•**SL-700** series slit lamp has 3 different models, 2-step, 3-step and 5-step.

•The resolution is improved to 180 lp/mm, it can give you a clean and clear image.

•The illuminance is greatly improved to over 280Klux. It meets the demand of Fundus diagnosis. Especial when these two symptomshappen to the patients: crystalline lens opacities or vitreous opacities.

•Comfortable mechanical operating feeling.

•The range of refractive degree of eyepiece is improved. Now is from +6.00D to -8.00D. When tuning the refractive degree of eyepiece, the cover of eyepiece does not turn along with it, so that avoid the inconvenience for user.

•The distance of left and right optics is 23mm, which is compatible to almost all the brands of beam splitters in the market.

•It's compatible with the Goldmann applanation tonometer BQ type.

•The compatibility to different brands of laser adaptor is improved.

## SL-700-5    SLIT LAMP

5 STEPS

5 steps magnification

Beautiful binocular move symmetrically

eyepieces regular

eyepieces stretch

Illumination continuously adjustable

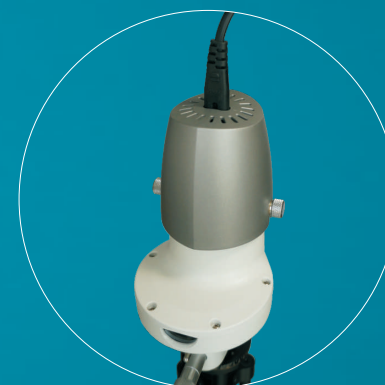**SL-700-5L(LED)**
**SL-700-5H(Halagen)**

CE  FDA

## SL-700-3    SLIT LAMP

3 STEPS

3 steps magnification

**Unique design for the SL-700 series Slit lamp**

Unique design of lamp cover
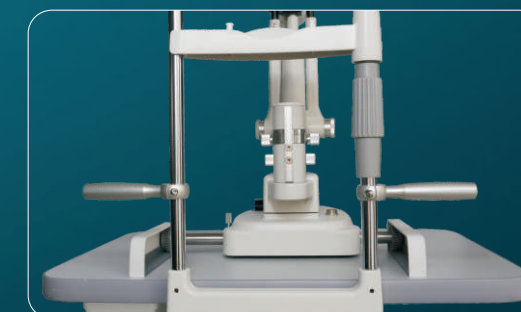for fashion and for better heat emission

Assemble hole for Goldmann applanation
tonometer BQ type

Hollowed arm to tie wires around without mess if needed

**SL-700-3L(LED)**
**SL-700-3H(Halagen)**

CE  FDA

Patient Hand Rest
on double side of the Chin-rest Rack

## SPECIFICATIONS

### Microscope

| Item no. | SL-700-3H/SL-700-3L | SL-700-5H/SL-700-5L |
|---|---|---|
| Type | Galilean system | Galilean system |
| Model of magnifying | Revolving drum(3 steps) | Revolving drum(5 steps) |
| Eyepiece | 12.5 X | 12.5 X |
| Total magnification rate (Field-of-view) in mm | 10X(Φ19.8),16X(Φ12.5), 25X(Φ7.8) | 6X(Φ31.2), 10X(Φ19.8), 16X(Φ12.5),25X(Φ7.8), 40X(Φ5.0) |
| Range of P.D. Adjustment | 52mm to 78mm | 52mm to 78mm |
| Diopter adjustment | +6D to -8D | +6D to -8D |

### Slit illumination

Slit width.......................Continuously variable from 0 to 14mm
Slit length.......................Continuously variable from 1 to 14mm
Illumination fields Circle...........................14/10/5/3/2/1/0.2mm
Test mark with fixation star
Slit image radial range..................................................0~180°
Slit inclination 4 steps......................................5°, 10°, 15°, 20°
Filters.......................................Heat-absorbing filter, ND filter,
Red-free,Cobalt Blue
Light source.........................Halogen-bulb 6V 20W/LED 3V 3W
Slit illumination intensity......................Halogen-bulb :150k Lux
LED: 180k Lux

### Instrument Base

Operation....................3-dimensional operation of the joystick
Range of adjustment.........110mm(longitudinal),110mm(lateral)
30mm(vertical),15(fine)

### Chin-rest

Fixation light............................................................Red LED
Vertical adjustment.....................................................80mm

### Power supply

Input...........................................220V/110V±10%, 50Hz/60Hz
Output.................................................................30VA(max.)
Light source: Halogen bulb  6V 20W/LED 3V 3W
Fixation light: 3V



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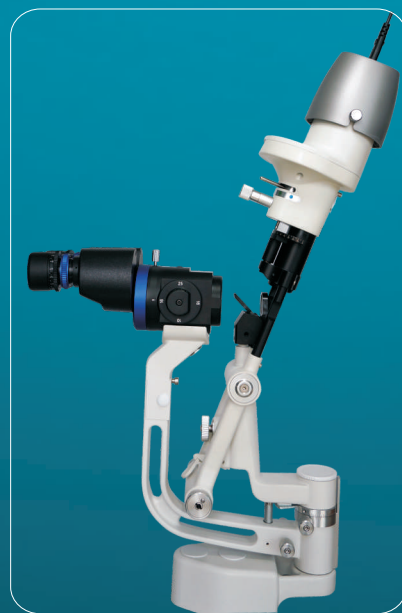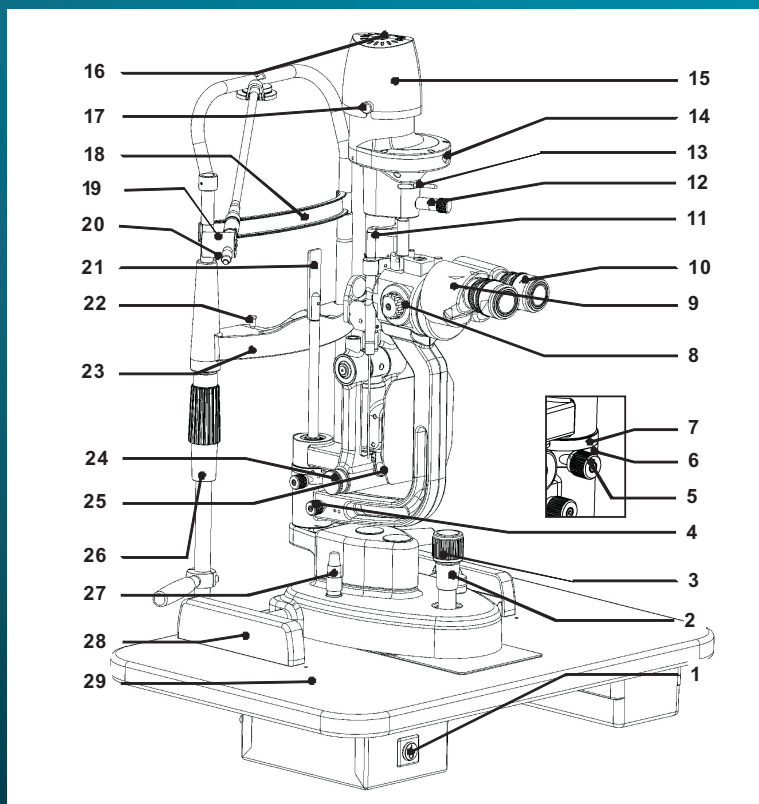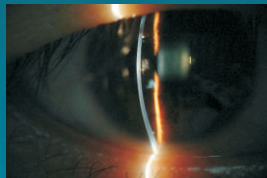


Slit can be incline for SL-700-5,
SL-700-3 and SL-700-2
Inclination degree: 5°,10°,15°,20°

---

2 STEPS

### FEATURES

•The excellent optical system ensures a clear and sharp image
for users.
•4 kinds of slit inclination are available.
•Continuously adjustment of illumination.
•With hand-rest for the chin-rest.

### SPECIFICATIONS

#### Microscope

Type.................................................Converging stereoscope
Eyepiece.........................................................................10X
Angle between eyepieces...................................................13°
Magnification change................2 steps by objective lens rotate
Total magnification rate(Field-of-view)....10X(Φ18), 16X(Φ14.5)
Range of P.D. Adjustment................................52mm to 78mm
Diopter adjustment ................................................+5D to -8D

#### Slit illumination

Slit width.......................Continuously variable from 0 to 14mm
Slit length.......................Continuously variable from 1 to 14mm
Illumination fields Circle..........................14/10/5/3/2/1/0.2mm
Test mark with fixation star
Slit image radial range................................................0~180°
Filters.......................................Heat-absorbing filter, ND filter,
Red-free,Cobalt Blue
Light source.........................Halogen-bulb 6V 20W/LED 3V 3W
Slit illumination intensity.........................................≥280k Lux

#### Instrument Base

Operation......................3-dimensional operation of the joystick
Range of adjustment.......1100mm(longitudinal),110mm(lateral)
30mm(vertical),15(fine)

#### Chin-rest

Fixation light...........................................................Red LED
Vertical adjustment......................................................80mm

#### Power supply

Input...........................................220V/110V±10%, 50Hz/60Hz
Output................................................................30VA(max.)
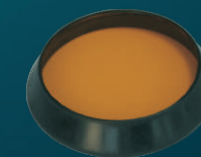Light source: Halogen bulb  6V 20W/LED 3V 3W
Fixation light: 3V



CE  FDA

SL-700-2L(LED)
SL-700-2H(Halagen)

Yellow filter for SL-700series Slit Lamp is optional



B1322

Metal frame makes it easy to  be put on or off
the magnetic back side of slit lamp

**MODOP®**

## SL-700D    DIGITAL SLIT LAMP

### FEATURES

This system is made up by the SL-700 combining with the following accessories: beam splitter, digital camera adaptor, CANON DSLR camera, back ground illumination LED model(3V).
Besides observing the eye diseases, it can take pictures and store the image, print and store the case history, this is convenient to observe the patient's condition and evaluate remedial effect.
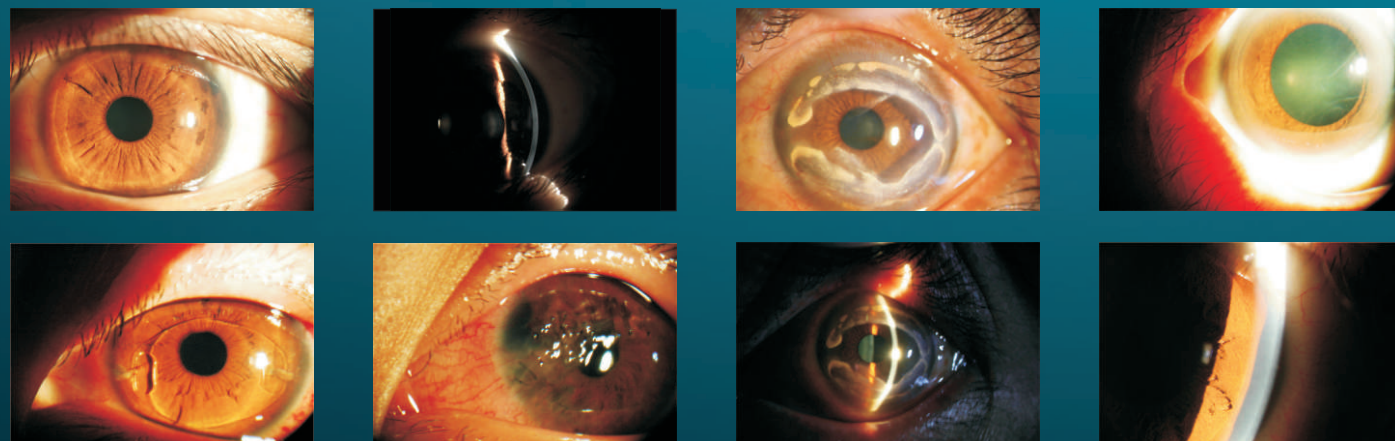
Background illumination

### CAMERA RECOMMENDED SETTING

STEP 1) Turn the <Mode dial> to <M>.

STEP 2) Set the shutter speed 1/10 to 1/30 sec

STEP 3) Image-recording quality select <M>.

STEP 4) ISO setting: select ISO speed "ISO 800" at least

STEP 5) White Balance: select "Tungsten"

**Both SL-700-3 and SL-700-5 slit lamp can be upgraded to SL-700D**

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**MODOP®**

## SL-700T    ANALYZE DIGITAL SLIT LAMP

With software

• This system is made up by the SL-700D combining with the image processing system.
• This system is not only a work platform for ophthalmic diagnosis, but also a case database.
• It can easily capture digital photos of the cornea, sclera, anterior chamber, iris, lens, retina and set up patients files and effectively manage them.

### FEATURES

• What doctors see from eyepieces is showed synchronously on camera display screen, which is very convenient for the doctors to capture the best and clearest pictures.
• Background illumination specifically designed for darkroom environments.
• Fine photos immediately taken by the button on joystick.
• Used for establishing the full data of patients, processing images, measuring the length, area and so on.
• Famous for its excellent optics.

### SOFTWARE OPERATING ENVIRONMENT

**Hardware:**
CPU: Intel Core Due, 2.00GHZ or above
Minimum EMS memory:1024MB or above
Screen resolution:1028*1024(17inch or lage size monitor)
Graphice Card: update to the latest display driver(support DX9C)
Hard ware space:80GB or above
Type of port:USB:1.1~2.0 and COM inter face

**Operating system:**
Windows XP and Windows 7 (Caution: Windows Vista, Windows 8 is not compatible)

**Digital SLR camera:**
Digital camera is not standard accessory.
This system is fit for Canon EOS 700D/750D/800D/1200D/1500D, please do not use digital cameras not listed here.
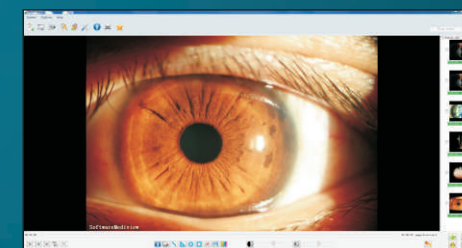
CE  FDA

## T170  APPLANATION TONOMETER

**FEATURES**

Based on the Goldmann principle which is a world widely accepted gold standard, T170 applanation tonometer can provide fast and accurate IOP measurement data to clinical diagnosis and treatment.

Adjustable mechanical design ensures the reliable measurement result and durable performance of the instrument.

Repeated measuring procedures do not reduce the natural ocular pressure of the patient.

In combination with most of slit lamps.

The measurement can be carried out on the patient sitting at the slit lamp in conjunction with other routine microscopic examinations.

**SPECIFICATIONS**

Range of Measurement.....0mmHg~ 80mmHg (0 kPa~10.64kPa)
Moving Range of the Rings.............................1.53x2=3.06mm
Prism Diameter..................................................................7mm
Moving Range of Prism..............................................±1.5mm
Dimension.............................................172mmx80mmx80mm
Net Weight...................................R type:0.8Kgs   T type:0.5Kgs

**R type**            **T type**

CE FDA

### B1335  TONOMETER ADAPTOR

R TYPE

### B1336  TONOMETER ADAPTOR

T TYPE
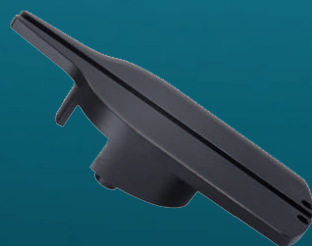
## OPTIONAL  ACCESSORIES OF SLIT LAMP

**(for SL-700 series slit lamp)**

**B1333**

1/3" CCD adaptor

**B1331**

Beam Splitter

**B1332**

Digital camera adaptor for
CANON EOS series EF mount

**B1334**

Backlit Background
Illumination Module

**B1301**

Bulb for Slit Lamp
SL-700 series
(6V20W)
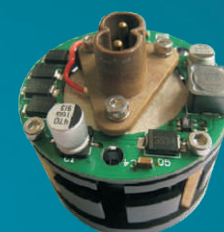
**B1303**

LED  module

**B1323**

Measuring Eyepiece
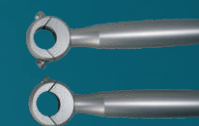
**B1317**

Hand rest

**B1313**

Power box
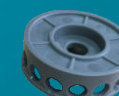
**B1318**

Wheel

**B1314**

Chain
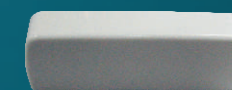
**B1315**

Chain cover

### B1311  METAL PLATE

FOR MOBILE SLIT LAMP
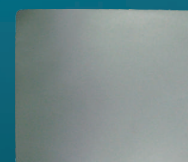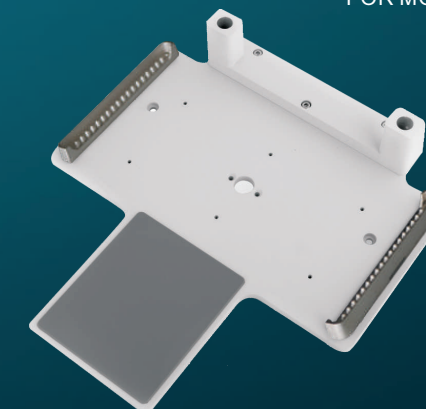
**B1316**

Moving plate

**B1312**

Slit Lamp Plate for
American style table

## LM-900  AUTO LENSMETER

### Accurate & High speed

The 4th generation operation system, with HD screen and blue ray

### FEATURES
•Hartman testing method, CPU high-speed precise computing
•Automatic recognition of single and progressive lens
•Automatic measurement, reading and memorying the data
•ABBE compensation no need
•Broad contents, strong performances, simple and convenient operation
•Latest international designing concept of collecting technology, mode and individuality
•With PD, built-in printer and inner UV part
•Accelerator key used

