market before 13 August 2005, equivalent and with the same functions of the new device, the Distributor or Manufacturer are legally required to collect the old device.
- if the user decides to dispose a used device, put on the market after the 13th August 2005, the Distributor or the Manufacturer have to collect it.
- the Manufacturer takes care, by joining a consortium for electronic waste, of the treatment and the recycling of the used device by paying its costs.

The Manufacturer is available to give the user all the information about the dangerous substances contained in the device, and on the recycling modalities of those substances and about the possibility of a reuse of the used device.
Strict sanctions for transgressors are provided for by law.
For specific information about the disposal in other countries than Italy, contact the local Dealer.

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2.8 MANUFACTURER DECLARATIONS

2.8.1 ELECTROMAGNETIC EMISSIONS

The unit is designed to be used in a room with the following electromagnetic characteristics:

The copy of the documentation of the electromagnetic compatibility (EMC) can be demanded at any time to C.S.O. Costruzione Strumenti Oftalmici SRL.
The device is compliant with all the requirements of electromagnetic compatibility (EMC) decided by the norm CEI EN 60601-2-40 "Electromedical devices".
The ophthalmic unit can be used in an electromagnetic environment where the disturbances of radio-frequency irradiated fields are controlled.

The ophthalmic unit shall not be used near other devices that are not components of the device itself. In case it is necessary, you should make sure that their functioning in this configuration is regular and safe.
If the ophthalmic unit performances are affected by other appliances, remove the cause of the interference. For any doubts or explanations contact the Manufacturer.

Do not use as ophthalmic unit components other devices than dose indicated by the Manufacturer. They could cause an increase of the devices' emissions and a reduction of the ophthalmic unit immunity. For any doubts or explanations contact the Manufacturer.

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3 DEVICE DESCRIPTION

3.1 SUPPLY DESCRIPTION

Fig 5 - Ophthalmic unit – front view

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Pos	Denomination	Description
A	LED ceiling light	Ceiling light with 3 LED lights with adjustable intensity, spotlight and ambient light.
B	Column	
C	Wheel-cover carter	Cover for the table top arm
D	Structure	There are two backlit keypads and a drawer for the tonometer. Possibility to control the room light from the working position.
E	Ophthalmic unit basement	There are electronic tabs and joints for table top and column
F	Table top	The table top allows the positioning of the movable table top.
G	Movable table top	It is possible to place three different devices. Electrical or manual shifting of the table top.

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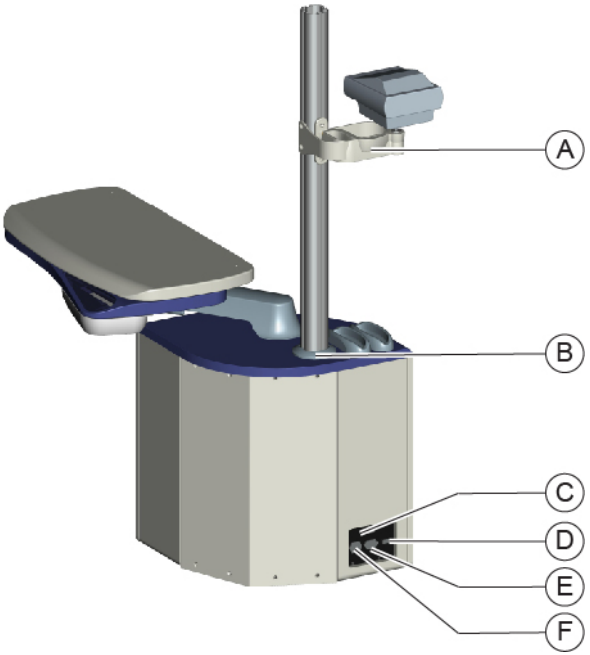

Fig 6– Ophthalmic unit – rear view

Pos	Denomination	Description
A	Projector support	
B	Plastic gasket to cover the pole	
C	Chair mains power socket	Power cable for the chair is provided with the ophthalmic unit
D	Main switch	
E	General mains power socket	Power cable is provided with the ophthalmic unit
F	Auxiliary socket	

For the list of accessories and available models, contact the Manufacturer or the local Distributor.

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3.2 ACCESSORIES ON DEMAND

In what follows, are indicated the accessories on demand for the ophthalmic unit:

- Self-balancing arm for phoropter
- Auxiliary spot
- Manual or electrical back/ forward movement of the chair
- Video camera system
- Special supports for chin rest
- LCD monitor arm
- Drawer and desk
- Chair.

