

Ophthalmic DEVICES





MDT (est. 1998) is a reputable manufacturer and supplier of the ophthalmic devices, accessories and consumables (including: BioGlo - Fluorescein Sodium Ophthalmic Strips and TearFlo - Schirmer's Test Strips). Thanks to our experience and sustainable development, we are able to meet growing requirements by offering a wide range of functional products for Ophthalmologists.

We manufacture ophthalmic surgical tables, operator's chairs, ophthalmic units, electrical ophthalmic tables, as well as devices used for diagnostics and treatment of strabismus, which are proudly CE & 'made in EU' marked.

Thanks to our commitment to Ophthalmology, excellent Business Partners, a long-lasting presence in the global market, continuous investments in research and development, as well as the team of devoted employees, we are able to meet growing requirements by offering a wide range of high-quality products and services.

We are proud of our Service Engineers and Business Partners who provide customers with an outstanding level of technical support, both at the stage of equipment installation and in case of any issues appearing during product life-time. The satisfaction of the customers is of utmost importance to us, therefore we take into consideration your advice and opinions, while striving to meet the challenges and expectations we encounter.

We welcome you to acquaint yourselves with our product portfolio. In case of any questions we are at your disposal.

MDT Ophthalmic Equipment Manufacturer.



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Ophthalmic Unit

ECO Plus

New comfortable design





- Ergonomic and smart design
- Two instruments translating table-top with the electrical up / down adjustment
- Electrically elevated / reclined patient chair
- Chair rotatable by 90° giving possibility to examine patient with additional diagnostic devices from the side
- Practical control panel and easy accessed accessory drawer
- Easy connection of different types of slit lamps: 6V,12V,18V
- Aluminum column with illumination lamp, ophthalmoscope / retinoscope rack and projector support
- Wide selection of upholstery and chassis colours
- Optional: Left handed set up, spring or linear phoropter arm

Technical specification:

Input power:	110V - 230V 50/60Hz
Max. power consumption:	150 VA
Illuminating LED lamp power:	5W
Table height:	880mm - 980mm
Table-top dimensions:	880mm x 450mm

Dimensions:

Width:	1080mm - 1460mm
Depth:	1500mm
Height:	1810mm
Column chair up/down movement:	250mm
Min/max seat height:	490mm - 690mm

Ophthalmic Unit

SMART Plus

Ideal solution for the most demanding





- Ergonomic and smart design
- Two instruments translating table-top with the electrical up / down adjustment
- Electrically elevated / reclined patient chair
- Chair rotatable by 90° giving possibility to examine patient with additional diagnostic devices from the side
- Practical control panel and easy accessed accessory drawer
- Simple connection of different types of slit lamps: 6V,12V,18V
- Aluminum column with illumination lamp, ophthalmoscope / retinoscope rack and projector support
- Wide selection of upholstery and chassis colours
- Spring phoropter arm (optional)

Technical specification:

Input power:	110V - 230V 50/60Hz
Max. power consumption:	150 VA
Illuminating LED lamp power:	5W
Table height:	880mm - 980mm
Table-top dimensions:	900mm x 440mm

Dimensions:

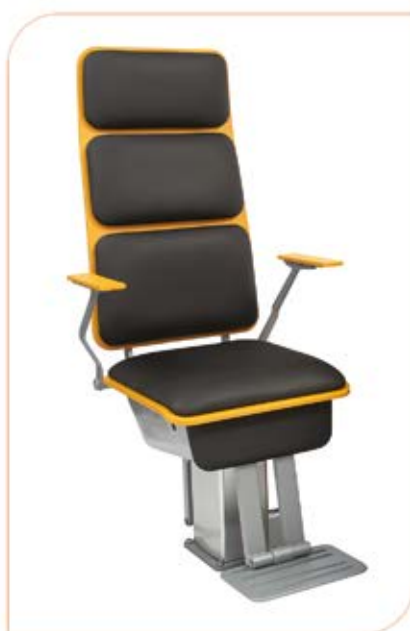
Width:	1080mm - 1460mm
Depth:	1500mm
Height:	1810mm
Column chair up/down movement:	250mm
Min/max seat height:	490mm - 690mm