### ADVANTAGES

1.More functions
2.High speed(not simple speed only, that's the image taking in, data transmitting, calculating and processing in synchrony and precision and high speed)
3.High precision(powerful software processing capacity, unparalleled house-in optical circuit structure designed)
4.High quality components, high standard, fine workmanship (three key standards: strict components purchasing, production controlling and testing)
5.Substantial, generous and integrated appearance designing
6.High stability(failure rate at 1% or so)

CE  FDA
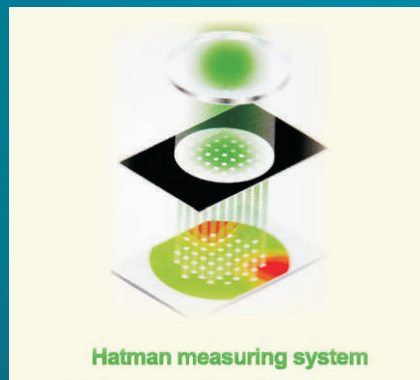
Hatman measuring system
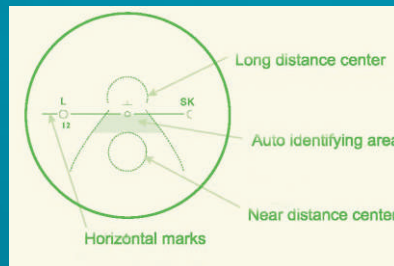
Auto identifying system of progressive lens

Long distance center
Auto identifying area
Near distance center
Horizontal marks

### Technical advantages

1.Dark dyeing lens and polarized lens can be measured
2.Low power sunglass lens can be measured (±0.12 inside of can be measured)
3.Surface scratched lens can be measured (the surface film of the weared lens seriously come off or degenerate)
4.Real UV measure (can measure the midway penetrating value)
5.Real value measured especially for RDD and ADD
   (Real measuring to the original data per each point of lens, not make any experienced disposal)
6.ABBE compensation no required when different refraction rate lens can be measure
7.Wide measuring range(±35.00, error ±0.25 inside of)
8.Utmost value measure(can measure the residual astigmatism power in lens)
9.Auto identifying system(judge the lens type automatically and accurately, not make an erroneous judgement)
10.Connect with computer(directly transmit the measured data into computer in stock for use)

### SPECIFICATIONS

#### Measuring Range
Sphere.................0 to ±35D(0.01D, 0.06D, 0.12D, 0.25D steps)
Cylinder................0 to ±10D(0.01D,0.06D, 0.12D, 0.25D steps)
Axis............................................................0-180°(1° steps)
ADD.....................0 to 10D (0.01D, 0.06D, 0.12D, 0.25D steps)
Prism......................................................0 to 15Δ(0.01Δsteps)

#### Mode
Cylinder.....................................................................+,+/-,-
Prism........................X-Y: Cartesian Coordinates H:I,O. V:U,D
                          P-B: Polar Coordinates
                          mm: mm expression
Reading resolving power................0.01D, 0.06D, 0.12D, 0.25D
Contact lens.....................................0 to ±25D, BC 6.00 to 9.00
Measuring mode........single vision lens/bifocal lens/trifocal lens
                          progressive lens/contact lens

#### Others
Lens Diameter................................................Φ20 to Φ100mm
PD.................................................40 to 90mm(0.5mm steps)
UV transmissivity test
Measurable transmissivity............>10%; >20% at ±10D and over
Printer...................................................Built-in thermal print
Thermosensitive paper size...........................................57mm
Display............................................................TFT LCD (5.7")
Power................................................AC100V to 240V, 40VA
Product size.................................210(L)x190(W)x420(H)mm
Net weight........................................................................4Kgs

White color is available

### Standard Accessories

Ink pen                    Printing paper
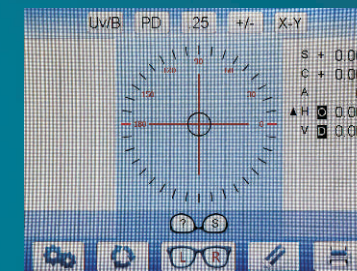
### Auto identifying

Auto identify interface          Wrong position interface

### Real UV test
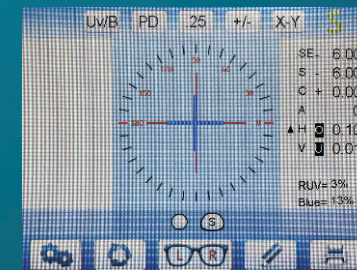
UV penetrability                 UV compare

### Progressive lens measurement
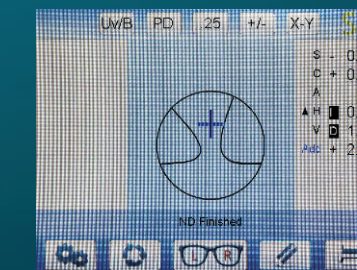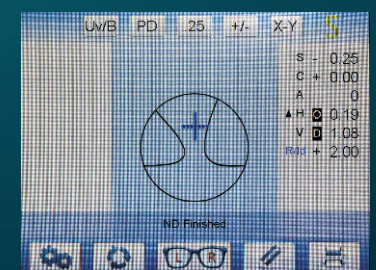
ADD measurement                 RDD measurement

## ASPHERICAL LENS

### Indirect Diagnostic lens

•MEDOP Retina Lenses are precision 2 sides aspheric lens that yield an extremely wide field of view and sharp image.
•The double aspheric design of retina lenses can effectively reduce the oblique spherical aberration and lateral chromatic distortion in large field of view and yield a clear and sharp image.

| Item No. | 20D STD | 78D STD | 90D STD |
|---|---|---|---|
| Image Magnification | 3.13X | 0.93X | 0.76X |
| Static Fov | 46° | 81.4°-97° | 74.2°-89° |
| Working Distance | 50mm | 8mm | 7mm |
| Clear Aperture | 48mm | 26mm | 21mm |
| Dimension(mm) | Ø56X20 | Ø33X15 | Ø27X13 |

CE  FDA

#### FEATURES

1. The lens material is high quality optical glass.
2. The lens have many layers of professional AR coating(anti-reflection film).

#### USE

1. As a kind of medical magnifier, aspherical lens(indirect diagnostic lens) has a wide-angle. It can be used with slit lamp microscope, binocular ophthalmoscope to diagnose the rear and bottom of the eye's vitreous body.
2. When used with slit lamp or ophthalmoscope with the lens, retina, second nerve, macula luteal and capillary vessel can be observed expressly. Without touching the patient's eye, the image has a wide angle of view, large image and strong third dimension etc.

#### DIRECTIONS FOR USE

1. The silver ring on the lens holder should be held toward the patient's eye during examination, which can ensure the right using direction and may provide for best image quality.
2. Keep the lens centering on the patient's pupil.
3. Hold the lens far enough form the patient's eye so that the retinal image has the same diameter with the lens.
4. Keep the illumination sources as dark as possible to minimize reflections and image contrast.
5. Keep the lens clean to minimize glare form the lens surface.

#### CLEANING

Clean with alcohol or the mixture of aether and alcohol.

**Packing Case**

## BRT-3    PD METER

#### FEATURES

•Pupil distance measure
•Eye wire distance measure
•Pupil height measure
•SPH +2.00D compensation available

#### SPECIFICATIONS

Data Range
    Binocular PD......................................................46-82mm
    Monocular PD.....................................................23-41mm
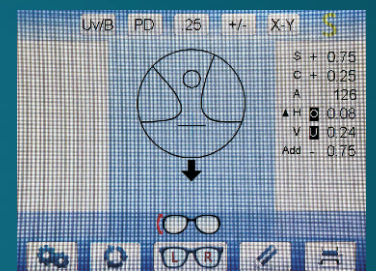    PH.......................................................................12-28mm
    LD.........................................................................6-20mm
Distance range..........................................300mm- infinity ∞
Indication error.....................................................≤0.5mm
Rounding error.....................................................≤0.5mm
Asymmetric error.................................................≤0.5mm
Power source...............DC 3V(2pcs AA batteries, not included)
Automatic standby.................................................. 2 minutes
Instrument size............................220(L)X160(W)X60(H)mm
Net weight...............................................................600g

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**Measurement of pupil distance**

Needle        Reflective spot from pupil
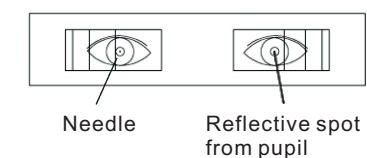
**Measurement of pupil height**

Lower Edger of the Lens

Needle

PH Marker Line
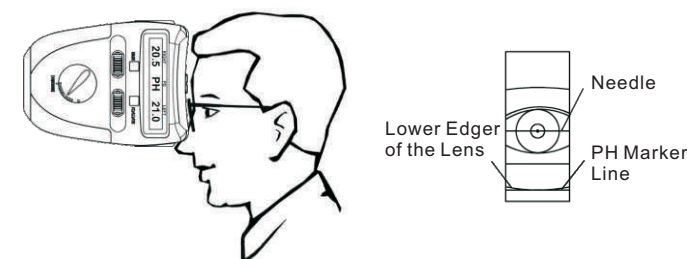
**Measurement from lens vertex to corneal vertex**

Needle        LD Marker Line

Lens Vertex        Corneal Vertex
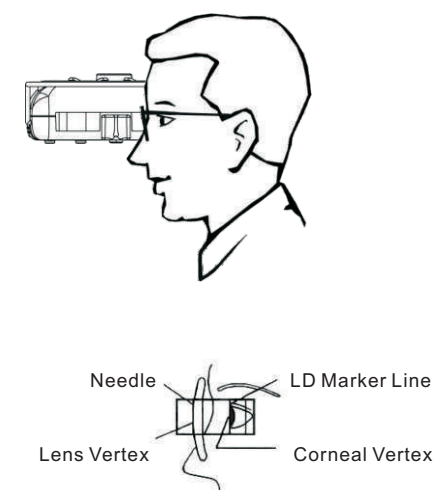
## ZN-270    LED VISUAL CHART    27" HD
POLARIZED SCREEN

- **Big size monitor, clear display**
  27" TFT-LED monitor, 1920x1080 pixels,200CD/m²
- **3D polarization vision chart**
  Apply to binocular balance test and stereo visual function test
- **Optotypes can be changed randomly**

**Standard accessories**    **Optional accessories**

**Polarized filters**

Wall mount

**L-72A**

Remote    U disc    Floor stand for screen max. 27"

CE FDA

Both table stand and wall mount are as standard accessories

### SPECIFICATIONS

LED moniter....27-inch TFT Panel, 1920x1080 pixels, 200CD/m²
Optotype................E, C(Landolt),Alphabet, Numbers, Children
Visual unit................Decimal,Snellen(ft,20/20),Snellen(m,6/6)
Dis................................................1M~6M (in steps of 0.1m)
Mask type............Single mask, Horizontal mask, Vertical mask,
                            Red/Green mask, White/Black mask,
                            Contrast adjustment, Red/Green adjustment

Special test masks......................Ishihara Test, Cross cylinder,
                            Astigmatism Test, Cross Grid,
                            Fixation point Test, Red/Green Panel,
                            Worth Test, Red/Green Balance,
                            Traffic light, Coincidence Test, Stereo Test,
                            Schober Test, ETDRS
Other functions.......Ramdomization Optotypes Playing function,
                            R/G setting function, Video playing function,
                            Screen-saver function, standby function
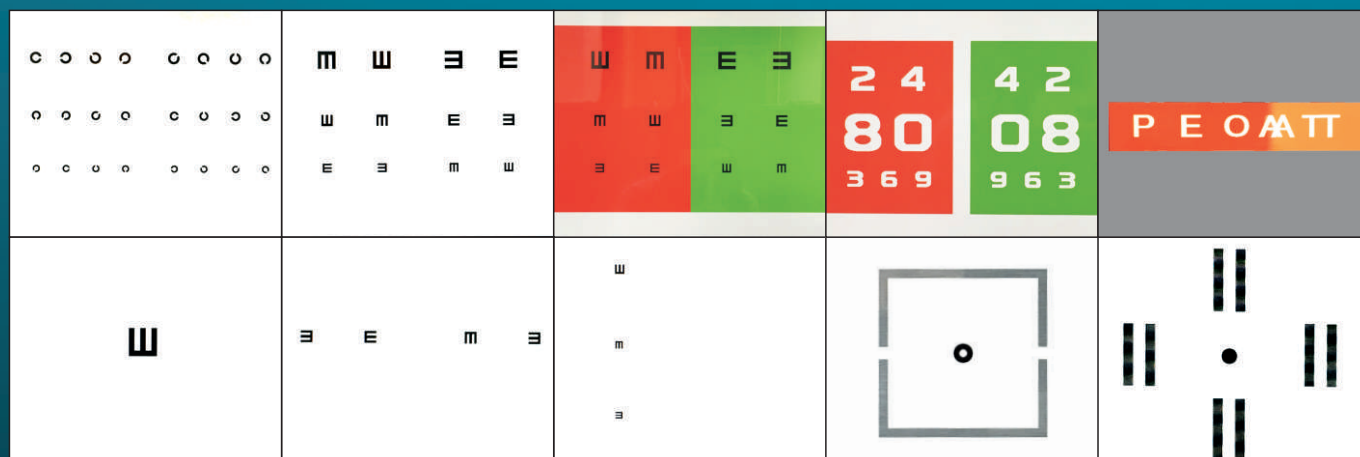
## AT-20    POWER TABLE

Improved  Table  Top: surface PVC blister/HDF

CE  FDA

58cm

AT-20
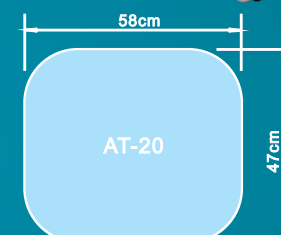
47cm

### SPECIFICATIONS

Table top size..........................................................58X47cm
Height adjustment..............................................650~840mm
Max. load..........................................................................60kgs
Gross weight................................................................18.5kgs
Input voltage......................................220V/50Hz; 110V/60Hz

Two power supply sockets    One power supply socket

Both 110V American socket and 220V European socket
are available.

Improved castor makes the table
move more smoothly. Bigger brake
makes it easier to lock the table by
foot instead of by hand.

**I2101**

## AT-20B    POWER TABLE

### FEATURES

Bigger table top size for two machines: 90X50cm
Other functions are same as AT-20

### OPTIONAL ACCESSORIES

Enhanced metal plate support under the table top

**I2102**

Improved 2.5" castor makes
the table more stable, and
more smooth in moving

CE  FDA

## ALE-1000A    PATTENLESS LENS EDGER
2D

### ALE-1000 Main Edger
Stable main machine,easy operation, convenient maintenance.

Dimension.......................................730mmx510mmx410mm
Weight..............................................................................55kgs
Voltage..............................................AC220V/110V  50/60Hz
Power...................................................................................550W
Accuracy..................................................Tolerance±0.01mm
Size range.....................................................20mm～80mm
Axis accuracy...................................................................0.1°
The adjustable step length of size..............................0.05mm
Clamping pressure..........................................................80kgs
Lens Material...................................PC, Glass, CR, HI, HR, TC
The processing type.............................pointy edges, platband,
                              bevel polishing, platband polishing
Screen.................truecolor, 5.7 inch TFT LCD, lens photograph
          displayed as 1:1 and with use-friendly operating interface

### ST-1200 Scanner
Optical path without parallax, original shape scanning,more accurate.

Dimension.........................................325mmx250mmx205mm
Weight.....................................................................................5kgs
Voltage.............................................AC230V/115V   50/60Hz
Power........................................................................................60W
ADD adjustment range......................................................6mm
Screen tilt angle.........................................................0~130°
Max storage...............................................................500 sets
Touch screen.......................................7 inch capacitive screen
Quantity connecting with the main manchine....................2 units

Optical path without parallax,
original shape scanning,
more accurate.

### ALE-1000A

Adapt to PC,Glass,Resin,HI,
HC and TR lens material.

Three grade headpiece pressure to
prevent the lens from being out of axis.

Have the optical centering
and geometric centering modes.

Three grade headpiece pressure

All English and graphical menu, easy operation and convenient maintenance.

TINE 1: Bevel 1 is suitable for Index
           beyond 1.61 or harder glasses.
TINE 2: Bevel 2 is suitable for Index
           under 1.61 or high curve glasses.

### ST-1200

Digital template can edit the figure
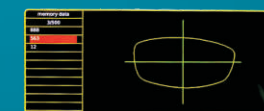
500 sets lenses
data storage

One scanner with two main machines

Turn out to install the suction cup, more easy operation.

Special design suction cup holder to
realize lens returning by one push
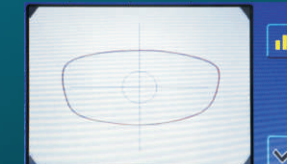
It is adjustable for the scanning light source,
more than 98% Demo lenses are available.

## LE-400A  AUTOMATIC LENS EDGER

### FEATURES

With the automatic emendation system in this new model, it can do automatic emendation when the machine starts up, assure the size of lens(left and right) is uniform and improve the precision.

### SPECIFICATIONS

The size of Diamond wheel.................. PC wheel: 100X15.6mm
Glass wheel: 100X16mm
V wheel: 100X23mm
Flat style polishing wheel: 100X11mm
Available lens range..............................................22~100mm
The processing type..........pointy edges, platband, flat polishing
The lens material..............................................CR, Glass, PC
Size...........................................550(L)X510(W)X410(H)mm
Voltage.............................220V±10%, 50Hz/110V±10%, 60Hz
Power..............................................................................500W

**Function of LE-400A**
**BEVEL POLISH function is not available.**



Wheel of LE-400A

Water box and water pump is standard accessories

Cabinet is optional accessory

Wheel of LE-420A

## LE-420A  AUTOMATIC LENS EDGER

### FEATURES

LE-420A has all functions of LE-400A, furthermore, it has PC bevel polishing function.