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3.3 KEYPADS

3.3.1 FUNCTION OF KEYPAD BUTTONS

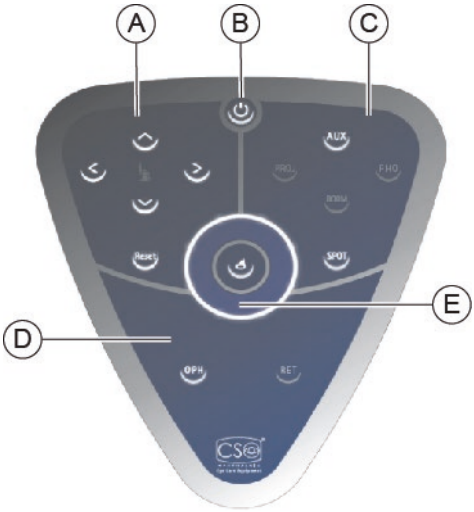

Fig 7 - Structure keypad

Pos	Function	Description
A	**CHAIR**	Movable chair to adjust elevation and back/forward movement (optional)
	RESET	The chair returns to the lower position (this happens also when the unit is turned off)
B	**ON/OFF**	ON/OFF button for ophthalmic unit
C	**AUX**	Auxiliary device ON/OFF button
	PROJ-	Eye charts projector ON/OFF button
	PHO-	Phoropter ON/OFF button
	ROOM	Upper ceiling light ON/OFF button
	SPOT	Reading spot light ON/OFF button
D	**OPH/RET**	0 to 24V devices ON/OFF button
E	**LIGHT**	ON/OFF button and regulation of the LED ceiling light through circular part touching

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3.3.2 FUNCTION OF THE TABLE KEYPAD BUTTONS

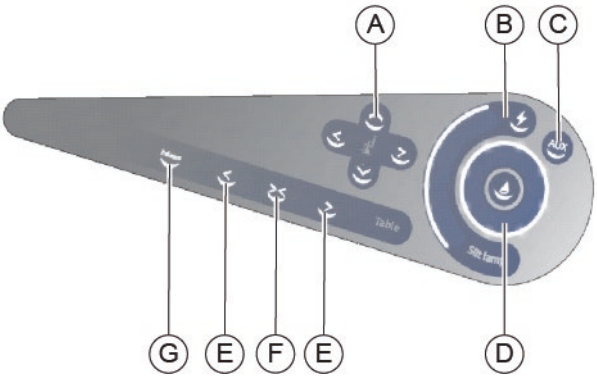

Fig 8 - Table keypad

Pos	Function	Description
A	**CHAIR**	Chair position adjustment
B	**Voltage Booster**	Raises to maximum the light intensity of the Slit Lamp
	SL regulation	Dimming of the Slit Lamp light through semi-circular part touching (only if the function is enabled)
C	**AUX**	Auxiliary device ON/OFF button
D	**LIGHT**	ON/OFF button and regulation of the LED ceiling light through circular part touching
E	**< and >**	Moving the table top
F	**> <**	Central positioning
G	**RELEASE**	Manual table top placement Press the button to unlock the table and place it in front of the patient. When it reaches the position, you'll hear a click and the table is blocked.

The table top is equipped with a sensor that prevents the patient's legs to get crushed under the table top during the chair movement. Other movements of the chair can be performed through mechanic levers and pedals on the chair itself.

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3.4 TECHNICAL DATA

Technical data	Value
Supply voltage	from 90 V to 264V
Power frequency	from 47Hz to 63 Hz
Network fuses	from 4A T 5x20mm to 8AT 5x20mm
Auxiliary sockets (chair and auxiliaries)	from 120Vac 50Hz to 230Vac 60Hz
Maximum power absorbed by the auxiliary sockets	100VA
Maximum power absorbed	600VA
Voltage for the table devices	from 0 Vac to 24Vac for ophthalmometer and Slit Lamp
	from 0Vac to 24Vac for Chin rest
	230Vac on the table top centre (ONLY devices version 3)

Description	Value
Maximum total weight on the table top (devices version 2)	40 Kg
Maximum total weight on the table top (devices version 3)	70 Kg