Ophthalmic Unit

Easy

Excellent quality and smart design at reasonable price





- Two instruments translating table-top
- Autoref / slit lamp built-in power supply
- Adjusting knobs of a slit lamp illumination mounted on the table-top
- Electrically elevated patient chair
- Easy right or left handed set-up
- Aluminum column (with illumination lamp, chart projector mounting and phoropter arm)
- Linear or spring phoropter arm (optional)
- Wide selection of upholstery colours (optional)

Technical specification:

Input power:	110V - 230V 50/60Hz
Max. power consumption:	150 VA
Illuminating LED lamp power:	5W
Table height:	875 mm
Table-top dimensions:	434mm x 840mm

Dimensions:

Width:	1255mm -1627mm
Depth:	1920mm
Height:	1731mm
Column chair up/down movement:	250mm
Min/max seat height:	423mm - 623mm

Ophthalmic Unit

3D Expert

Professional workstation



- Fully automatic motorized unit designed for 2 or 3 instruments with or without doctor's desk (working space on the side)
- Accessory drawer: standard
- Complex maneuverability of patient chair: up / down movement, reclination, rotation, forward /backward movement for wheelchaired patient access
- Two or three instruments translating table-top with up / down movement
- Built-in phoropter arm-with automatic left / right translation
- Column with LED illumination lamp, ophthalmoscope / retinoscope rack and projector support
- Slit lamp on/off push button and illumination intensity control knob located on a table-top
- Wide selection of upholstery colours (optional)



Technical specification:

Input Power:	110V - 230V 50/60Hz
Max. power consumption:	250 V A
Illuminating LED lamp power:	24W
Table height:	780mm - 980mm
Table-top dimensions:	1250mm x 450mm (3 devices)

Dimensions:

Width:	2500 - 3000mm
Depth:	7800 - 2610mm
Height:	max. 2000mm
Column chair up/down movement:	150mm
Min/max seat height:	550mm - 700mm



Ophthalmic Surgical Chair

SC-1

Ergonomics, functionality, comfort



SC-1 surgical table has been designed to ensure maximum comfort for the patients and surgeons during ophthalmic surgical procedures with complete seat tilt, Trendelenburg position, and different accessories available.

Full range of patient positioning from sitting to lying position gives unprecedented opportunity to position patients at any age in a comfortable way.

A unique design of the patient's head rest gives the surgeon precise control over the patient's head during surgical procedures.

A robust construction of the base with special casters allow the surgical table to be freely moved in and out the operation theatre with the patient sitting on.

Central locking gear assures stability during surgery.

Battery/mains operated controls assure maximum flexibility of the system.

Wide selection of upholstery colours available.

Technical specification:

Overall length:	1750mm-1850mm (flat position)
Overall width:	925mm
Net weight:	100kg
Max. load of table:	250kg

Adjustment range:

Height	610 - 750mm
Trendelenburg position	15°
Detachable arm supports	✓
Detachable cushioning	✓

Accessories:

Anaesthesia support/goose neck tube holder	✓
Push-handles	✓

Electrical data:

Operating voltage	24 VDC
Battery capacity	12Ah
Operating cycle at full load	40 cycles

Available colours:



Vanilla

Mint

Juniper

Very Berry

Operators Chair

OC-1

Comfort and maneuverability



Designed to ensure maximum comfort and functionality for the ophthalmic surgeons.

Wide variety of arm supports, back rests and seat height adjustments gives the opportunity to achieve the optimum sitting position during ophthalmic procedures.

Ergonomically positioned up/ down switches operated by surgeon's feet, ensure easy height adjustment, saving a space under an operating table.