### SPECIFICATIONS

The size of Diamond wheel.................. PC wheel: 100X15.6mm
Glass wheel: 100X14mm
V wheel: 100X19mm
Flat style & bevel polishing wheel: 100X19mm
Available lens range..............................................22~100mm
The processing type............................pointy edges, platband,
flat polishing, bevel polishing
The lens material..............................................CR, Glass, PC
Size...........................................550(L)X510(W)X410(H)mm
Voltage.............................220V±10%, 50Hz/110V±10%, 60Hz
Power..............................................................................500W

### Function of LE-420A
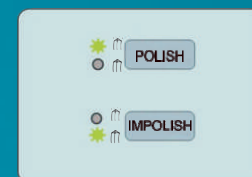
**POLISH**
Polishing and impolishing selector
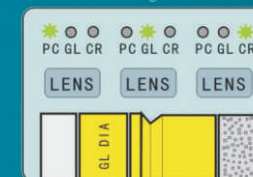
**LENS**
Various materials lens processing. Select different wheel as per material of lens, save time and save trouble.
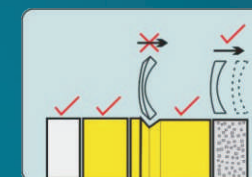
**DIA**
Use diamond wheels effectively. The grinding place can be moved for prolong the life of the wheels. Efficiently utilize the width of the abrasive disc.
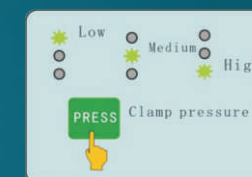
**CLAMP PRESSURE**
3 kinds of pressure for selecting
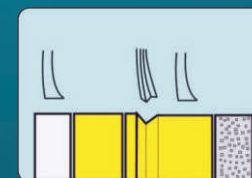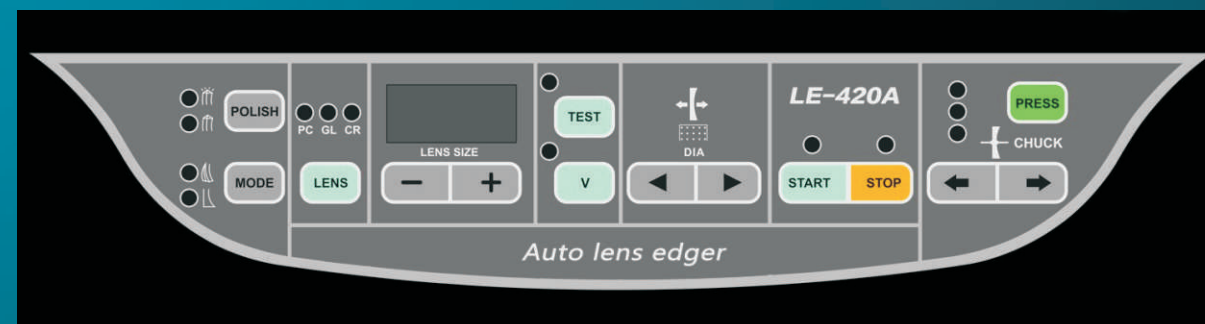
**MODE**
Beveling and flat edge selector
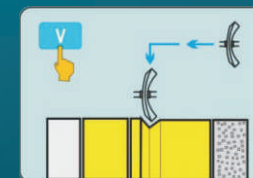
**V TEST**
V for Re-edging
TEST for normal test
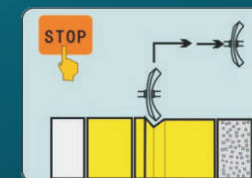
**STOP**
It has been used when a pause is needed during the grinding process and also to be restored to the original place.
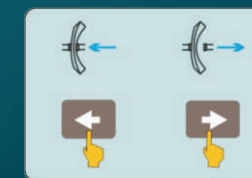
**CHUCK**
Automatic clamping lens system.

## LE-300A AUTOMATIC LENS EDGER

### FEATURES

With the automatic emendation system in this new model, it can do automatic emendation when the machine starts up, assure the size of lens (left and right) is uniform and improve the precision.

### SPECIFICATIONS

The size of Diamond wheel..................... CR wheel: 100X16mm
Glass wheel: 100X16mm
V wheel: 100X23mm
Polishing wheel: 100X11mm
Available lens range..............................................22~100mm
The processing type..........pointy edges, platband, flat polishing
The lens material.......................................................CR, Glass
Size..............................................550(L)X510(W)X410(H)mm
Voltage..............................220V±10%, 50Hz/110V±10%, 60Hz
Power.............................................................................500W

### Function of LE-300A
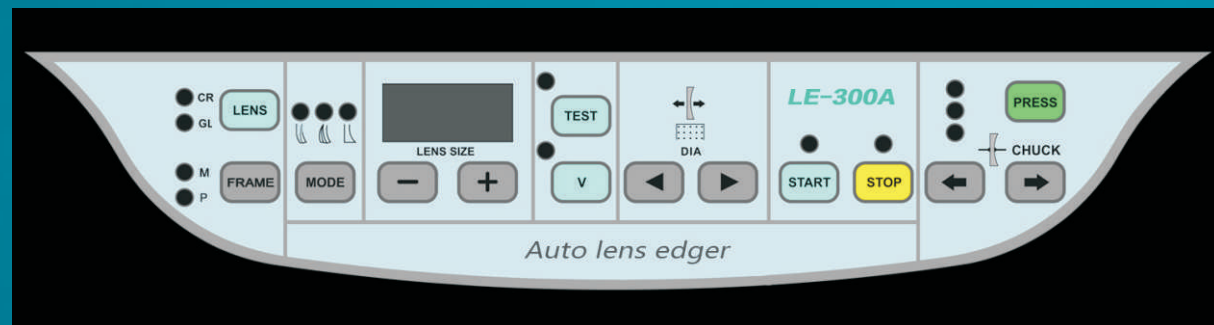


Auto lens edger

Wheel of LE-300A

### Standard accessories for LE series auto lens edger

K1101     K1102     K1103     K1104     K1121
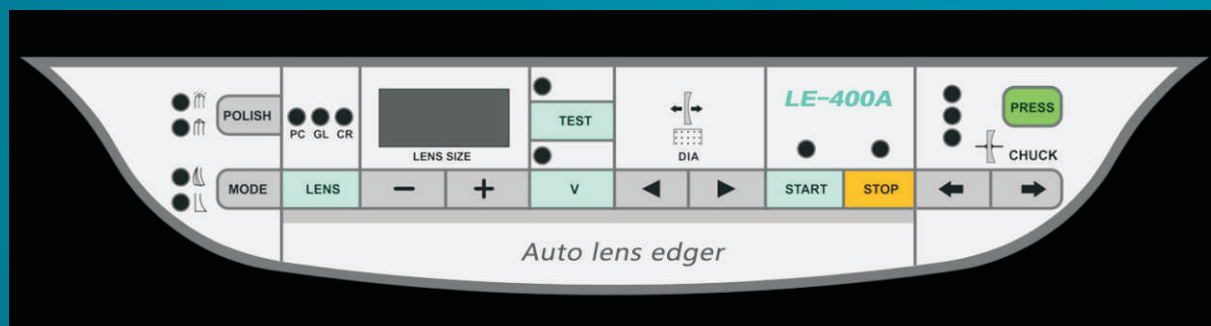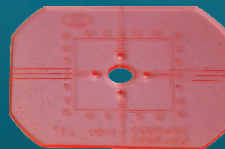
## LE-520 AUTOMATIC LENS EDGER

### FEATURES

• Beveling polishing function
• Pressurizing automatically
• PC auto edger
• The 3rd generation mainboard
• Double bevel model

### SPECIFICATIONS

The size of Diamond wheel.................PC wheel: Φ100X15.6mm
V wheel: Φ100X19mm
Bevel polishing wheel(bevel 1): Φ100X19mm
V wheel(bevel 2): Φ100X11mm
Available lens range.............................................Φ22~100mm
The processing type............................pointy edges, platband,
flat polishing, bevel polishing
The lens material...............................................CR, Glass, PC
Size..............................................550(L)X510(W)X410(H)mm
Voltage..............................220V±10%, 50Hz/110V±10%, 60Hz
Power.............................................................................500W

Equipped with specific materials, the LE-520 automatic lens edger inherits the design style of Medop LE series auto lens edger, and improve the bevel wheel for high curve lens instead of the glass wheel.

### BLOCK PADS for LE series lens edger
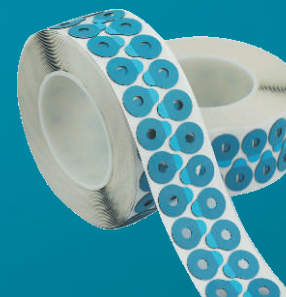
| T648 | BLOCK PADS | T650 | BLOCK PADS |
|------|-----------|------|-----------|
|      | 21mm      |      | 18x25mm   |

Box packing
1000pcs pads each box

### GRINDING WHEEL for LE series lens edger

| T671 | T672 | T673 | T674 |
|------|------|------|------|
| E-1  | E-2  | E-3  | E-4  |

PC wheel
100(OD)x17(ID)X15.6(T)mm

V wheel
100(OD)x17(ID)X19(T)mm

Polishing wheel
100(OD)x17(ID)X19(T)mm

Glass wheel
100(OD)x17(ID)X14(T)mm

## CP-10B    LENS DRILLING MACHINE
## CP-10C    LENS DRILLING MACHINE

AC motor

**FEATURES**

It is an indispensable machine to fully automatic edger.
Use this machine to make direct drilling in the gasket.
The gasket can replace for dieplate in using the edger.
It saves the trouble of opening the mould.
It is practical, convenient and labor-saving

CP-10B: With LED lamp

CP-10C: Without LED lamp

CE

## CP-5B    LED LAYOUT BLOCKER

**FEATURES**

•Compact and pretty appearance design
•No vision difference on the display screen, no deformation
 and accurate lens layout obtained
•Compensating the accuracy of the lens and suction cup
 position
•Bifocal lens can be positioned quickly and accurately,
•The small lens can also be put in clear projection

CE

## WB-3310A    LENS DRILLING MACHINE

**FEATURES**

Add one sliding lens-fix device, can slide out aligned with Axis,
and press/fix the lens for drilling it

CE

## PM-400AT    PATTERN MAKER

**FEATURES**
•Being based on the patterned lens or the original lens from
 your eyeglasses to make the standard pattern .
•It is easy and convenient to use clamping device equipped
 with 3 suction cup bases according to different model of lens
 edger and easy operation, quick speed of cutting and accuracy.
•Suction cup base: Topcon, Briot, Takubo

CE

## BRII-2-84    PRISM SET

Prism power: Δ0.25, Δ0.50,Δ0.75,Δ1.00,Δ1.25,Δ1.50,Δ1.75,
Δ2.00,Δ2.50,Δ3.00,Δ3.50,Δ4.00,Δ4.50,Δ5.00,
Δ6.00,Δ7.00,Δ8.00,Δ9.00,Δ10.00,Δ12.00,Δ15.00

Coated lenses are optional
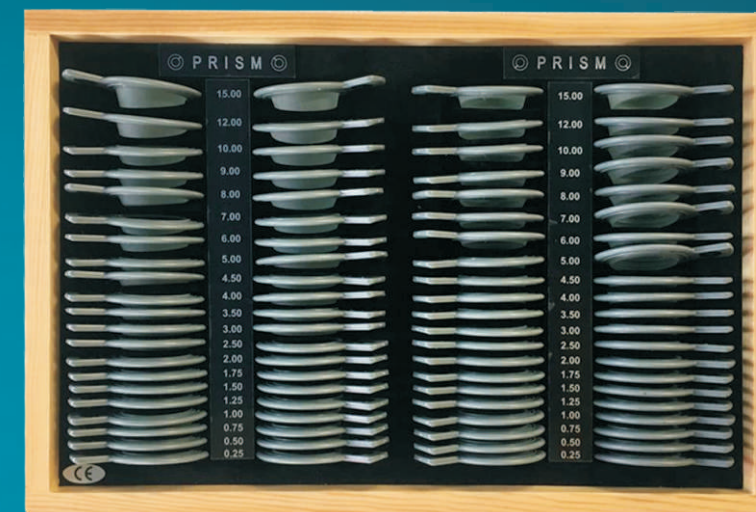
CE   FDA

## HC-23M    PNEUMATIC CHAIR

**FEATURES**
Small and functional
Good choice for combine table

**PACKING:**
1pc/carton
49X23X49cm/7kgs

**SPECIFICATIONS**
Diameter of the seat: 34cm
Diameter of metal base:  49cm
Height adjustment: 53-73cm
Max loading: 140kgs

CE   FDA

# TABLE OF CONTENT

## RM-9000    AUTO REFRACTOMETER

COLOR LCD SCREEN
BLACK & WHITE CCD

### FEATURES

1) Using the ARM processor and the latest domestic image processing, the system is fast and the image is clear.
2) Japan's mature optical path system, humanized automatic mist measurement process, to reduce the error caused by adjustment, more precise measurements.
3) Light rack with integral casting, CNC machining, measuring system is more stable, good consistency.
4) Color LCD display, 5.7 inches man-machine interface is more comfortable.
5) PD automatic measurement function, automatically PD value
6) One key lock function, quickly locking mobile platforms
7) Innovative designs, according with the structure of human body engineering, to bring customers good aesthetic feeling and comfortable
8) Data transmission with CV7200, improved efficiency of online

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5.7 inch color LCD screen

Most each record 10 times, automatic display representative value

Intuitive interface, convenient adjustment, the VD value, the precision and print mode, etc.

Automatic mist target, effectively reduce the measurement error caused by adjusting

One key lock function, convenient and practical

Fast thermal printer

### SPECIFICATIONS

**Measurement Range**

Vertex distance.......................................0.0,12.0,13.75,15mm
Sphere......................................-20D~+20D(0.12/0.25D step)
Cylinder.........................................0~±10D(0.12/0.25D step)
Axis............................................................1~180°(1° step)
Pupil distance.......................................................…..30~85mm
Minimum pupil diameter.............................................Ø2.0mm
Target...............................................automatic fogging target

**Hardware specifications**

Monitor.........................................................5.7" color LCD
Printer..................................................Fast thermal printer
Power saving function...................OFF, 5/15 mins (selectable)
Power supply..............................AC110~220V, 60/50Hz, 50W
Dimension/weight.............................288x500x480mm(14kgs)

## ARK7800A    AUTO REF-KERATOMETER with manual
## ARK7800B    AUTO REF-KERATOMETER with auto tracking

**FEATURES**

•New optical system, unique imaging impression
•Hartman imaging analyzing and processing technology, accurate measurement result
•TFT touch screen, can move front and back freely
•Motorized chinrest
•Auto paper-cutting printer
•Auto tracking and focusing during measuring

Adjustable 7" LCD Touch Screen

Motorized Chin Rest

ARK7800B

CE FDA

Auto Paper-Cutting
Thermal Printer

**Hartmann imaging processing technology**

BS

illumination
system

light source

detection
system

Lenslet Array creates a lot of separated
focal spots on the lens as pattern of
which subdivide the imaging for
extreme precision processing

aberrated wavefront

Lenslet array

CCD

SH-WFS

Hartmanngram

90°
135°
6.5mm    3.0mm
180°        0°
24°
6.5°
R center
225°
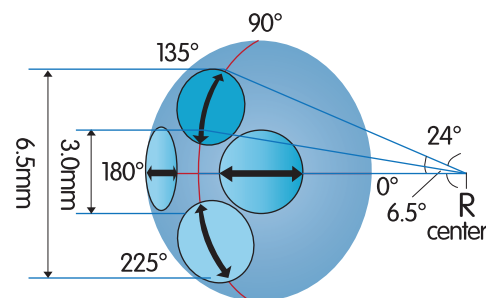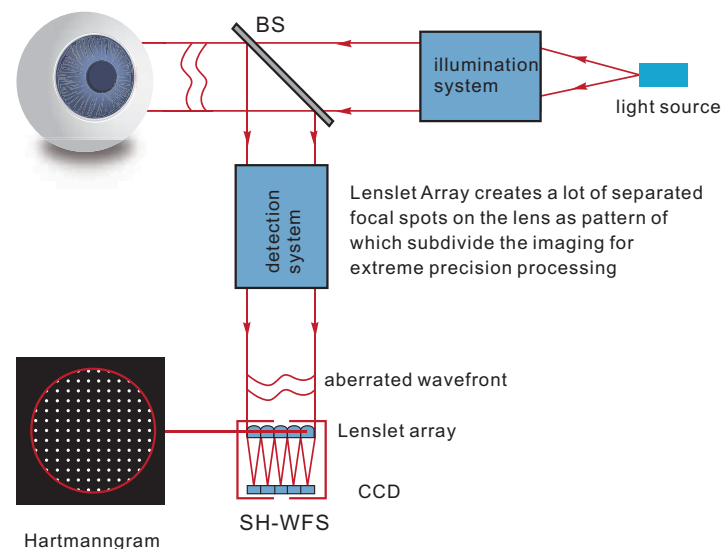
Measure peripheral keratometry precision
of eyes with contact lenses fitting

**SPECIFICATIONS**

**•Refractometry:**

Vertex Distance(VD)....................................0,12,13.75,15mm
Sphere(SPH)................................-30.00~+25.00(wide range)
                        (VD=12mm,0.01,0.06,0.12 or 0.25D)
Cylinder(CYL)....................0.00~±10.00D(0.06,0.12 or 0.25D)
Axis(AX)..............................................1~180°(increment:1°)
Sign of cylinder.................................................................-,+,±
Pupil Distance(PD)................................................10~86mm
Pupil diameter.............................................Ø2.00~Ø8.00mm
Minimum pupil diameter...........................................Ø2.0mm