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3.5 BULK

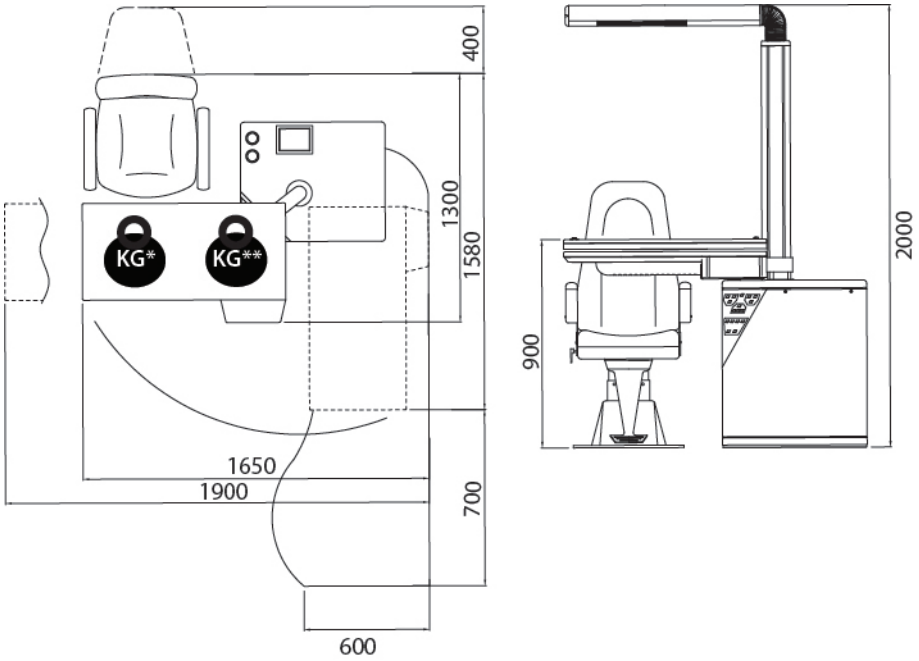

Fig 9 - FUTURE DELUXE 2 size

Never place the heavier device on the external part of the table top.

Devices shall be placed on the table top after considering their single weight. The maximum loadable weight of the table top is 40 Kg.
If a device weighing 20 Kg has been placed on the internal part of the table top (**), the maximum loadable weight for the external part (*) is 20 Kg.
If a device weighing 30 Kg has been placed on the internal part of the table top (**), the maximum loadable weight for the external part (*) is 10 Kg.

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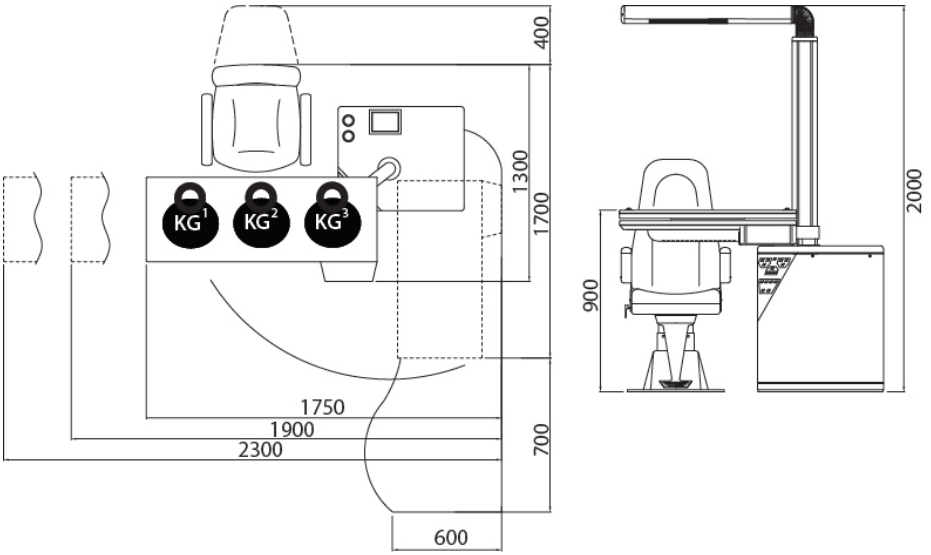

Fig 10 - FUTURE DELUXE 3 size

Never place the heavier device on the external part of the table top.

Devices shall be placed on the table top after considering their single weight. The maximum loadable weight of the table top is 70 Kg.
Always place the heavier device in the central position (2).
The other two devices (1) and (3) can be placed at will.