A robust chair base is equipped with three heavy-duty casters for easy movement around the operation theatre.

The base shape allows the OC-1 to fit most of the operating tables available in the market.

Technical specification:

Chair up / down height adjustment:	550mm - 670mm
Arm supports height adjustment:	120mm
Arms support rotation adjustment:	360°
Back rest height adjustment:	75mm
Back rest forward / backward adjustment:	55mm
Input power:	110V / 230V 50/60Hz
Battery power:	2,2Ah, 24V
Weight:	40kg
Different upholstery colorus available	✓

Available colours:



Vanilla



Mint



Juniper



Very Berry



Mobile Lounge Chair

COMFY

Perfect comfort for a patient

MDT COMFY postoperative chairs had been designed for patients who have undergone One Day Surgery, and need a comfortable transport from the OR and relaxation afterwards. Modern and unique design combined with an elegant upholstery provide an outstanding level of patient's comfort in both a sitting and reclined position. The use of large rear wheels in combination with small swivel front wheels enables gentle patient's transport.

COMFY mobile chairs are distinguished by high quality materials and careful workmanship.



Technical specification:

Maximum load	150 kg
Seat dimensions:	
Width	640 mm
Length	1870 mm
Total width	750 mm
Front wheels diameter	100 mm
Rear wheels diameter	400 mm
Lifted armrests	



Strabismus Training Devices

STRAB LINE



Visual Coordinator KN-1

The visual coordinator uses the Haidinger's phenomenon. The purpose of the exercise is fixation of the rotating propeller (fan). Patient with amblyopia (lazy eye) can see it only from a side. Haidinger's brush is seen only with the macula, since it is dependent on its anatomical structure. In the macula there is a yellow pigment and a radial system of retinal fibers which makes it possible to see this phenomenon. What was used in the construction of the device is the fact that while gazing at an evenly lit, textureless surface through a polarizer we notice a form of a propeller or a bud creating an unclear dark cross. The phenomenon is more clearly visible with the use of a dark blue filter.

The process of adaptation and disappearance of the Haidinger phenomenon is counteracted by:

- changing direction
- rotation speed of the propeller
- light intensity in the coordinator



Convergence trainer AK-1

In the convergence apparatus, the idea of Bangerter has been used - so-called "snail".

The AK-1 Convergence Trainer consists of a base on which two guide bars are placed in the form of two parallel metal rods. The guide allows for free movement between the brackets of the mechanism driving the test disk (Archimedes' spiral). In the lower part of the mechanism there is a handle for moving the disc. On the front support there is a chin rest for comfortable observation of the moving test disc.

Thanks to the distance control and rotating "snail disc", patient gets a very strong stimulus for the convergence (also in case of very low or underdeveloped fusion). The use of a rotating spiral makes it easy to focus attention on its center point.

Thanks to exercise and efficiency of the convergence of the eyes can improve:

- the fusion and counteract the suppression of the eye.
- Stimulation of fixation
- Coordination and cooperation between the eye and hand. It also improves the precision of hand movements that are useful for writing and drawing
- Central vision is strengthened and more stable.

Acoustic locator LA-1

The device is used to train location performance in treatment of amblyopia. The principle of the function is that the hearing facilitates the visual location. Thanks to acoustic locator patient can improve:

- eyesight
- central fixation
- proper eye-hand visual location and coordination

The metal plate and the stylus that the patient holds in hand form a closed electrical circuit. After covering the healthy eye, the patient's task is to indicate / outline the picture. If it goes beyond the outline of the image, the electric circuit will be cut and the sound signal will be heard.





Cheiroscope CH-1

A cheiroscope is a device used to train binocular vision and designed so that each eye can see a different image.

The patient places forehead on the support and looks through convex lens. One eye is aimed at a diagonal mirror, and the other on the sheet of paper. The convex lens create conditions of looking far away, because the pictures are in the focus of the lens. The apparatus is ready for training both left and right-handed children.