**•Keratometry:**

Radius of curvature..........5.00~10.00mm(increment:0.01mm)
Corneal power..................................................33.00~67.00D
(in case that the corneal equivalent refractive power is 1.3375)
Corneal astigmatism........................................0.00~-15.00D
                        (Increments0.06/0.12/0.25D)
Axis....................................................1~180°(increment:1°)
Corneal diameter..............2.01~14.00mm(increments: 0.1mm)

**•Others:**

Monitor.....................Sharp 7 inch color TFT LCD touch screen
                        (Angle of view adjustable)
Built-in Printer............57mm thermal printer, auto paper-cutting
Measuring Time.................................................<0.5 second
Measuring light energy...........<30μw(Insure measuring safety)
Memory of Data...................10 measured values for each eye,
                        both Refractometry and Keratometry
Power supply......................................AC 100~240V, 50/60Hz
Packing dimension......................680(W)X400(D)X640(H)mm
Net weight/Gross weight.................................22kgs/26.5kgs
Data output.................................................RS-232  interface

**Operation interface function**

STEP.25  CYL(-)  VD:12.0  PD:    0/0
R 3/3
S + 0.25
C + 0.00
A 180
R1 7.77
R2 7.73
AX 180
NO.0001
R/K    AF

KER
REF
R/K

Manual Measuring
Auto Measuring

Clear
Data
Record    Set

Manual Focusing
Auto Focusing

**3D Measuring System**

Y–Direction
X–Direction
Focus
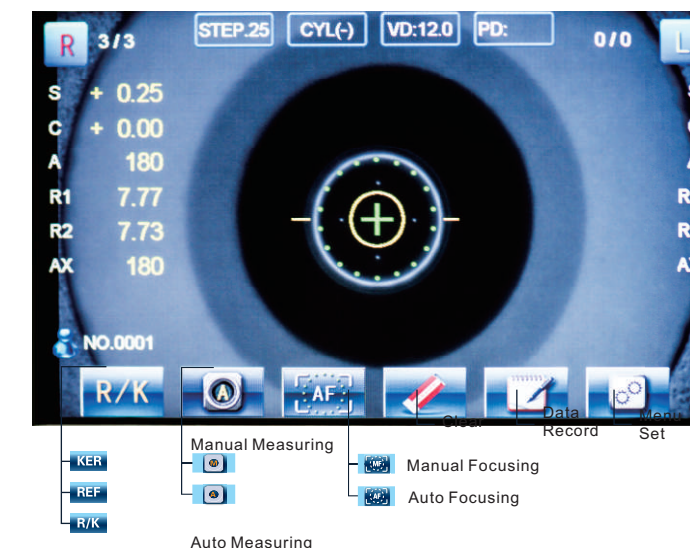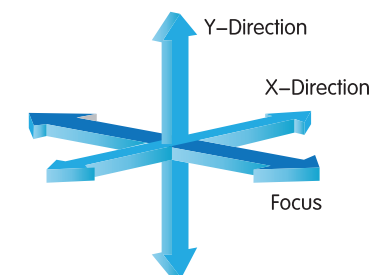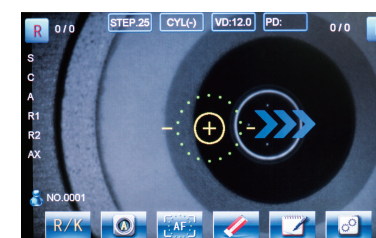
**Eye Socket Range**

Start instrument, quickly move the
device into the measuring area
(black part)

**Auto Tracking and Focusing**

When move the device into the range
of the patient's eye socket, it will track
down a measuring focus of the eye
automatically by the light sensors and
3D mechanism system inside(AF mode)

**Auto Measuring**

After auto focusing successfully, auto
measuring(A mode) is performed. By
these performances, an inexperienced
user can also complete the
measurement perfectly

B

B

## YZ-38  KERATOMETER

### SPECIFICATIONS

Magnification of Eyepiece...................................................15X
Total  Magnification............................................................18X
Illumination........................................2X 6V/12W halogen bulb
Measurement Range:
Radius of Curvature.................................................5.5~1.1mm
Diopter...................................................................30~60Dpt
Reading Increment(radius)........................................0.02mm
Measuring Accuracy.................................................0.25Dpt
Compensation Refractive index n..................................1.3375
Minimum Surface required....................r=5.5 Φ1.65 r=7.5  Φ2.3
For measurement...........................................r=11 Φ4.00(mm)
Angle Measuring Disc.................................................0°~180°
Input Voltage..........................................................110V/220V

FDA

## YZ-23B  SYNOPTORPHORE

YZ-23B Synoptophore is a diagnostic and remedial equipment combined with optical, mechanical and electrical parts. It can be used to diagnose and treat binocular functions, such as strabismus, amblyopia, diplopia, heterophoria, etc.

### CHARACTERISTICS

•Combined with functions of diagnosis, treatment, simultaneous viewing, syncretic viewing, solid viewing, and afterimage.
•Equipped with a pair of Haidingers Brush, 20 pairs of pictures with different angle.
•Advanced semi-transparent and semi-reflecting viewfinder is convenient for the oculists to observe.
•Advanced LED luminophor with even light, low thermal and long span.
•The pictures adopt new design and are anti-broken, long span.
•Manual or automatical coruscation at doctor's option and accurate frequency.

### SPECIFICATIONS

Magnification.............................................................................................................1.65X
Diameter of visual field.................................................................................................≥56mm
Red  light  wavelength...............................................................................................λ=640nm
Left and right tubes around erect axis...........................................................Concourse 50°, radiation 40°
Left and right tubes around horizontal axis..........................................................................±30°
Pictures of left and right can be moved up and down according axis............................................±10Δ
Pictures of left and right can be moved up and down around optical axis........................................±20°
Adjustable range of pupil distance..............................................................................45~75mm
Darkroom illumination............................................................LED luminophor with symmetry design
Adjustable haidingers brush......................................................................50~100 round/minute
Coruscation form........................................................................................manual or automatic
Automatical  coruscation  frequency......................................................ten-step, 30-300times/minute
Range of automatic coruscation(each cycle)......................................1/4 on 3/4 off, 1/2 on 1/2 off, 3/4 on 1/4 off
Type of automatic coruscation.............................One on and the other off. One on or off while the other can be turned on or off
The left and right can be turned on or off at the same time.
The left and right can be turned on or off alternatively.

Whole packing volume....................................................................................................0.256CBM
Carton  number.........................................................................................................................1
G/weight................................................................................................................................40kgs

FDA

## S390L  DIGITAL SLIT LAMP

Built-in Digital Image System with professional photo and video

### FEATURES

•The design was inspired from the shape of firefly. The smart design largely saves space for clinicians compared other bulky camera system
•We have preset many camera parameters so the user does not need to adjust settings before using the device. The user can operate the machine immediately once the installation has been finished.
•The device has the following automatic functions for photo shooting and processing when equipped with our software: Auto Focus(During setup), Auto Exposure, Auto Gain, Auto White Balance, Auto OS/DS Indicator

Quick Capture Button          Fewer Cables with Extra USB port
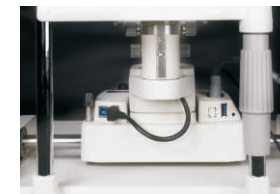
### SPECIFICATIONS

#### Microscope

Microscope type..............................................Galilean Type
Magnification change....................Five position revolving drum
Eyepieces......................................................................12.5X
Angle between eyepieces......................................................13°
Total magnification(Field of view)....40X (5.5mm), 25X (8.5mm), 16X (13.5mm), 10X (22mm), 6X (34.7mm)
Pupillary adjustment............................................52mm~78mm
Diopter adjustment...................................................................±6D

#### Slit Illumination

Slit width.........................Continuously variable from 0 to 14mm (slit becomes a circle at 14mm)
Slit length..................Continuously variable from 1mm to 14mm
Aperture diameters...................Ø14mm,Ø10mm,Ø5mm,Ø3mm, Ø2mm,Ø1mm, Ø0.2mm
Slit angle....................................................................0°~180°
Slit inclination.....................................4 steps: 5°, 10°, 15°, 20°
Filters.......................heat-absorbing, ND, Red-free, cobalt blue
Lamp...............................................................3V LED Module
Intensity of illumination...............................................≥60KLX

#### Power

Input voltage.................................100-240V,50Hz/60Hz ±10%
Power consumption.........................................................10VA
Back ground illumination..............................................LED 6V
Fixation light................................................................LED 3V

#### Capture system

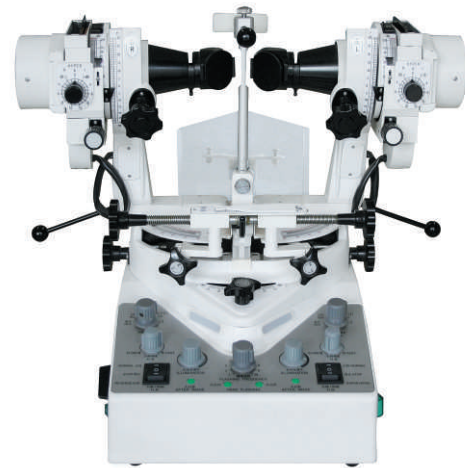Built-in image sensor........................................5 mega pixels
Photo resolution............................................2592X1944 pixel
Video resolution.........................................1280X960, 25fps
Focus mode.........................................................Auto Focus
Exposure Mode.................Automatic exposure, Automatic gain
Transmission interface.........USB 2.0 High-speed 480Mbps port

Digital capture module with beam splitter

Adjustable Aperture

CE  FDA

### Software Features

Our software is the image management system to help clinicians management patient records and images capture by Firefly. By showing patients the anterior segment images and pointing out pathologies, clinicians can educate patients and gain their trust.

### Convenient Patient Management

The patient management system enable clinicians to build and edit patient record, search information by inputting key words. Clinicians can easily record symptoms and manage the data all the time. The software supports DICOM which makes the images captured by Firefly be easily integrated into hospital's medical system

### Functional Image Analysis

Clinicians can measure the pathology area with our powerful software tools and change the contrast and brightness of the images. Clinicians can also compare several images at one time to analyze the symptoms and pathology.

### Orthokeratology Lens Fitting Assistance

The optometrists can capture and record high resolution fluorescein images of lens fitting and real-time video without a recording time limit. By comparing the different lens fitting effects, the photos optometrists can show and educate patients which lens is most suitable for them.

### Customized Auto Exposure Value Setting

Clinicians can customize auto exposure values according to the image demand and save as templates for future capturing purpose. Also, the printing report can be customized according to clinician's need

B

B

## YZ-5F1  SLIT LAMP

5 STEPS

### FEATURES

The optical lens is made of glass which imported from Germany.
All the lens are multi-coated, mildew-proof and anti-reflection.
All the adaptors are universal.

### SPECIFICATIONS

Type....................................................................Galilean type drum
Magnification.......................................Five-step drum magnifications
Eye piece.......................................................................................12.5X
Total Magnification..............6X(Φ33mm),10X(Φ22.5mm),16X(Φ14mm),
 (Diameter of Visual Field)               25X(Φ8.8mm),40X(Φ5.5mm)
Diopter Adjustment................................................................-5D~+3D
Slit Height....................................1mm~8mm continuously adjustable
Slit Width....................................0mm~9mm continuously adjustable
Light Spot Diameter...........................Φ9,Φ8,Φ5,Φ3,Φ2,Φ1,Φ0.2(mm)
Slit Angle..........................................................................0~180°
Slit Inclination.................................................5°,10°,15°,20°
Filter.................................heat absorption, grey, redfree, cobalt blue
Input Voltage.....................................................110V/220V, 60/50Hz
Input Power.....................................................................................58W
Illumination Bulb.............................................12V 30W halogen bulb
Fixation Bulb.........................................................................(red) LED
Whole Packing Volume.......................................................0.18CBM
G/Weight.................................................................................25kgs

**POWER BOX**

CE  FDA

## YZ-5J  SLIT LAMP

2 STEPS

### FEATURES

The optical lens is made of glass which imported from Germany.
All the lens are multi-coated, mildew-proof and anti-reflection.
Two step magnifications, 10X, 16X for choice.

### SPECIFICATIONS

Microscope Type...........................................Converging stereoscope
Magnification................................................two-step magnifications
Eye piece.......................................................................................10X
Total Magnification and field of View(mm)...........10X(Φ18),16X(Φ14,5)
Range of Pupil Distance(mm)...................................................55~82
Adjustment of Diopter...............................................................±6D
Slit Width(mm)............................................................0~9 adjustable
Slit Height(mm).........................................................1~8 adjustable
Slit Angle..........................................................................0~180°
Light Spot Diameter (mm)...................Φ9,Φ8,Φ5,Φ3,Φ2,Φ1,Φ0.2(mm)
Filter.................................heat absorption, grey, redfree, cobalt blue
Illumination Bulb...........................................12V/30W halogen bulb
Input Voltage/frequency...........................AC220V ± 10%/50Hz ± 1Hz,
                                                                    AC110V ± 10%/60Hz ± 1Hz,
Input Power.....................................................................................58W
Electrical Safety Standard..................................Conform to Standard
                                                                    IEC 601-1.Class 1 Type B
Whole Packing Volume.......................................................0.18CBM
G/Weight.................................................................................24kgs

**POWER BOX**

CE  FDA

## YZ-5S  DIGITAL SLIT LAMP

### FEATURES

It has built-in beam splitter and digital camera adaptor.
The digital camera should be CANON DSLR.
It covers all the functions and characteristics of YZ-5F1 with
big light spot.
It has background illumination system.
Photos can be taken by the button on the joystick.

### OPTIONAL ACCESSORIES

R style or T style tonometer
Measurable ocular
Trihedron lens
Anterior chamber angle lens (single side lens or four sides lens)
Eyeground contact lens
Aspheric surface lens.

### CAMERA RECOMMENDED SETTING

STEP 1) Turn the <Mode dial> to <M>.
STEP 2) Set the shutter speed 1/10 to 1/30 sec
STEP 3) Image-recording quality select <M>.
STEP 4) ISO setting: select ISO speed "ISO 800" at least
STEP 5) White Balance: select "Tungsten"

The camera should be Canon DSLR camera
(EOS digital) like EOS700D/750D/800D

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## YZ-5T  ANALYZE DIGITAL SLIT LAMP

This image processing system is not only a working platform for
ophthalmic diagnosis, but also a case database.
It can easily capture digital photos of the cornea, sclera, anterior
chamber, iris, lens, retina and set up patients files and effectively
manage them

### FEATURES

•What doctors see from eyepieces is showed synchronously on
   camera display screen, which is very convenient for the doctors
   to capture the best and clearest pictures.

•Photos taken by the 17.9 megapixel camera.

• Background illumination specifically designed for darkroom
   environment.

• Fine photos immediately taken by the button on joystick.

• Used for establishing the full data of patients, processing images,
   measuring the length, area and so on.

• Famous for its excellent optics.

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**YZ-5T = YZ-5S + software**

B

B

## YZ-5X1    SLIT LAMP

## YZ-5X    SLIT LAMP

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### SPECIFICATIONS
**Microscope**

| Item no. | YZ-5X1 | YZ-5X |
|---|---|---|
| Type | Galileo magnification changer with converging | Converging steroscope |
| Model of magnifying | 5 steps by drum rotation | Two-step magnifications |
| Eyepiece | 12.5 X | 10 X |
| Total magnification rate (Field-of-view) | 6X(Φ33mm), 10X(Φ22.5mm), 16X(Φ14mm), 25X(Φ8.8mm), 40X(Φ5.5mm) | 10X(Φ18mm), 16X(Φ14.5mm) |
| Range of P.D. Adjustment | 55mm to 75mm | 55mm to 82mm |
| Diopter adjustment | -5D to +3D | ±6D |

**For both YZ-5X1 & YZ-5X:**

**Illumination**
Slit projection magnification....................................1.16X
Slit width...........................continuous from 0mm to 14mm
(become a circle at 14mm)
Slit height..........................continuous from 1mm to 14mm
Aperture diameter.................14mm, 9mm, 5.5mm, 0.3mm
Slit angle..............0° to 180° continuously adjustable from
vertical to horizontal
Filter piece........................Heat-absorbing, red-free, blue
Illumination bulb..............................6V 20W halogen bulb

**Dimension and weight**
Packing box............................720mm X 495mm X 480mm
Total weight..........................................................23kgs
Net weight.............................................................17kgs

**Chin-rest parts**
Vertical movement...............................................................80mm
Fixation target....................................................................Red LED

**Movement base**
Fore and back movement....................................................90mm
Left and right movement.....................................................100mm
Fine movement...................................................................15mm
Vertical movement..............................................................30mm

**Power source**
Input voltage..................................................AC110V/220V±10%
Input frequency.................................................................50/60Hz
Input power........................................................................30VA
Output voltage...........Illumination bulb 4V, 5V, 6V/Fixation target 6V
Electric safe standard......................Conform to Standard IEC601-1,
Class I Type B

## HSL-01    HAND-HELD DIGITAL SLIT LAMP

•First portable digital slit lamp
•High definition and stable image
•Auto focus
•3.97 inch touch screen

It's a portable medical camera for anterior segment imaging, diagnosis and especially for anterior disease screening.
It's compact, easy to obtain high definition images.
It can be conveniently applied to rapid screening, out diagnosis, bedside diagnosis and remote medical treatment, etc.