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4 DEVICE USE

4.1 HOW TO INSTALL THE OPHTHALMIC UNIT

For the ophthalmic unit installation procedure refer to the service manual. The installation has to be carried out by expert and competent personnel. The installation must be only carried out by expert authorised personnel.

4.2 HOW TO INSTALL STICKER PAD FOR PLACING THE DEVICE ON THE TABLE TOP

The ophthalmic unit allows to place two devices on the table top. Some devices, however, do not require installing further accessories to be placed on the table top. The chin rest support is fixed position: if you move the table top the chin rest will always be in front of the same device.

For the table top's configuration procedure for devices, please refer to the service manual.

Never place the heavier device on the external part of the table top for the version with two devices.

Devices shall be placed on the table top after first considering their single weight and depending on the unit version (for two or three devices).

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1 The device shall be placed considering its weight. One of the devices might not need the sticker pad.
2 Place the sticker pad between the two cogged wheels and the scrolling plate on the table top.
3 Verify the position respectively to the central axis (A).

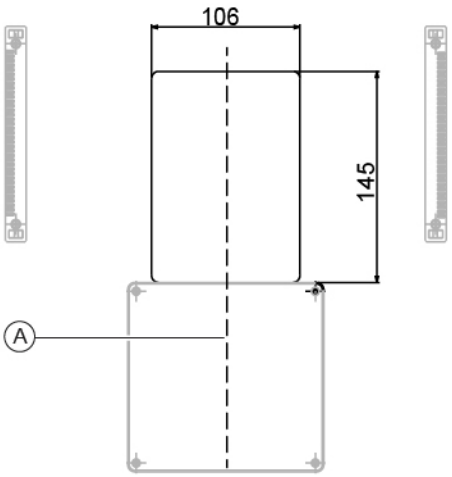

Fig 11 - Placing the sticker pad on the table top

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4.3 HOW TO PLACE THE CHIN REST

The chin rest can be placed on the table top in two different ways, depending on the chosen devices to be installed on the same table top:

- using a support for adjusting chin rest: when moving the table top, the chin rest will be placed in front of the device to be used for the chosen test
- Using a support for fixed chin rest: when moving the table top, the chin rest will remain in front of the same device (suitable solution for devices which do not require a chin rest).

For the list of the chin rest supports available and their features, refer to the **Spare parts and accessories list on page 37.**

4.3.1 PLACING THE CHIN REST ON THE SUPPORT

This procedure applies to every type of support installed on the table top.

1 Remove the chin rest support by removing lateral screws.
2 Place the chin rest on its support located on the table top.

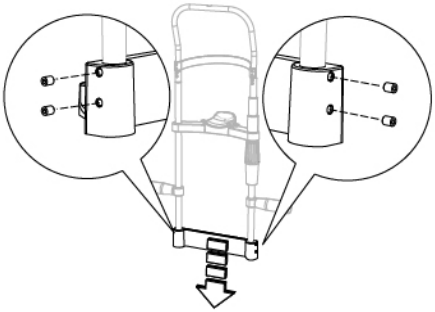

Fig 12 - Removing the chin rest support

3 Fasten the screws to fix the chin rest on its support on the table top.

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For the unit version with opening on the left, there is a specific attachment for the fixation point cable connection.

4 Make sure the chin rest is properly aligned with accessories on the table top. Move the table top in front of the chair until activating the locking system of the table top.

5 Lift or lower the chin cup by rotating the knob.

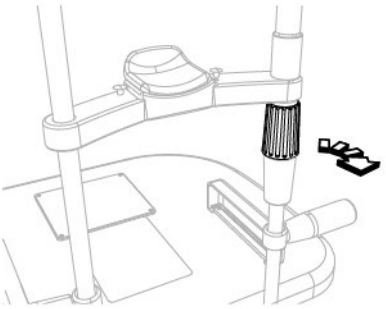

Fig 13 - Knob rotation

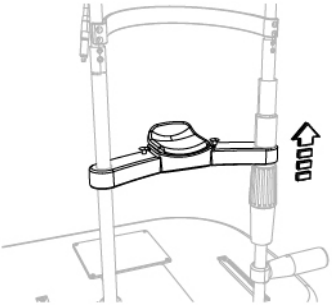

Fig 14 - Placing the chin cup

The ophthalmic unit must be installed on a horizontal and stable surface.