A simple picture is placed in a holder, preferably with outlines of objects, drawn with bold, black line, e.g. a house, a tree, etc. The

exercise is difficult, which is why simple pictures are used. The task of the patient is to copy the picture on the sheet of paper precisely following its outlines. The picture that is fixated with the leading eye or the line drawn with the strabismic eye or a pencil fixated with this eye often disappears. The patient needs to blink several times to prevent fatigue and allow the exercise to be continued.



Campbell Stimulator SW-1

The treatment of amblyopia with the Campbell stimulator is based on the concept of active and controlled stimulation of the patient's eye. Rotating stripes provide simple stimuli which stimulate the retina in terms of space and location.

The research shows that the cells of the cortex which are responsible for seeing pictures react best to moving lines of a certain width. The stimulator is designed so as to activate cells of the cortex and also the entire visual system.

Campbell used in his apparatus tests with high contrasting stripes, which rotate on the plate very slowly (one full rotation per minute)

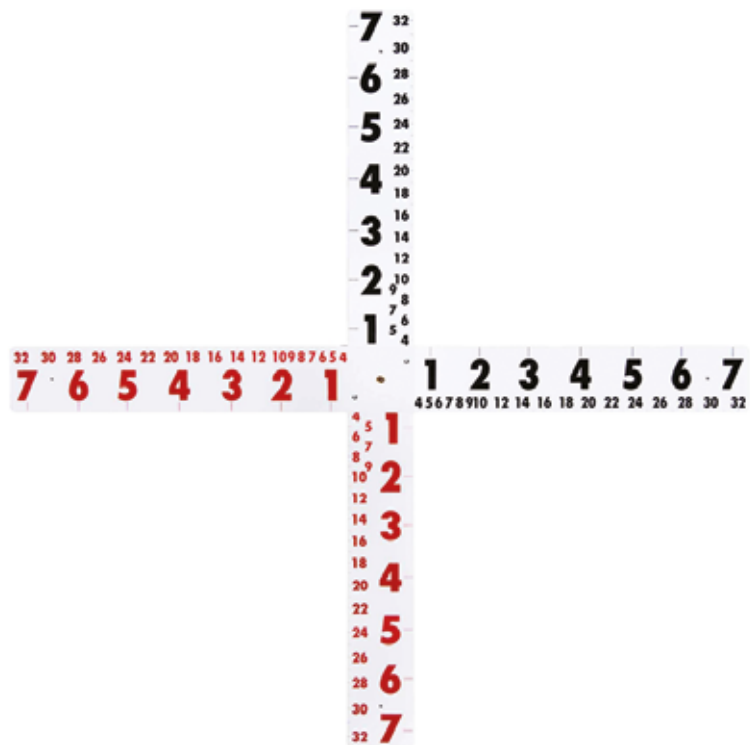
During a task a child observes the stripes which are rotating very slowly while making different drawings on the glass or outlining the pictures. This facilitates their concentration on the stripes and trains eye and hand coordination at the same time. As soon as the visual acuity starts to improve the width of the stripes used for the task should be decreased

Maddox Cross KM-1

The Maddox cross is a tangent scale for squint angle measurement and retinal correspondence testing. In association with rod can be used to subjectively detect and measure a latent (heterophoria), manifest, horizontal or vertical strabismus for near and distance.

The tangent scale is cross-shaped, sometimes its vertical arms are shorter. In the middle of the cross at the zero point, there is a small white light.

On the arms of the cross, there are scales marked with numbers. The horizontal arm of the cross is usually about 1 m long, allowing to examine eye deviations up to 10° with examination distance of 5m, and up to 5° with distance of 2 metres. Individual distances of the scales correspond to radians. The larger one is used for distance of 5 m, and the smaller one for distance of 1 m.