### FEATURES
•Images real-time display, 10 times magnification
•High definition imaging
•Internal capacity 16GB
•USB and WiFi connection
•Low weight 850g, movable and portable
•Rechargeable battery provides up to more than 4 hours of continuous operation
•3.97 inch TFT-LCD touch screen

CE  FDA

### SPECIFICATIONS
Magnification...............................................................................10X
Working distance.................................................................... 80mm
Refractive compensation.....................................................-7D ~ +7D
Slit width .........................................0~12mm continuously adjustable
Aperture diameter.......................................0.2mm, 1mm, 5mm, 12mm
Filter.............................. Heat-absorption, Grey, Red-free, Cobalt blue
Light source......................................................................White LED
Image resolution.........................................................................16MP
Focus Mode...............................................................................Auto
Screen..........................................................3.97 inch touch screen
Storage..........................................................Internal capacity 16GB
Power supply.......................................Lithium Battery 3.7V 3400mAh
Interface...............................................................USB/WIFI/BT/4G
N. Weight..................................................................................850g
Size......................................................................140x118x225mm
Packing size...............................................................36x28x26cm

**B**

**B**

## KJ-5S1    HANDHELD SLIT LAMP

### SPECIFICATIONS

Microscope type......................Binocular Crossed Stereoscope
Eyepiece...............................................................10X, 16X
Objective Magnification.......................................................1X
Diameter of Light Spot.......................1mm, 3mm, 5mm, 10mm
Pupil Distance................................................48mm to 70mm
Adjustable Diopter...................................................-7D to +7D
Working Distance........................................................80mm
Slit width....................................................0~10mm adjustable
Slit height..................................................1~10mm adjustable
Slit Angle.........................................................horizontal± 30°
Filter....................Heat-absorption, Grey, Redfree, Cobalt blue
Illumination Bulb....................................................white LED
Power.............................7.2V, Lithium Battery, Rechargeable
Working Time.............................................................5-6 hours
Packing volume.................................................40x20x23cm
Net weight.........................................................................750g
Gross weight...............................................................2600g

### Standard Configuration
Carrying case(1pc) , Battery(2pc), Battery Charger(1pc),
Forehead support(1pc), Diopter adjustment bar(1pc),
16x Eyepiece (1pair), 10x Eyepiece (1pair)

**Optional**
Camera Adaptor
Smartphone Adaptor

CE

## YZ-30    APPLANATION TONOMETER

### SPECIFICATIONS

Measurement  Range.............................................0~10.64Kpa
Light Ring Displacement.................................1.53X2=3.06mm
Diameter of the testing head.............................................7mm
Average Error .................................................................±70pa
Type........................................................................R type/T type

Three Prism Head **B2101** as standard accessory

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Applantion Tonometer(R type)
For YZ-5F1,YZ-5J, YZ-5S

Applantion Tonometer(T type)
For YZ-5F1,YZ-5J,YZ-5S

## ACCESSORIES OF SLIT LAMP

OPTIONAL for YZ serise slit lamp

### BEAM SPLITTER & ADAPTOR

**B1131**
Beam Splitter(90° type)
for digital camera

**B1133**
C-mount Adapter suitable for
CANON EOS series EF mount

Assemblied combination

**B1346**
Adaptor for
teaching tube

**B1136**
Teaching Tube

**B1132**
Beam Splitter(180° type)
for video

**B1134**   1/2" CCD Adapter
**B1135**   1/3" CCD Adapter

Assemblied combination

**B1124**
Diffusion Lens

**B1125**
Hruby Lens
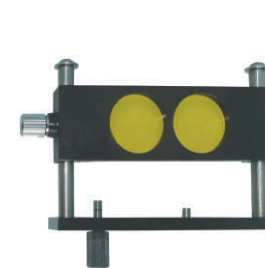
**B1122**
Yellow Filter

**B1123**
Measuring Eyepiece
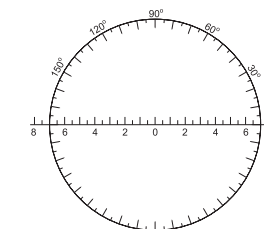
### Goldmann lens

**B1126**
Eyeground
contact lens

**B1127**
Anterior chamber angle
lens-single side lens

**B1128**
Trihedron lens/3 mirror lens
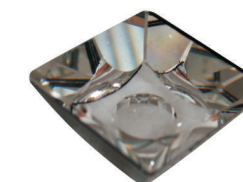
**B1129**
Anterior chamber angle
lens-four side lens

## MP-500 PHOROPTOR

SUPER SMOOTH HANDFEELING

**FEATURES**

•All the lens are anti-reflection coated.
•All Cross-Cylinder lens are Manus lens.
•Fingertip adjustment for sphere power control.
•Measuring astigmatism
•Cross cylinder (±0.25D)
•Rotary prism
•Unique new convergence system mechanism
•Wide range of auxiliary lens combinations
•Precision machined to finest tolerances
•Net weight: 5kgs
•Dimension: 318 X 315 X 90mm

**AUXILIARY LENS**

| Right eye | Left eye |
|---|---|
| O (Open aperture) OC (Occluder) ±.50 (Fixed cross cylinder) | |
| 6Δ U (6 prism diopter base up) | 10Δ I (10 prism diopter base in) |
| PH (Pinhole) +.12 (+0.12D sphere lens) | |
| RL (Red filter) RMH (Red maddox rod, horizontal) RMV (Red maddox rod, vertical) | GL (Green filter) WMH (White maddox rod, horizontal) WMV (White maddox rod, vertical) |
| P45° (Polarizing filter, axis 45°) P135° (Polarizing filter, axis 135°) R (Retinoscopic lens. +2.00D, for 50cm) | |

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Cylinder mark: 15° scale is optional

**SPECIFICATION**

Sphere powers range.................................................................................+16.75D to -19.00D, with minimum reading 0.25D or 0.12D
(when +0.12D auxiliary lens or optional±0.12D lens is in use)
+26.75D to -29.00D (when optional±10.00D lens is in use)
Cylinder powers range.......................................................0 to -6.00D, with mini reading 0.25D or 0.12D(when auxiliary lens is in use
0 to -8.00D (when -2.00D auxiliary lens is in use)
Astigmatic axis scale..............................................................................................................................0 to 180° in 5° steps
Cross cylinder...................................................................................................................±0.25D, reversal type, ±0.50D optional
Rotary prism..................................................................................................................................0 to 20Δ D in 1Δ D step
Interpupillary adjustment..............................................................48mm to 80mm in 1mm step (right and left synchronized)
Forehead rest adjustment..................................................................................................16mm backward and forward
Convergence....................................The optical axes of the lenses are aligned at a distance of 400mm from the vertexes of the corneas
(2mm each for right and left inward) Interpupillary distance enabling convergence = 57mm to 80mm
Corneal distance device................................................................2mm forward and 5mm backward from standard plane; with scale
Effective field of view.........................................................................................................................................19mm

Black color is optional

| | |
|---|---|
| 1. Locking knob | 15. Cylinder lens axis scale |
| 2. Clamp bracket | 16. Sphere power rapid feed dial |
| 3. Leveling knob | 17. Auxiliary lens control knob |
| 4. Interpupillary adjustment knob | 18. Auxiliary lens symbols |
| 5. Convergence lever | 19. Astigmatism scale |
| 6. Level | 20. Cylinder lens axis index |
| 7. Interpupillary scale | 21. Cylinder lens axis scale |
| 8. Forehead rest adjusting knob | 22. Accessory lens pinhole |
| 9. Sphere power control ring | 23. Near point scale receiver |
| 10. Cross cylinder | 24. Cross cylinder rotating knob |
| 11. Sphere power reading window | 25. Rotary prism knob |
| 12. Rotary prism | 26. Astigmatic axis index |
| 13. Cylinder lens axis control ring | 27. Auxiliary lens mark |
| 14. Cylinder lens power control knob | 28. Rotate tighten knob |

**ACCESSORIES:**

Near Point Holder

Rotating Near Point Chart

Near Point Rod

Auxiliary Lenses(-0.12C/-2.00C)

Face shield

Rotating Near Point Set

## MP-650  PHOROPTOR

### FEATURES

•It's a new generation of phoroptor reference the foreign similar produce.
•This equipment use the comprehensive centralized operation and large dial.
•Improve the operating performance.
•The cross cylinder is auto connecting with the cylinder lens coordinate.
•Build-in astigmatic lens and axis knob are synchronism linkage.
•Settle the axis and astigmatic examine at one go.
•Build-in various auxiliary lens. Overall check the ophthalmic function.

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C
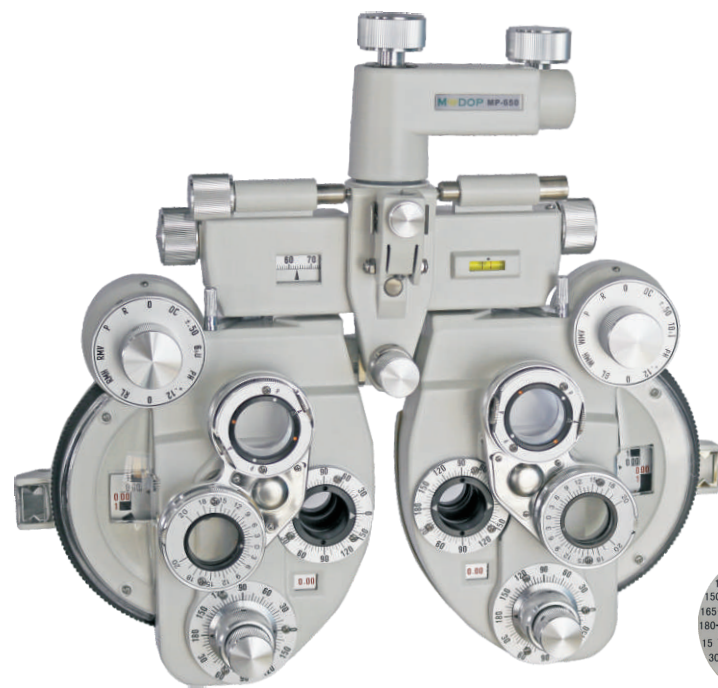
**Black color is optional**

Cylinder mark: 15° scale is optional

### SPECIFICATIONS

Sphere powers range…………………………………………………………..……… +16.75D to -19.00D, with minimum reading 0.25D or 0.12D
( When +0.12D auxiliary lens or optional +/-0.12D lens is is in use)
+ 26.75D to -29.00D(When optional +/-10.00D lens is is in use)
Cylinder powers range ……………………………………………….……0.00D to -6.00D, Step:0.25D or 0.50D（Whenlens auxiliary is is in use)
0 t o -8.00D (when -2.00D auxiliary lens is in use)
Astigmatic axis scale……………………………………………………………………………………………….………………0° to 180°, Step:5°
Cross cylinder……………………………………………………………………………………………….…………+/-0.25D or+/-0.50D optional
Rotary prism……………………………………………………………………………………………….…………………0 to 20△D in 1△D
Interpupillary adjustment…………………………………………………………48mm to 75mm in 1mm step (right and left synchronized)
Forehead rest adjustment……………………………………………………………………………….…………………16mm backward and forward
Convergence…………………………………The optical axes of the lenses are aligned at a distance of 400mm from the vertexes of the corneas
( 2mm each for right and left inward) Interpupillary distance enabling convergence=51mm to 80mm
Corneal distance device……………………………………………………………………………………2mm forward and 5mm backward from standard plane
Effective field of view………………………………………………………………………………………………………………………………19mm

## PA-5  PHOROPTOR ARM

WALL MOUNT TYPE

### SPECIFICATION

Up/Down angle of arm: ±30°
Rotate angle of arm: 180°
Max weight on arm: 10kgs
Max weight on projector stand: 12kgs

1. Adjust screw
2. Projector stand
3. Lock screw
4. Arm lock wrench
5. The place for phoroptor
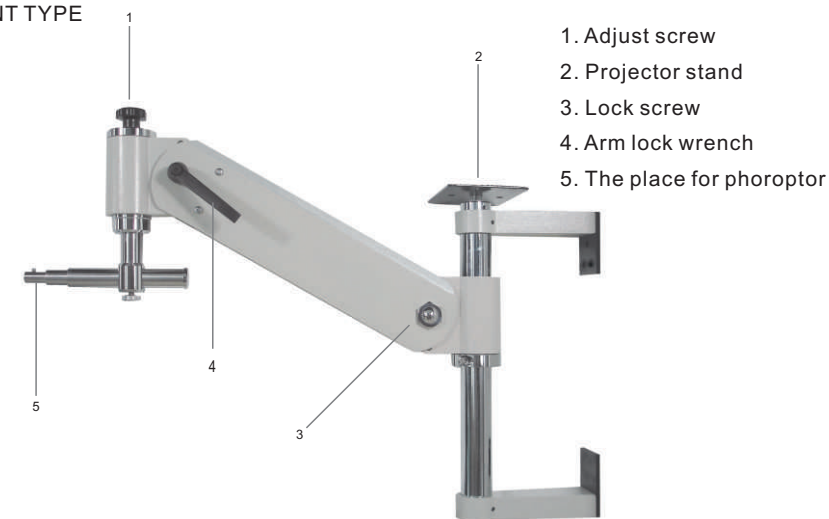
## PTA-5  PHOROPTOR ARM

TABLE STAND TYPE

### FEATURES

Simple and easy to assemble.

### SPECIFICATION

Base………………………………………………………………42 X 28cm
Height……………………………………………………………………75cm
Light………………………………………………………………white LED
Net weight…………………………………………………………8.5kgs

## FA-6  PHOROPTOR ARM

FLOOR STAND TYPE

### FEATURES & SPECIFICATIONS

Up/Down angle of arm: ±30º
Rotate angle of arm: ±32.5º
Input voltage: 110V/220V AC60Hz/50Hz
Light luminaire: 36W
Working temperature: -30°C~+50°C
Relative humidity: less than 90%

### INSTALLATION DIMENSION

Size: 600(L)X745(W)X2063(H)mm
Weight of base: 30kgs
Total weight: 60kgs

C

## CV-7200  AUTOMATIC PHOROPTOR

COMPUTERIZED

### FEATURES

7.0-inch color LCD touch screen
Stylish and compact design
Auto detachment printer
Independent PD adjustment
Built-in LED for near vision illumination
Data transmission with auto refractometer and auto projector

### SPECIFICATIONS

Sphere..............-19.00~+16.75D (0.25D/0.5D/1.00D/3.00D steps)
Cylinder .........................................-6.00D~+6.00D  0.25D steps
Axis angle......................................................0~180°(1°/5°steps)
Pupil Distance...........................................Distant range 52~80mm
Close range 48~76mm  0.5/1mm steps
Rotary Prism.........................................0~20Δ 0.1/0.5/1.0Δ steps
Cross Cylinder Lens.........................................................±0.25D
Retinoscope...................................+1.5D(67cm),+2.00D(50cm)

Auxiliary Lens.......................................PH,Binoculus(Ø=1.0mm)
RMV, RMH
RL(Right eye), GL(Left eye)
Polaroid (Right eye 135°/145°,Left eye 45°/135°)
Prism (Right 3ΔBU, 6ΔBU),(Left 3ΔBD, 10ΔBI)
Cross Cylinder Lens (±0.5D Axis=90°)
PD Lens

Phoropter Size............................365mm x 280mm x 110mm  3.8kg
Keyboard Size............................230mm x 195mm x 190mm  1.2kg
Power Box Size...........................236mm x 126mm x 115mm  2.1kg
Power Supply.......................AC220V 50Hz or AC110V 60Hz, 90W

**STANDARD LAYOUT: Automatic phoroptor & Junction Box and Control keyboard**

control keyboard & printer

Automatic phoroptor          Junction box          Control keyboard

### NETWORK POSSIBLILITY

Auto refractometer RM-9000
Vision chart CM-1900C
Auto Chart projector ACP-1500A ACP-1500B
Junction box
Automatic phoroptor CV-7200
Control keyboard
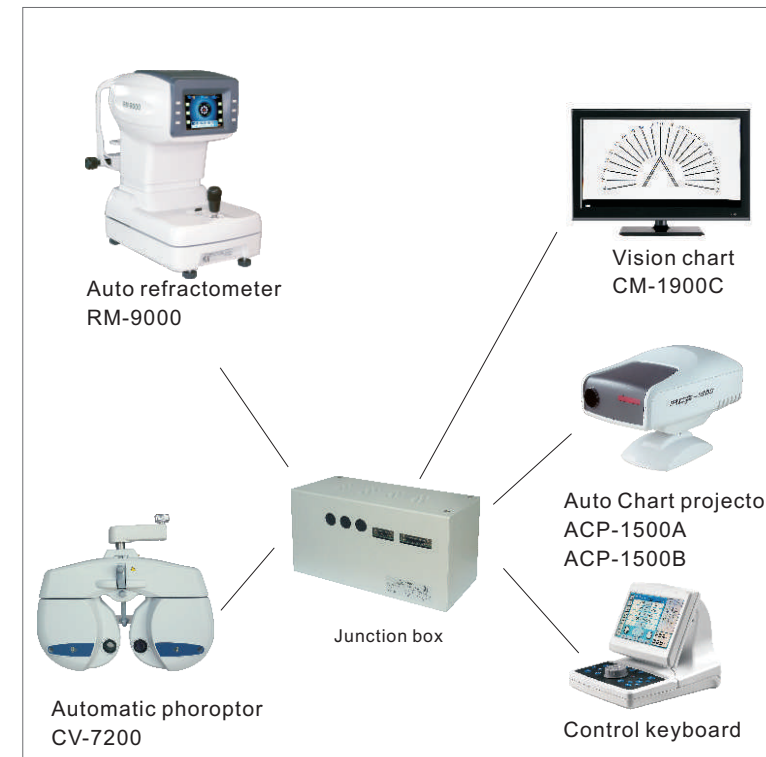
With the data output cable, the auto refractometer
RM-9000 can be connected with the following
machines by the junction box to form a network.
**Automatic phoroptor CV-7200**
**Keyboard of CV-7200**
**Vision chart CM-1900C**
**Auto chart projector ACP-1500A/ACP-1500B**