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4.4 HOW TO PLACE DEVICES ON THE TABLE TOP

1 Place the device on the table top and align the cogged wheels on the cogged guides.

2 Fasten the two wheel cover carters to the cogged wheels on the table top.

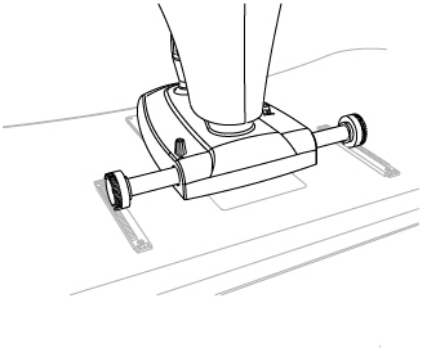

Fig 15 - Placement of the device

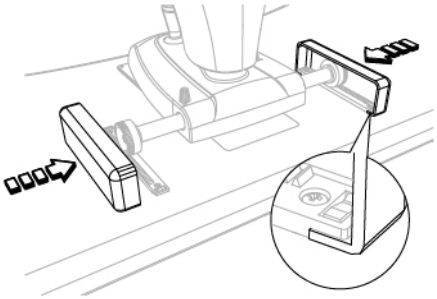

Fig 16 - Placement of wheel cover carters

3 Connect the device cables to both connectors placed on the table top.

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4.5 HOW TO PLACE ELECTRIC CABLES

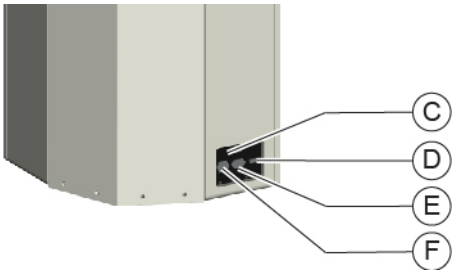

Fig 17– Ophthalmic unit – rear view

C Chair mains power socket
D Main switch
E General mains power socket
F Auxiliary socket

CAUTION
Danger of stumbling and falling. Do not let the power cables or the connection cables free in a place where people could walk.

CAUTION
Electric shock risk. Do not leave the power supply cables in contact with sharp corners or objects. Always collect and fasten the power supply cables.

It is forbidden to use any extension cable not authorized by the unit Manufacturer.

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4.6 HOW TO TURN ON THE OPHTHALMIC UNIT

CAUTION

Danger of keypad damages. The protective film of the keypad has to be removed when the ophthalmic unit is off. Removing the film while the ophthalmic unit is ON might damage the keypad.

1 Remove the protective film from the keypad.
2 Connect the power cable to the power supply.
3 Press the main switch of the unit on ON.
4 Press the ON/OFF button on the keypad.

4.7 HOW TO CONFIGURE THE DEVICES SETTINGS

For the devices configuration see the service manual. The installation has to be carried out by expert and competent personnel. The configuration of the settings must be only carried out by expert authorised personnel.

4.8 HOW TO ADJUST THE CHAIR

1 Press buttons and to adjust chair elevation.
2 To move the chair back to the stand-by position, press RESET (this also happens when the unit is turned off).

4.9 HOW TO TURN ON THE LED SPOTLIGHT

1 On the command keypad, press the button to turn on the spotlight.
2 Touch the slider to adjust light intensity.

4.10 HOW TO TURN ON THE DEVICES ON THE OPHTHALMIC UNIT

1 On the command keypad there are the buttons ON/OFF for the ophthalmic unit accessories. For the buttons description and functions see paragraph **3.3**.

4.11 HOW TO RESET THE CHAIR

1 Simultaneously press the chair adjustment buttons on the control keypad.

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4.12 HOW TO PLACE THE TABLE TOP TO EXAMINE THE PATIENT

1 Inform the patient to take a seat.
2 Place the table top in front of the patient.
3 Press the button < or > to shift the plane and place the device in front of the patient.
4 Check the patient's height respectively to the chin rest. Press the chair height adjustment button on the command keypad.
5 Perform the check-up with the medical device.

Refer to the device user manual and, if needed, the software user manual to perform medical investigations.

6 To pass to another device press the button < or >.
7 Perform the check-up with the medical device.

Refer to the device user manual and, if needed, the software user manual to perform medical investigations.

8 Once the check-up ends, place the table top in the first position.
9 Place the table top in the stand-by position. Tell the patient to get up.