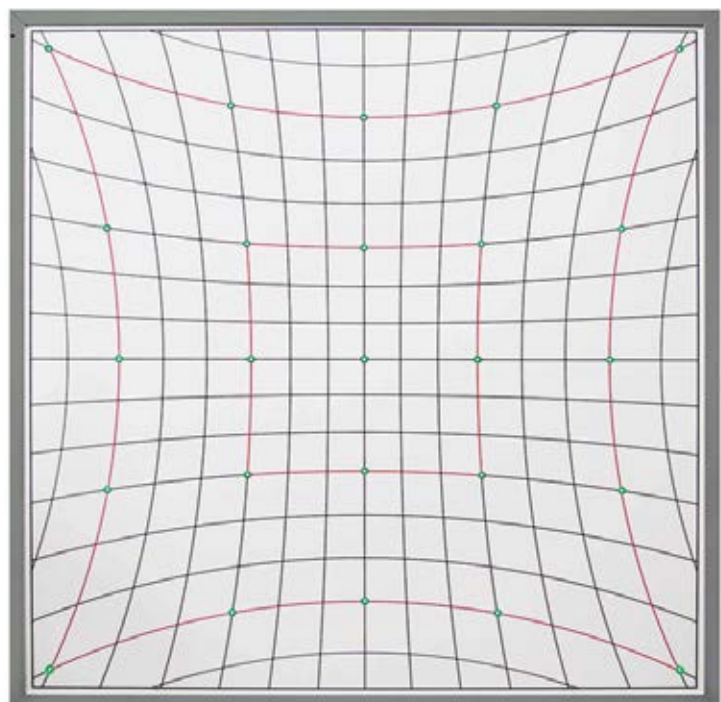


Hess Screen EH-1

The Hess Screen allows to qualitatively and quantitatively evaluate eyeball mobility disorders. It's a grey tangent screen for measuring and classifying strabismus.

Carrying out a test with the use of Hess Screen is simple and answers the question of which oculomotor muscles display paresis or lack of functions. After placing the results on the relevant charts you can read out names of muscles responsible for the eyeball mobility disorders.

The device delivered with accessories: the Red/Green Diplopia Goggles, an AC Adapter, a laser pointer, a remote control and CD with Hess Screen drawing



MD Series

MD-1

Table-top: 660mm x 460mm
Max. load: 60 kg



MD-2

Table-top 860mm x 430mm
Max.load: 80 kg

MD-V

Table-top: V-shape 1040mm x 550mm
Max. load: 80 kg



Technical specification:

Table-top height from the ground:	730 mm - 980 mm
Vertical movement range, up / down:	250 mm
Input power:	110V - 230V 50/60Hz
2 pcs. of power sockets IEC C13	✓
Robust base with 4 casters	✓



Combo-1

Table-top: 660mm x 460mm
Max. load: 80 kg

Combo-2

Table-top: 880mm x 460mm
Max. load: 80 kg



Technical specification:

Table-top height from the ground:	730 mm - 980 mm
Vertical movement range, up / down:	250 mm
Input power:	110V - 230V 50/60Hz
2 pcs. of power sockets IEC C13	✓
Robust base with 2 casters	✓



MD-3

Table-top: 1230mm x 550mm
Max. load: 150 kg

MD-3V

Table-top: 1230mm x 550mm
Max. load: 150 kg



Technical specification:

Table-top height from the ground:	610 mm - 900 mm
Input power:	110V - 230V 50/60Hz
Two synchronized columns	✓
4 pcs. of power sockets IEC C13	✓
Robust bases with 4 lockable casters	✓

Ophthalmic stools

Precisely designed group of stools used for patients as well as for ophthalmologists. Type T-P is used for ophthalmic patients and is equipped with a pneumatic height control, flat seat and stable base ensuring stability during examination. Type T-L is a stool with specially formed doctor's seat with ergonomic half-backrest and a pneumatic height control.