The measured results from the auto refractometer
RM-9000 can be sent to the junction box, and the
shared data will show on the screen of the keyboard.
These data can be used easily for further examination.
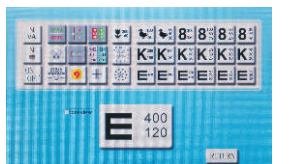
Decimal type          Snellen type

## ACP-1500  AUTO CHART PROJECTOR

white LED lamp

### SPECIFICATIONS

Projection distance..............................................1.5~7 meter
Projection magnification.......................................30X(at 5m)
Projection size........................................330x270mm(at 5m)
Chart switching speed..........................................0.01~0.02S
Mask number...............1 open,5 horizontal lines,8 vertical lines,
21 single letters,1 red/green
Program.........................................................2 sets programs,
each program contains up to 30 steps
LED Lamp................................................................12V,10W
Power source...............................AC 220V,50Hz or 110V,60Hz
Power consumption...........................................................80W
Dimensions....................................320mmX218mmX240mm
Net weight.................................................................7.2kgs

**A chart  ACP-1500A**

**B chart  ACP-1500B**

## C901   LED VISION CHART   17"

### VECTORGRAPH DESIGN

### FEATURES

• **Including sufficient test charts**
  5 standard optotypes (can be changed randomly), 13 special
  test charts, 7 different masks for optoytpes
• **Clear and sharp screen display**
  Use vectorgraph, the brightness reaches 160cd/m²(min).
• **Faster operating speed**
  Improved IC technique makes optotypes random changing much
  faster. Auto memory design helps to change optotype in no delay.
• **Easy to upgrade**
  The newest program can be upgraded easily, and also the video
  in the USB disk can be played.
• **Small size, ultra-thin design**

Ultra-thin design

### NEW IMPROVEMENT

• New CNT test, which is more scientific, effective, and directive.
  CNT curve will be formed and displayed on the screen when
  the test is finished.
• Better users experience. All tests icons are listed on home interface.
• Quick test list. Pick ten or less frequently used tests to establish
  your own quick test list.
• V style opotype arrangement. Avoid opothotypes congested on the screen.
• Excellent programming give full play to the features of CPU.
•

Some typical charts

New Remote

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| Tumbling E | Landolt C | Alphabte | Number | Allen Picture | Single Mask | Vertical Mask | Horizontal Mask | Red/Green Mask |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |

| Black/White Background | Contrast Sensitivity | ETDRS | V-Type | Contrast Test | Ishihara | Astigmatic Fan Dial | Cross Cylinder | Cross Grid |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |

| Fixation Spot Test | R/G Panel | Worth Four-Dot Test | R/G Balance | Vertical Coincidence | Horizontal Coincidence | Stereo | Stereo | Schober |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |

| Traffic Light | Full(HD) Video | Eye Education | Mirror Test |
| --- | --- | --- | --- |

### SPECIFICATIONS OF VISION CHART

LED moniter….…..17-inch XGA Panel, 1280x1024 pixels, 200CD/m²
Optotype……E(Tumbling), C(Landolt),Alphabet, Numbers, Children
Visual unit…………..Decimal(0.04~2.0), Snellen(ft, 20/20)(500~10),
                Snellen (M, 6/6)(150~3), LogMAR(-0.3~1.4),
                                        5-Grade(3.6~5.3)
Distance……………………………………….2M~7M (in steps of 0.1m)
                            6ft~24ft(in steps of 0.5ft)
Low vision……………………………………0.4M~1.5M(in steps of 0.1m)
Mask type………………Single mask, Horizontal mask, Vertical mask,
                Red/Green mask, White/Black mask,
                Contrast adjustment, Red/Green adjustment
Special test masks…………………….Ishihara Test, Cross cylinder,
                        Astigmatism Test, Cross Grid,
                    Fixation point Test, Red/Green Panel,
                        Worth Test, Red/Green Balance,
                        Traffic light, Coincidence Test,
                        Stereo Test, Schober Test, ETDRS
Other functions…..Contrast Test function, Contrast Sensitivity Test,
                Ramdomization Optotypes Playing function,
                        Real time R/G setting function,
                    Video playing function, Mirror function,
                    Screen-saver function, standby function

### SPECIFICATIONS PARAMETER

Input power…………………………100~240V AC +/-10%, 50/60Hz
Output power……………………………………………………12V DC
Power consumption……………………………………20 Watt(max)
Remote controller………………………..IR remot, 2xAAA batteries
Packing dimension…………540 mm X420 mm X250mm (L/W/H)
Net Weight……………………………………………………….3.6kgs
Gross Weight……………………………………………………….6kgs

### Standard Accessories

**Red/Green Filter**
**(Use it to do Stereo test)**

**Optotype Cards**           **Wall Mount Bracket**

### SETTING PANEL

| Language | English |
| --- | --- |
| Red | 80 |
| Green | 80 |
| Visus Unit | Snellen(ft) |
| Dist Unit | Feet |
| Distance | 18.0 |
| LV Distance | 1.0 |
| DPI | 96 |
| Image Scale | 1.0 |
| Gamma | 0.61 |
| Font Size | 48 |
| Beep Volume | 2 |
| Mirror | Off |
| password | Off |
| Screen Saver | Image |
| Screen Saver Time | 10 |
|  | Set password |
|  | Save |
|  | Cancel |
| Firmware | Upgrade |

Firmware:   20160826

### SPECIAL NEW FUNCTIONS

1) ETDRS (More optotypes added)
   The test (optotypes) include E(Tumbling), C(Landolt),
   Alphabet, Numbers and Children.
2) Low vision chart
   Enter the ETDRS chart and use the up arrow key to do low
   vision test. The standard test distance of low vision is from
   0.6m to 1.5m in step of 0.1m.
3) Optotype card
   With the optotype card, it's convenient to help the person
   who can not speak to do the examination.

### Optional Accessories

**Table stand**

D

D

## ACP-100    MIRROR CHART

### SPECIFICATIONS

Charts...........................................................32 Visual targets
Selection Speed...........................................Average 0.45 sec
Projection distance...............................................1.1m
Auto-off function....................................................5 minutes
Lamp.....................................................................12V/35W
Power source.................Main body: AC110V/AC220V 50/60Hz
                                    Remote control:DC9V
Power consumption........................................................50VA
Dimensions...............................Main body: 400X280X560mm
                                    Remote control:248X70X18mm
Net weight.................................................Main body: 20kgs
                                    Remote control: 0.22kg

**optional accessory**

Mini Stand
for Mirror chart

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D
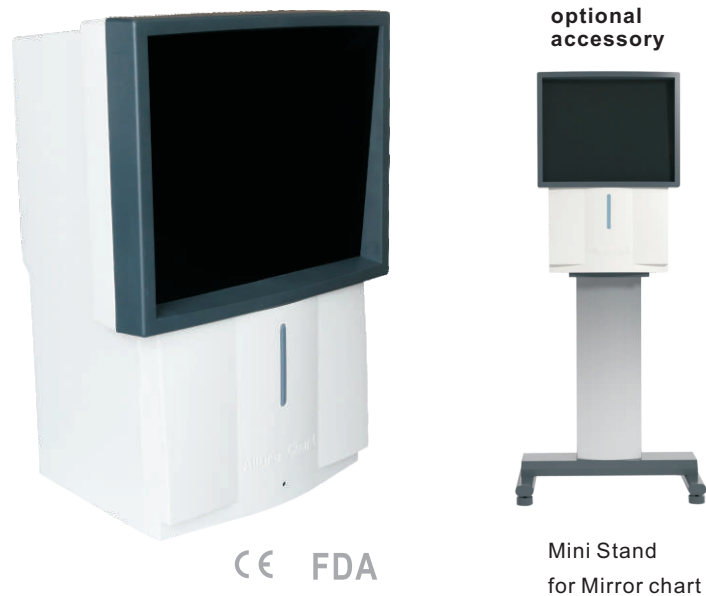
## NV-100    NEAR VISION TESTER

### FEATURES

**The refractive tests include:**
•Measurement of visual acuity using Snellen letter and illiterate
 E-chart,and Times Roman reading types.
•Accurate determination of presbyopic additions and other near
 corrections.
•Near vision astigmatism tests.
•Amplitude of accommodation including monocular measurements
 under binocular conditions.

**The Binocular balance tests include:**
•Fixation disparity test for uncompensated heterophoria motor
 eye dominance. Accommodation-convergence relationship.
•Quantitative evaluation of foveal suppression in heterophoria
 patients.
•Near point of convergence.
•Targets for subjective cover tests for heterophoria and harmonious
 ARC.

The NV-100 near vision tester enable a complete refractive and
binocular vision investigation to be carried out with the head and
eyes in their normal posture at any working distance.
It's in English. But French and Dutch version are also available.

### SPECIFICATIONS

Test Distance................................................................36cm
Distant Control..............................................................60cm
Size..............................................220(H)×210(W)×42(D)mm
Weight.........................................................................780g
Power Supply.................................................LR6 AA/1.5V×3

CE FDA

Include remote
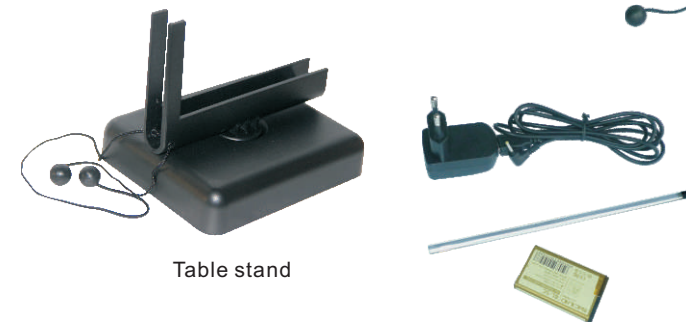& polarized lens

## NEAR VISUAL ACUITY CHART

**LED lamp**

### FEATURES

•Double side display(2 charts). Amsler grid is the standard chart
 for the other side.
•1100mAh rechargeable Li-ion battery offer longer working hour.
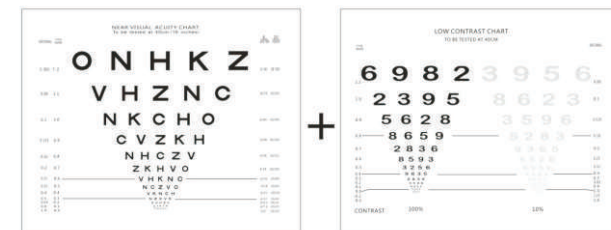•The angle of the base can be adjusted.

### SPECIFICATIONS

Test distance.....................................................30cm to 40cm
Dimension.....................................................196X145X10mm
Power supply...............AC adaptor, rechargeable Li-ion battery

### STANDARD ACCESSORIES:

Table stand

**Vertical chart**          **Lateral chart**

NV-145

NV-195

CE FDA

AMSLER GRID
back side of NV195
and NV 145

More chats of near vision chart

Letter chart          Low contrast

NV-194
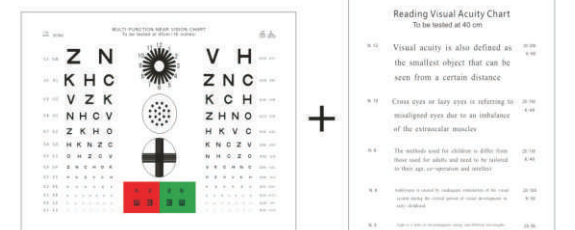
Letter and function chart          Reading chart

NV-134

E chart          E and function chart

NV-191

D

**DW**     TRIAL LENS SET
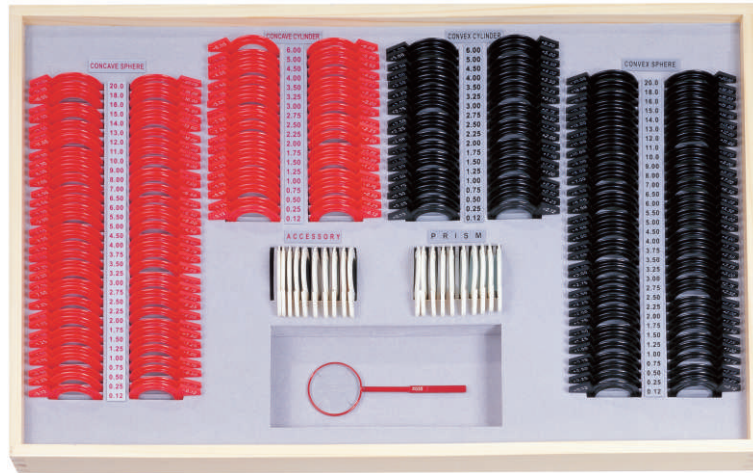


CE FDA

**DW158P**............158 pcs, Colored Plastic Rims
**DW232P**............232 pcs, Colored Plastic Rims
**DW260P**............260 pcs, Colored Plastic Rims
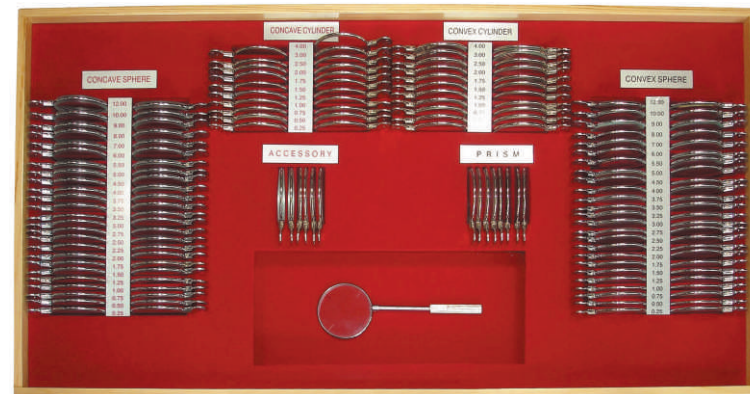


CE FDA

**DW158M**............158 pcs, Shiny Metal Rims
**DW232M**............232 pcs, Shiny Metal Rims
**DW260M**............260 pcs, Shiny Metal Rims



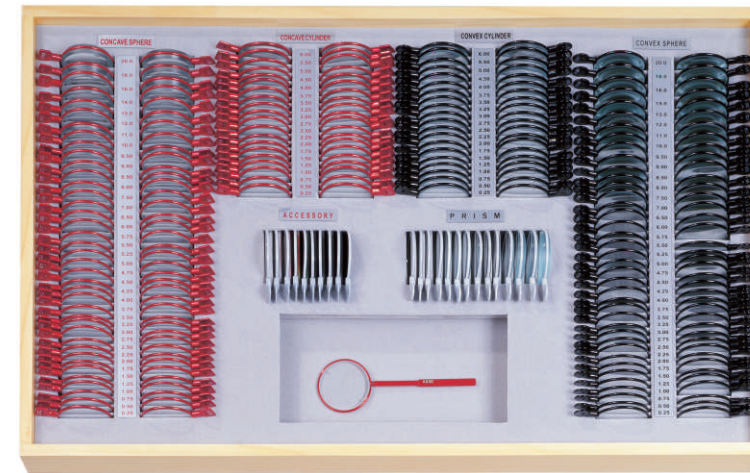CE FDA

**DW158AL**............158 pcs, Colored Aluminum Rims
**DW232AL**............232 pcs, Colored Aluminum Rims



CE FDA

**DW158PN**............158 pcs, Colored Plastic Rims
**DW232PN**............232 pcs, Colored Plastic Rims
**DW260PN**............260 pcs, Colored Plastic Rims

**DW**     TRIAL LENS SET



CE FDA

**DW158MC**............158 pcs, Colored Metal Rims
**DW232MC**............232 pcs, Colored Metal Rims
**DW260MC**............260 pcs, Colored Metal Rims



**ALUMINUM-ABS CASE**



**ALUMINUM-LEATHER CASE**
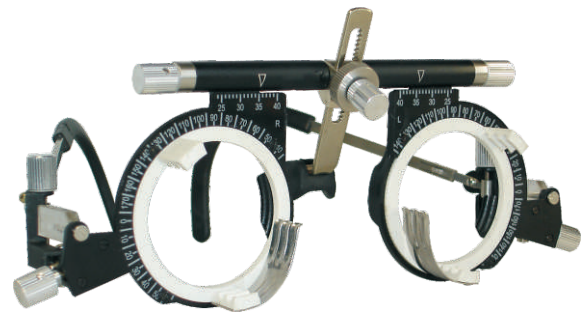
**WB-1106E**     PROGRESSIVE LENS SET

**SPECIFICATIONS**

1.Progressive lens:+1.00D~+3.50D in 0.25D steps(11pairs lens)
2.Corridor of Progressive lens: 12mm
3.hand lamp:1pc
4.Case: aluminum case



CE FDA
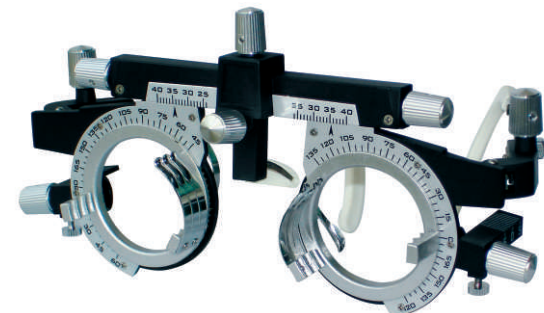
E

E

**TF-12**    TRIAL FRAME

PD Range: 48-80mm



CE FDA

**TF-10**    TRIAL FRAME

PD Range: 48-80mm



CE FDA

| TF-18 | TRIAL FRAME | PD Range: 48-60mm |
| TF-19 | TRIAL FRAME | PD Range: 54-70mm |

TITANIUM



CE FDA

**TF-13-48mm**    TRIAL FRAME FOR KIDS

FIXED PD

PD range: 48mm
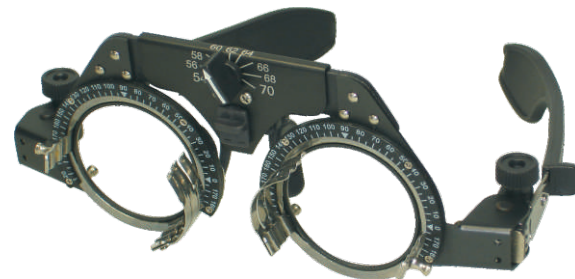


CE FDA

**TF-13-56mm**    TRIAL FRAME FOR KIDS

FIXED PD

PD range: 56mm



CE FDA

**TF-32**    TRIAL FRAME

FIXED PD



CE FDA

PD range: 50mm, 52mm, 54mm, 56mm, pink



PD range: 58mm, 60mm, 62mm, 64mm, blue



PD range: 66mm, 68mm, 70mm, 72mm, grey

Strong metal frame



**TC-1**    TRIAL CLIP



CE FDA



It has spring piece, hold the trial lens in.