4.13 HOW TO TURN OFF THE DEVICE

CAUTION
Do not turn off the computer and do not disconnect the connection cable between the computer and the ophthalmic unit when the program is in use.

1 Press the ON/OFF button on the keypad.
2 Press the main switch of the unit on OFF.
3 Disconnect the power cable from the power supply.

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5 ORDINARY MAINTENANCE

5.1 SAFETY WARNINGS

DANGER

Electric shock danger. Unplug the power cable from the mains socket before disinfecting or cleaning the ophthalmic unit and before any maintenance operation.

It is forbidden to carry out any maintenance operation on the ophthalmic unit that is not recalled in the information for use.

In case of operational faults or malfunctions or for every operation not mentioned in the information for use, there is the obligation to address an authorized technical assistance centre of the device Manufacturer.

5.2 CLEANING

Clean the external parts of the ophthalmic unit using a damp non-abrasive cloth, to avoid damaging the material. To clean other stains, we suggest using a solution of water and soap, both for the table and the chair. Do not use chemical solvents for cleaning (alcohol, thinners, etc.)

CAUTION

Danger of material damages. Do not use solvents or diluent to clean the device.

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5.3 NETWORK FUSES REPLACEMENT

CAUTION

Danger of material damages. The fuses have to be replaced only when the power cable is disconnected from the mains power. For any other kind of fault please contact the installation company.

1 Pull out the fuse drawer.

2 replace the burned fuses with new fuses, making sure that their value is compatible with the used net voltage. Check the data reported on the power outlets.
Put back the fuse drawer in the module.
Connect again the power cable to the power supply.

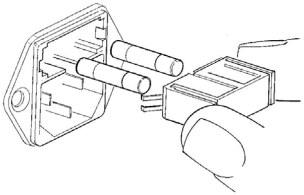

Fig 18 - Fuse replacement

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5.4 SPARE PARTS AND ACCESSORIES LIST

To order spare parts or accessories, provide the product code as indicated in the list. If not included in the list, contact the Manufacturer or the local Distributor.

Code	Description
300502325	Movable table's engine
3014010	Magnet
120819100	Electronic tab
610540-HK4020	Bearing for rotation
4109010	Decelerator
100818130	Main control panel
100818330	Table control panel
100819550	CSO ceiling light
300502320	Moving motor
330801050	Leg protection micro switch
3020690	Switching
100818821V	Table top
10081834V	Upper table top for two devices
100818821V	Upper table top for three devices
330801310	Optoswitch
4108010	Cable for sliding guide
330803040	Chair cable
100801029	Handle for counterweight lifting
100801027	Counterweight

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5.5 TROUBLESHOOTING

Issue	Cause	Solution	Note
The ON/OFF button on the keypad does not work	Power cable not connected to the power supply unit. The keypad-circuit board connection cables are not properly connected or are damaged.	Connect the power cable of the unit to the power supply outlet. Press the main switch of the ophthalmic unit on ON.	Verify the connection between the ophthalmic unit and the mains power. Check the functioning of the ophthalmic unit fuses. Verify the connection of the keypad.
The chair does not respond to the commands	The connection cable between ophthalmic unit and chair is not properly connected.	Properly connect the connection cable both to the chair and to the ophthalmic unit.	Check the functioning of the leg protection. Check the up and down movement tension on the chair cable. Check the chair engine is functioning properly by powering it separately.
The keypad does not turn on	Connection cables are not connected properly. The micro switch does not work.	Properly connect connection cables. Check the micro switch conditions. If needed, replace the micro switch	

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Issue	Cause	Solution	Note
The movable table top does not slide properly	The table top is not properly installed.	Install the table top properly. Connect the connections properly.	Check that the table top is levelled off. Check that the steel cable anchored to the tie-rod is well tightened. Check if the motor is powered. Check that the sensors and the optoswitches under the table top are working properly.
The devices connected to the table top of the ophthalmic unit do not work	Connection cables are not connected properly.	Connect the connection cables properly. Separately check the functioning of devices.	Check that the table top is connected. Check the output voltage. Table top connector. Check the right power has been programmed.
One or more lights on the ceiling light does not turn on.	Connection cables are not connected properly.	Connect the connection cables properly.	Check that the cables are connected properly. Check the output voltage for each peripheral device that is not working.

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FUTURE | IFU318EN01.00 - 02/2022