Designed for use by doctors. Equipped with casters allowing comfortable movement among the ophthalmic devices installed at doctor's practice. Type T-S is also designed for use by doctors, but has an ergonomic saddle shape seat with up / down and tilt adjust. All of the stools come in two sizes as a high and low seat.

T-L new version (Doctor's stool) *

Designed to increase the comfort of doctors performing long-term studies/ treatments in a sitting position. Comfortable and adjustable seat (up/down) with tilting backrest.

Lower Seat: 53-73 cm

Higher Seat: 61-87 cm



T-L (Doctor's stool)

Type T-L with specially formed doctor's seat with an ergonomic half-backrest and a pneumatic height control (lower or higher seat) designed for use by doctors, equipped with casters allowing comfortable movement among the ophthalmic devices installed at doctor's practice, base chrome finish with casters, base diameter - 50cm

Lower Seat: 46-66 cm

Higher Seat: 54-80 cm

T-P (Patient's stool) *

Round seat available in different colours, pneumatic seat up / down movement (lower or higher seat), base chrome finish with stable legs, base diameter - 50cm.

Lower Seat: 44-64 cm

Higher Seat: 52-78 cm



T-S (Doctor's stool)

Type T-S designed for use by doctors. Equipped with an ergonomic saddle shape seat with up / down control, pneumatic manual tilt control, base chrome finish with casters. Base diameter 50cm.

Lower Seat: 47-67 cm

Higher Seat: 55-81 cm

* Available colours:



VITA



NERO



SCURO



ROSA



AMORE



ESPRESSO



LATTE



BRUNA



ZUCCHINI



MELA



STELLA



AMALFI

Ophthalmic accessories



Thermal paper

- to be used with range of ophthalmic devices such as: tonometer, autorefractometer
- different sizes available-standard 57mm



Chin rest papers

- comfort and cleanliness for the patient
- 9 cm pin distance chin rest papers for different ophthalmic devices (90mm between holes) for use with - Topcon, Nidek, Oculus, CANON, TOMEY, Shin Nippon, Takagi, CSO, Haag-Streit, Reichert
- 11cm pin distance chin rest papers for other ophthalmic devices (110mm between holes) like NIKON, RIGHTON



Stabilizing elbow supports

- stability and comfort for doctors
- to be used during laser treatment, foreign body removal, other diagnostic and treatment ophthalmic procedures

Trial lens set

BR-90 Trial lens set

90 pieces of trial lenses in black/red METAL frames ($\pm 10D$ spherical, $\pm 3D$ cylindrical, 7 accessory lenses) full aperture, cylinder lenses with the cylinder axis set in line with the lens holder (easy to use in dark examination room)

BR-158 Trial lens set

158 pieces of trial lenses in black/red METAL frames ($\pm 12D$ spherical, $\pm 4D$ cylindrical, 0.5-5D prism and 6 accessory lenses) full aperture, cylinder lenses with the cylinder axis set in line with the lens holder (easy to use in dark examination room)



BR-260 Trial lens set

260 pieces of trial lenses in black/red METAL frames ($\pm 20D$ spherical, $\pm 6D$ cylindrical, 0.5-10D prismatic and 10 accessory lenses) full aperture, cylinder lenses with the cylinder axis set in line with the lens holder (easy to use in dark examination room), the axis marks engraved and painted, cross-cylinder included

PL-232 Trial lens set

232 pieces of trial lenses in black/red PLASTIC frames ($\pm 20D$ spherical, $\pm 6D$ cylindrical, 10 accessory lenses) wide aperture, cylinder axis clearly signed and visible for the doctor



Ophthalmic trial frames

TF-2 Universal trial frame

Light-weight trial frame designed to be used with both adults and children (two different size nose rests included), assures full adjustment against nose and ears position, PD adjustment from 48-58mm.



TF-4 Universal trial frame

Robust construction of a Topcon style trial frame designed to be used with adults, assures full adjustment against nose and ears position, PD adjustment from 48-58mm.