## YZ-25B  INDIRECT OPHTHALMOSCOPE

WITH POWER CORD

### FEATURES

• Illumination adjust button is on the helmet, convenient for doctor
• Advanced optical design, no reflection, wide and clear visual field
• Super light, comfortable
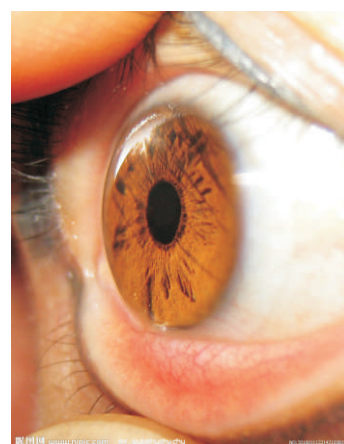• 20D aspheric lenses

### SPECIFICATIONS

Observation Angle..........................................................................45°±5°
Adjustable Pupil Distance................................................52mm~74mm
Adjustable Range of Head Bracket......Head Circumference: 530~630mm,
                                                        Depth: 85mm~125mm
Illumination Brightness..................................................................≥500lx
Illumination Source.........................................6V/10W, Halogen Bulb
Power.......................................................AC110V/60Hz; AC220V/50Hz
Dimension(mm).................................................142(L)X48(W)X128(H)
Weight of Main Body.........................................................................320g



1. Adjustable locking button and illumination control
   button ensure comfortable observation angles.
2. Filters and reflection mirror with building in dust-
   proof device ensure good observation.
3. Filter: Redfree, Cobalt Blue, Compensation
   Light Spot: big(60mm), middle(40mm), small
               (20mm, suitable for various pupils).
4. Teaching mirror, double-sided spectroscope
   ensure the synchronous observation.
5. Two types of smooth iris presser avoid damaging
   relevant issues.

**IRIS PRESSER**



CE  FDA

**ASPHERIC LENS:** 20D as standard accessory

## YZ-25C  INDIRECT OPHTHALMOSCOPE

CORDLESS WITH CHARGEABLE BATTERY

Advanced optical design avoids the glistening and provides the
broad field.

### FEATURES

• LED bulb(low-temperature, low-pressuer, high-brightness) with
  long lifetime to make the illumination uniformly and bright. The
  illumination brightness can be adjusted continuously.
• Imaging clearly, strong dimensional sense and large field of view
  range. The main body part of this device adopts engineering
  plastics and is designed to be compact and exquisite.
• Super light weight design, reduce fatigue, operation is very
  convenient.
• The portable power supply is suitable for surgery, ward round
  and consultation.
• This device is equipped with color filter, teaching mirror and sclera
  depressor to be more handy in operation.

### SPECIFICATIONS

Adjustable Pupil Distance..................................52mm~74mm
Headband..........................Head Circumference: 520~640mm
                                        Depth: 85mm~125mm
Illumination Brightness.............≥500lx, continuous adjustment
Light spots.................big(60mm), middle(40mm), small(20mm)
                                        suitable for various pupils
Illumination Source...................................................LED Bulb
Filter.......................................Red-free, white and cobalt blue
Power..........................................DC 7.4V, Li+ battery, 15VA
                                        AC100V~240V; 60Hz/50Hz, 50VA
Dimension(mm)....................................142(L)X48(W)X128(H)
Weight of Main Body........................................................230g



CE  FDA

## DM6D    RECHARGEABLE OPHTHALMOSCOPE

Complete with 3.5V coaxial ophthalmoscope and Desk charger

**SPECIFICATIONS**

Illumination source...............................................3.5V Halogen lamp
Diopter compensation.....0D, ±1D, ±2D, ±3D, ±4D, ±5D, ±6D, ±7D, ±8D,
      ±9D, ±10D, ±12D, ±15D, ±20D, -25D, +40D
6 standard apertures................cobalt blue filter, micro spot, small spot,
      large spot, slit, fixation aperture
2 standard filter................... red-free filter, cross-linear polarizing filter

CE    FDA

## SR24A    RECHARGEABLE STREAK RETINOSCOPE

Complete with 3.5V streak retinoscope and Desk charger

**FEATURES**

It's designed exclusively to determination of the refraction of the eye.
The streak retinoscope is found by most practitioners to be easy to use,
fast, accurate, and especially valuable in determining the axis of
astigmatism.

CE    FDA

## DR-1900    RECHARGEABLE DIAGNOSTIC SET

with Ophthalmoscope & Streak Retinoscope

**FEATURES & SPECIFICATIONS**

**Ophthalmoscope**
Illumination source...............................................3.5V Halogen lamp
Diopter compensation.....0D, ±1D, ±2D, ±3D, ±4D, ±5D, ±6D, ±7D, ±8D,
      ±9D, ±10D, ±12D, ±15D, ±20D, -25D, +40D
6 standard apertures................cobalt blue filter, micro spot, small spot,
      large spot, slit, fixation aperture
2 standard filter................... red-free filter, cross-linear polarizing filter

**Streak Retinoscope** is designed exclusively to determination of the
refraction of the eye. The streak retinoscope is found by most practitioners
to be easy to use, fast, accurate, and especially valuable in determining
the axis of astigmatism.

**Multi-coated optics**
A single control sleeve for vergence and rotation. Comfortable operation.
Totally dustproof, maintenance free. Metal handle-for long lasting operation
Superior streak quality enables easier and quicker refractions-even in
patients with small pupils. The powerful, bright bulb ensures easy recognition
of neutralisation. The lowest position gives a divergent beam.

CE    FDA

## DW-1100    DIAGNOSTIC WALL UNIT(WALL TYPE)

with Ophthalmoscope & Streak Retinoscope

**FEATURES**

Set complete with:
3.5V Ophthalmoscope,
3.5V Streak Retinoscope,
Wall mount transformer with handles

Spare part:
3.5V Spare bulb of 3.5V Ophthalmoscope
3.5V Spare bulb of 3.5V Otoscope

CE    FDA

## DW-1000    DIAGNOSTIC WALL UNIT

WALL TYPE

**FEATURES**
Set complete with:
3.5V Ophthalmoscope,
3.5V Fiber Otoscope,
Specula dispenser,
Wall mount transformer with handles

Spare part:
3.5V Spare bulb of 3.5V Ophthalmoscope
3.5V Spare bulb of 3.5V Otoscope

CE    FDA

## YT-2A    POWER TABLE

**FEATURES**

Its design, functions and quality reach international advanced level
and it is ideal table for medical, optical and other use, especially
for slit lamp.

**SPECIFICATIONS**

Table Size..................................................................60X40cm
Elevation Range....................................................640~860mm
Input Voltage....................................AC220V/110V,50Hz/60Hz
Packing Size........................690mmX580mmX265mm(LXWXH)
Maximal load..............................................................50kgs

60cm

YT-2A    40cm
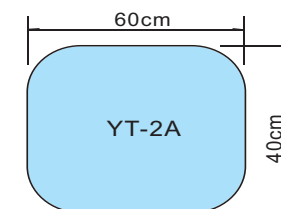
CE    FDA

## B10 POWER TABLE

### FEATURES

• Big size of table top
• Linear motor with low noise
• Strong steel structure base
• Universal brake wheel

### SPECIFICATIONS

Lifting height....................................................620mm-820mm
Max. load...............................................................65kgs
Lifting speed...............................................................13mm/S
Table top.............................................................640X500mm
Rated power...............................................................55W
Power supply..........................................100-240V, 50/60Hz
Net weight...............................................................20kgs

CE FDA

## COS-430 POWER TABLE

SLIDE TYPE

### FEATURES

Sliding table for two machines
Strong and stable structure for heavy load

### SPECIFICATIONS

Table size.............................................................90X46cm
Height adjustment..............................................700~900mm
Net weight...............................................................40kgs

G

CE FDA

## COS-100 POWER TABLE

SYMMETRICAL MOTORS

### FEATURES

• Big table top with three high-voltage sockets for three machines
• With two high quality symmetrical motors
• 4 different heights can be memorized
• Strong PU mute wheels with break

### SPECIFICATIONS

Table size....................................................1400mmX640mm
Table elevator height............................................680-973mm
Power input..........................................110V 60HZ/220V 50HZ
Net weight...............................................................61kgs

68.0 ∧ ∨ 1 2 3 4 M

CE FDA

## COS-590 POWER TABLE

### FEATURES

Big table for wheel chair user

### SPECIFICATIONS

Table size....................................................925mmX615mm
Table elevator height............................................690-900mm
Power input..........................................110V 60HZ/220V 50HZ
Net weight...............................................................40kgs

G

CE FDA

## TC-200    COMBINATION TABLE

### MANUAL PHOROPTOR ARM

**FEATURES**

• Table top can be lifted up and down, it makes the patient feels
  more comfortable
• Rotary arm with electromagnetic lock.
• With limit switch of table top
• It's fit to both digital phorptor and manual phoroptor
• Big drawer for trial lens set
• Small size and light

**SPECIFICATIONS**

Size of table top......................................................94X55cm
Size of sliding plate................................................42X30cm
Size of drawer.........................................53.5X34.5X5.5cm
Rotation angle of rotary arm..............................................90°
Rotation angle of sliding plate...........................................180°
Tabletop lift range....................................................64~94cm
Power.................................................110V/60Hz, 220V/50Hz
LED headlamp..........................................................DC 12V
Net weight....................................................................65 kg

Drawer for trial lens set

Manual Rotary Arm

With manual phoroptor

With automatic phoroptor

CE FDA

## TR-700A    OPHTHALMIC UNIT & CHAIR

### MANUAL PHOROPTOR ARM

**MECHANICAL PARAMETERS**

Angle of rotation for rocker..............................................±30°
Angle of rotation for table..................................................90°
Lifting height for table................................................350mm
Chair rotation range.......................................................360°
Lifting height for chair.................................................150mm
Loading for chair..........................................................150kg
Lifting height for pillow...............................................200mm
Backrest obliquity....................................................80°~180°

**ELECTRICAL PARAMETERS**

Input voltage..................................110V/220V AC  50Hz~60Hz
Motor power.........................................................55W 24V DC
Lamp................................................5W 110V  /  16W 220 AC
Fuse............................................................5A 130/250V AC
Power without load.............................................................1W
Pressure test.................................................................2KV
Working mode.................................................................S1
Main wire......................................................10A 110V/220V
Working temperature.......................................-30°C ~ +50°C
Relative humidity.............................................less than 90%
Force of pressing key.....................................................1~5N
Cooling mode...................................................nature cooling

CE FDA

**TR-700A-1**

**TR-700A-1** Stand base with Keratometer arm and
                Lower instrument arm, chair EC-700
**TR-700A-2**  Same as TR-700A-1 but without chair EC-700

**TR-700A-3**

**TR-700A-3**  Stand base with Lower instrument arm, chair EC-700
                but without Keratometer arm
**TR-700A-4**  Same as TR-700A-3 but  without chair EC-700

**EC-700**  Electrical chair

G

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## TC-700    OPHTHALMIC UNIT & CHAIR

**FEATURES & SPECIFICATIONS**

• Small and exquisite, can be used for small room
• Easy operation with a well positioned control panel
• Low voltage output for ophthalmoscope and Retinoscope voltage selectable, 2.5V, 3V, 3.5V, 4V, 6V, 12V
• "Keller" type and "Welch Allyn" type charger are for optional
• Projector mounting plate
• Table and case using composite material

| TC-700 Unit |
| --- |
| Input voltage..................................220V 50Hz/110V 60Hz |
| Fluorescent lamp......................................................40W |
| Table size....................................................670 X 400mm |
| Table rotational angle.................................................90° |
| Maximum working size......1400(W)X1450(D)X2150(H)mm |
| Net Weight (whole unit).........................................150kgs |

| Phoroptor Arm |
| --- |
| Upward movement...............................................550mm |
| Arm rotational angle................................................360° |

| Electrical Chair |
| --- |
| Minimum height of seat.........................................550mm |
| Maximum height of seat........................................700mm |
| Maximum loading capacity....................................150kgs |

C€   FDA
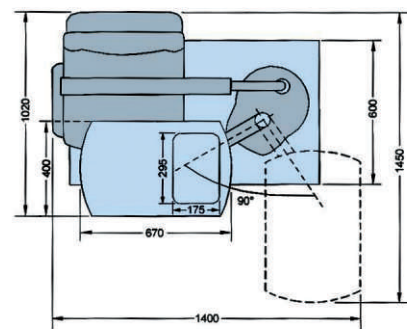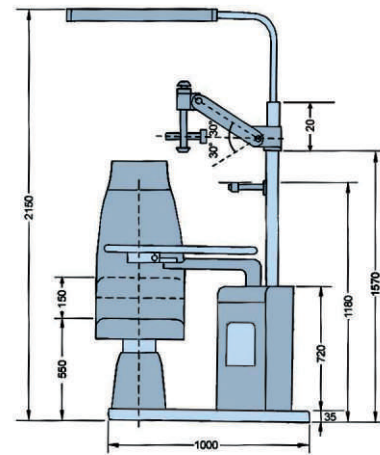
control panel

• "Keller" type and "Welch Allyn" type charger are for choice.
• Or low voltage output for ophthalmoscope and Retinoscope voltage selectable, 2.5V, 3V, 3.5V, 4V, 6V, 12V

## CS-218    COMBINED TABLE

**FEATURES**

• Fine made, simple & practical, designed for auto phoroptor
• Can be equipped with automatic phoroptor or manual phoroptor, auto refractometer, and trial lens set
• Phoroptor arm can be turned 90° automatically when turning the small plate
• LED lamp for the near point chart of phoroptor
• Table top can be moved up and down

**SPECIFICATIONS**

| |
| --- |
| Size of combined table...............................1010x581x1485mm |
| Table top of up and down..............................................160mm |
| Size of table top....................................................930x581mm |
| Size of tray...........................................................420x300mm |
| The degree of phoroptor arm turning.....................................90° |
| The degree of small plate turning.......................................180° |

C€   FDA

**PRO-5B**

**PRO-1B**

G

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## TC-600    OPHTHALMIC UNIT & CHAIR

**FEATURES & SPECIFICATIONS**
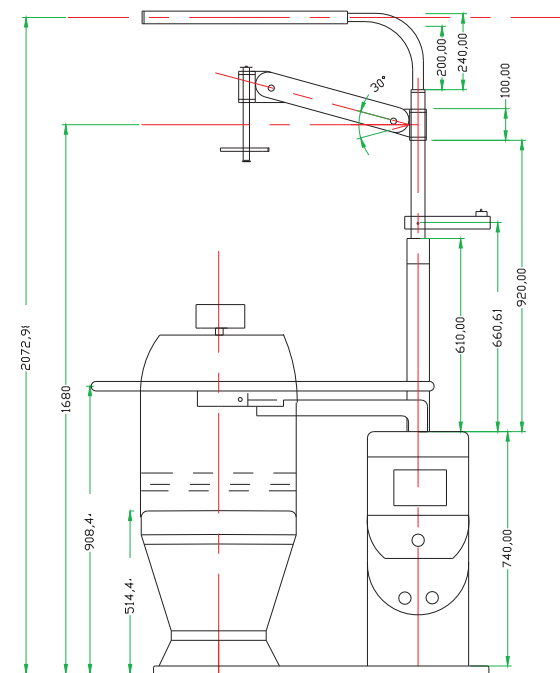
Base size...........................39inch x 32inch (1000mm x 800mm)
Tabletop size........................33inch x 16inch (840mm x 405mm)
Sliding table to accommodate two instruments
Auto "power off" for table instruments.
Table instrument voltage selectable: 6V and 12V)
Auxiliary 110V/220V output under table
Three rechargeable wells
Counterbalanced Refractor Arm
 (a) Adjustable Load Range: 8lbs to 20 lbs. (3.6kgs to 9kgs)
 (b) Vertical Adjustment Range: 12inch (405mm)
Table rotate angle..............................................90°
Chair rotate................................................... ±90°
Recline angle of chair......................................165°
Chair height....................20inch ～ 25inch (500mm ～ 640mm)
Adjustable range of headrest..........................4inch (100mm)
White LED lamp........................ 10 W, brightness is adjustable
Voltage................................110/220V. (Switch voltage freely.)
Gross weight..................................................485lbs (220kgs)