TF-2 Pediatric trial frame

Pediatric trial frame with special, adjustable nose pads perfect for children. They are characterized by high durability & excellent quality.



Ophthalmic Diagnostic Strips

BioGlo Fluorescein Sodium Ophthalmic Strips USP



BioGlo™ is the best-known brand in the diagnostics of ocular surface. It has been well accepted and recognized as the leading diagnostic aid on the ophthalmic market. BioGlo™ strips are being used to diagnose tear film disorders. Fluorescein stains corneal epithelial defects and penetrate through these defects into the intercellular space, thus showing the dead epithelial cells and exposed basement membrane of the cornea. Fluorescein test strips are being used to examine patient's cornea and conjunctiva using a slit lamp with a blue filter on. Furthermore, fluorescein is widely used in measuring intraocular pressure using applanation tonometry to evaluate hard contact lens fitting, and to evaluate break-up time (B.U.T.) in Dry Eye Disease.

Parameter measured:

Number of punctate dye spots corresponding to defects in the surface of the cornea.

Method of a performance:

Cobalt filter is switched on in the slit lamp.

One strip that has been pre-wetted with physiological saline solution is being placed in the lower fornix of the conjunctival sac for a short time.

The patient is asked to blink the eyes several times to spread fluorescein.

Intensively stained fluorescein spots in the palpebral fissure are being counted.

Results interpretation:

0 spots showing uniform distribution of fluorescein – normal result;

>10 spots or diffuse fluorescein staining through the epithelial defects – pathological result.

Available packages:

100 pcs. or 300 pcs. sterile, individually wrapped strips.

Ophthalmic Diagnostic Strips

TearFlo™ Sterile Tear Flow Test Strips (Schirmer's Test)



TearFlo™ is being used to evaluate tear secretion - Schirmer's test. More than 13 mm wetting of standardized strips folded at a given notch over a 5-minute period of examination with eyes closed is considered to be normal tear secretion. Wetting values less than 9 mm are considered as hyposecretion.

Schirmer's test is the oldest method available for Dry Eye Disease diagnosis.

Method of a performance:

Test is performed in a room with a dimmed light, without a draught, and without pressure sources in the field of vision.

Patient is advised to look straight ahead or slightly upward and not to force himself/herself to blink the eyes.

Tear fluid should be removed from the lower fornix using a gauze swab before paper strips are placed.

Strip should be bent at the notch on the marked end using forceps and inserted in the lower part of the conjunctival sac at 1/3 of length of the lid margin on the outer side.

Strip is removed from the conjunctival sac after 5 minutes, and the amount of wetting of the filter paper section is measured in millimetres from the place of bending.

Results interpretation:

=>15 mm – normal;

>10 to 15 mm - initial stage of the tear deficit;

>5 to 10 mm - advanced tear deficit;

5 mm – severe tear deficit.

Available packages:

100 pcs. sterile, individually wrapped strips.

Universal dust covers



UC-1

universal fabric dust-protector cover for two ophthalmic instruments (mounted on the ophthalmic unit or two instruments table).

Dimensions: W75cm x H55cm x D45cm.

custom made logo available



UC-2

universal fabric dust-protector cover for two ophthalmic instruments (for high devices like Haag-Streit type slit lamps and others).

Dimensions: W40cm x H70cm x D30cm.

Custom made logo available.



UC-3

universal fabric dust-protector cover for two ophthalmic instruments (for Zeiss type Slit lamps, autorefractometer, puff-tonometer. etc.).

Dimensions: W45cm x H45cm x D27cm.

Custom made logo available



UC-4

universal fabric dust-protector cover for two ophthalmic instruments for chart projectors, A-scans, pachymeters, etc.)

Dimensions: W27cm x H20cm x D40cm.

Custom made logo available.



VITA



LATTE



NERO



BRUNA



SCURO



MELA



ROSA



STELLA



AMORE



ZUCCHINI



ESPRESSO



AMALFI



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