Optional chair color: Beige-white
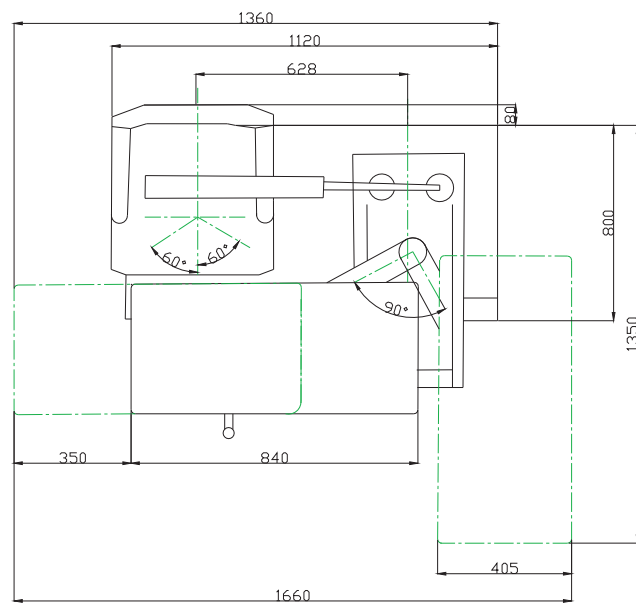
CE   FDA

## TC-800V    OPHTHALMIC UNIT & CHAIR

**FEATURES & SPECIFICATIONS**

Base size...........................39inch x 24inch (1000mm x 600mm)
Tabletop size........................33inch x 16inch (840mm x 405mm)
Sliding table to accommodate two instruments
Two rechargeable wells
Counterbalanced Refractor Arm
 (a) Adjustable Load Range..........8lbs to 20 lbs (3.6kgs to 9kgs)
 (b) Vertical Adjustment Range........................16inch (405mm)
 Table rotate angle...............................................90°
Chair rotate...................................................±90°
Recline angle of chair......................................165°
Chair height....................20inch ～ 25inch (500mm ～ 640mm)
Adjustable range of headrest..........................4inch (100mm)
Fluorescent lamp......................12W. (Brightness is adjustable)
Voltage................................110/220V. (Switch voltage freely.)
Weight..........................................................485lbs (220kgs)

CE   FDA

G

G
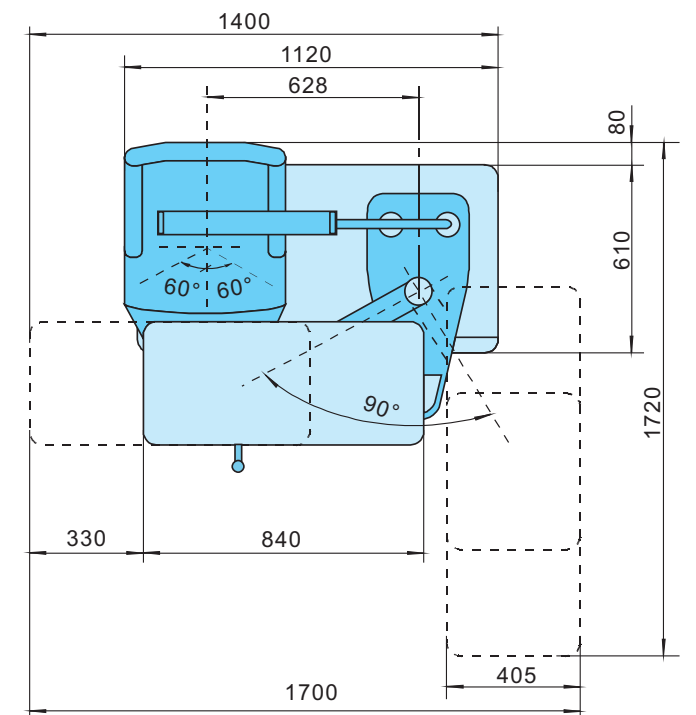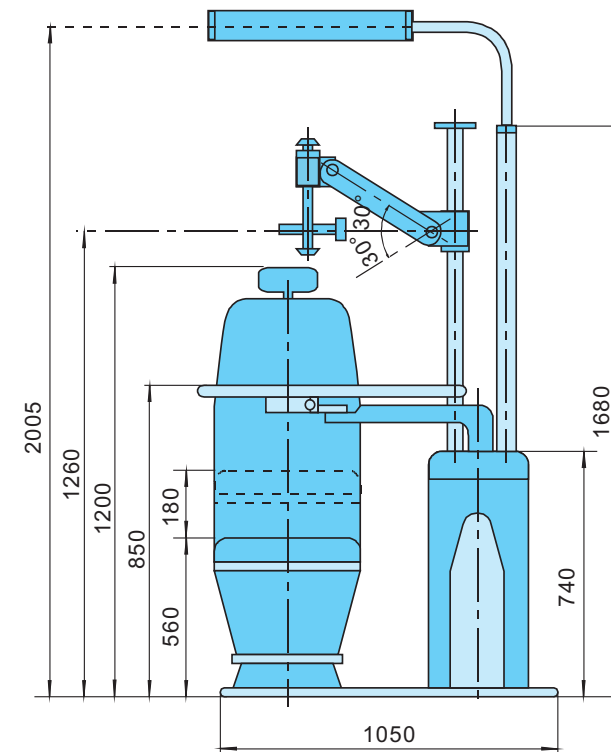
## CS-518 OPHTHALMIC UNIT & CHAIR

Space save type: the minimum room width request is 155cm

### SPECIFICATIONS

Table Size......................................................845mm×405mm
Total Size......................................1000mm×752mm×2100mm
Voltage......................Main:220V±10% 50Hz; 110V±10% 60Hz
Table top: 12V
Power...........................................................................200W
Net Weight..................................................................220kgs

### FEATURES

**Arm**
Can be moved up and down or spin around.
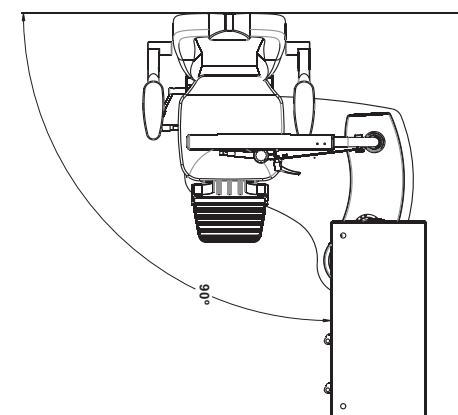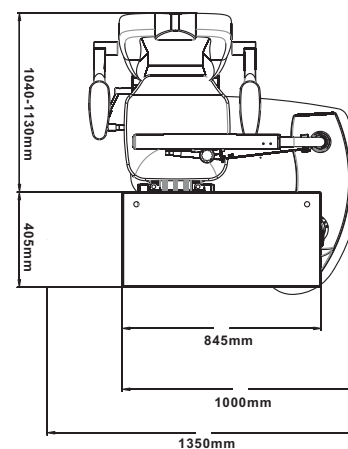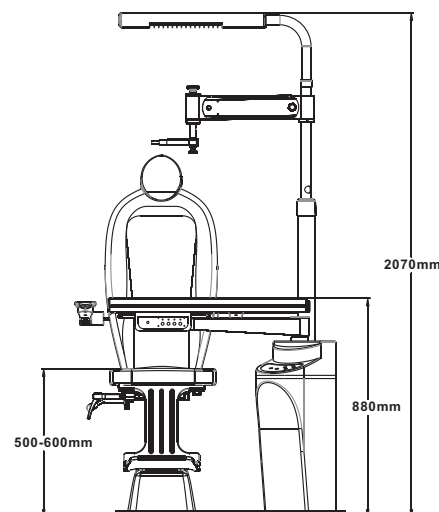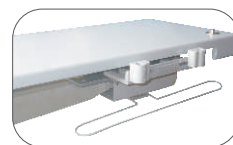
**Electric lift chair**
Ultra-luxury European-style.

**Sliding table**
Table could slide horizontally, the total length of the machine is only after the table is slid out.

**Optometry energy-saving lamps**
Elegant, energy-saving.

CE FDA

2070mm
1040-1130mm
405mm
845mm
1000mm
1350mm
1650-2000mm
90°
880mm
500-600mm

G

## EC-507 ELECTRICAL CHAIR

with foot control

Elevation range..........................................................0-15cm
Power............................................... 110/220V, 60/50HZ,50W

## EC-800 ELECTRICAL CHAIR

with foot control

Elevation range: 49~63cm
The arm rest can be lifted up and down freely

Foot control

CE FDA

## EC-508 ELECTRICAL CHAIR

with foot control

Elevation range..........................................................0-15cm
Power...............................................110/220V, 60/50HZ,50W

## EC-600 ELECTRICAL CHAIR

with foot control

Elevation range: 53~68cm
Back rest can be lied down 165°
Arm rest can be lift up and down

CE FDA

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**CC-SC**   CROSS CYLINDER

0.25D  0.50D
0.75D  1.00D

CE  FDA

Shining handle

**CC-S2C**   CROSS CYOLINDER

0.25D  0.50D
0.75D  1.00D

2pcs cross cylinder packed in 1 box (both plastic box and wood box available

CE  FDA

**CC-S3C**   CROSS CYLINDER

0.25D  0.50D
0.75D  1.00D

3pcs cross cylinder packed in 1 box (both plastic box and wood box available

CE  FDA

**FCT-P1**   FOUR LENS CONFIRMATION TEST

Plastic frame in high quality

0.25D  0.50D
0.75D  1.00D

CE  FDA

**FCT-Y**   FOUR LENS CONFIRMATION TEST

0.25D  0.50D
0.75D  1.00D

CE  FDA

**TCT-Y**   TWIN LENS CONFIRMATION TEST

0.25D  0.50D
0.75D  1.00D

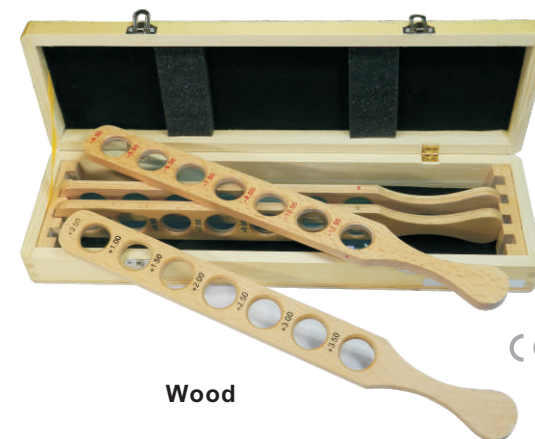CE  FDA

**FCT-P2**   FOUR LENS CONFIRMATION TEST

Plastic frame in high quality

0.25D  0.50D
0.75D  1.00D

CE  FDA

**RR-W**   RETINOSCOPY RACK SET

Wood

CE  FDA

**RR-S1**   RETINOSCOPY RACK

Plastic

CE  FDA

RED/GREEN LENS TEST

Plastic

RG-2

RG-1
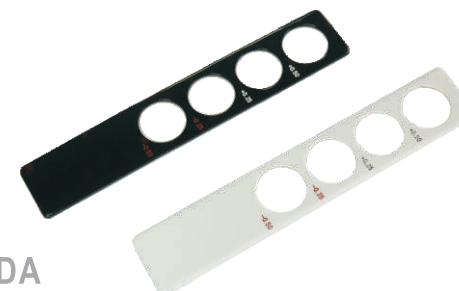
CE  FDA

**RR-P**   RETINOSCOPY RACK SET
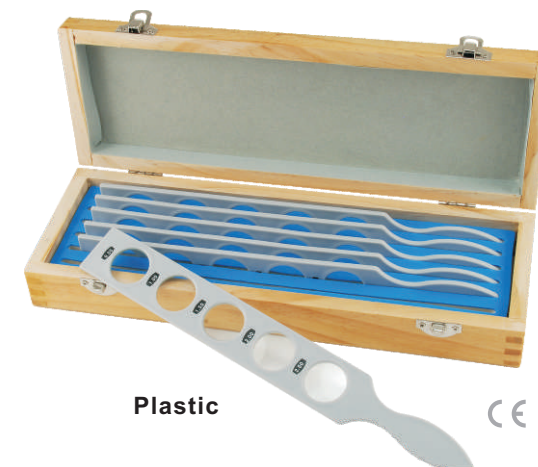
Plastic

CE  FDA

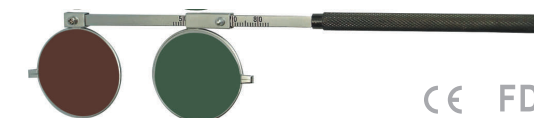**RR-S2**   RETINOSCOPY RACK

Plastic
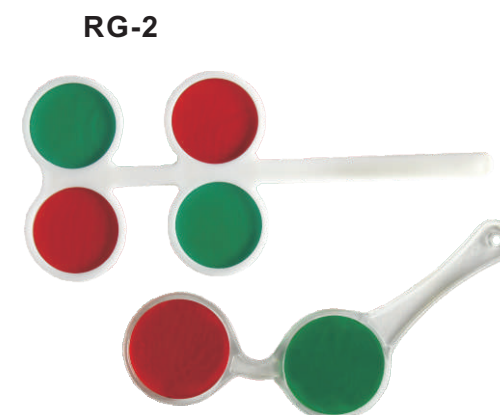
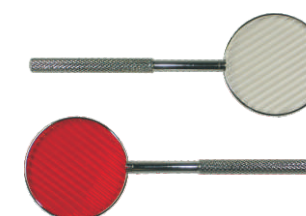CE  FDA

**RG-8**   RED/GREEN LENS TEST
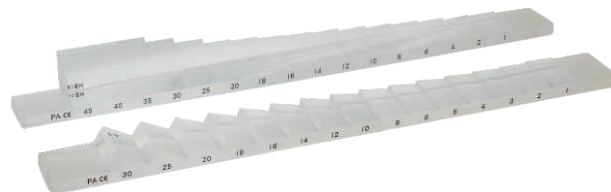
CE  FDA

**TM-2**   RED/WHITE MADDOX TEST

CE  FDA

H   H

## PB-16 — PRISM BAR (HORIZONTAL)
## PB-15 — PRISM BAR (VERTICAL)

PB-16: Diopter(Δ): 1,2,4,6,8,10,12,14,16,18,20,25,30,35,40,45

PB-15: Diopter(Δ): 1,2,3,4,5,6,8,10,12,14,16,18,20,25,30

CE  FDA

## PB-1516 — PRISM BAR SET
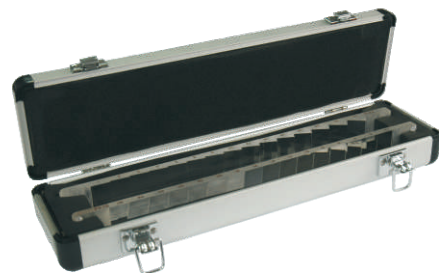
PB-15 and PB-16 each in on aluminum case

CE  FDA

## MOD-1 — LORGNETTE PINHOLE OCCLUDER

## PR-3 — PD RULLER

## PR-4 — PD RULLER

## OD-2 — OCCLUDER

## OD-4 — OCCLUDER

Frosted

## OD-5 — OCCLUDER

## T405 — RADIAN APPARATUS

Index: 1.53

## OD-6 — OCCLUDER

With hole

H

## CP-17A — ULTRASONIC CLEANER

**FEATURES**
Remarkable cleaning effect, Small volume, Large Power, Easy to use.
It is equipped with sound water-proof system.

**SPECIFICATIONS**
Dimensions:240x210x210mm
Weight:2.5kgs
Power:110V/220V,60/50HZ,17A/50W

## CD-7810A — ULTRASONIC CLEANER

**FEATURES**
1.Cleans discs such as CDs, VCDs, DVDs, etc.
2.Use only plain tap water to clean.
3.Remove dirts effectively; results can be seen with bare eyes.
4.Clean articles to shine just like new.

**SPECIFICATIONS**
Ultrasonic frequency................................................42,000Hz
Tank material......................................Stainless steel SUS303
Tank capacity.................................................................750ml
Timer................................5 working circles,choose time freely
Power supply.........AC100-120V,50/60Hz AC220-240V,50/60Hz
Power................................................35W(110V),50W(220V)
Unit size........................................236(L)x205(W)x170(H)mm
N.W. .........................................................................0.99kgs
G.W. .........................................................................1.07kgs

## CD-4800 — ULTRASONIC CLEANER

**SPECIFICATIONS**
Ultrasonic frequency................................................42,000Hz
Tank material......................................Stainless steel SUS303
Tank capacity...............................................1,375ml(2.4pint)
Quiet,Solid states circuitry
Timer......................................5 Cycles,with digital time display
Power supply.........AC100-120V,50/60Hz;AC220-240V,50/60Hz
Power................................................60W(110V),70W(220V)
Unit size........................................230(L)x180(W)x160(H)mm
N.W. .........................................................................1.75kgs
G.W. .........................................................................2.15kgs

## P41 — PEN TORCH

LED bulb
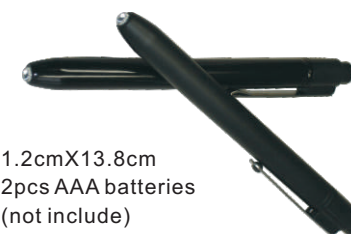
Product size:Φ1.2cmX13.8cm
Power source: 2pcs AAA batteries
(not include)

**ADVANCEMENTS**
1.Tightened lid design for effective noise reduction
2.Improved products durability and safety by water resistance
  capability enhancement

CE

**FEATURES**
1.High power transducer for superior cleaning results.
2.Larger tank capacity for professional cleaning.
3.Isolated-circuit design,keep water away for extra safety.
4.First ultrasonic cleaner to introduce cooling fan for prolonged
  operation.

CE

## P203 — PEN TORCH

LED bulb

Product size:Φ1.3cmX14.8cm
Power source: 2pcs AAA batteries (not include)

I

## ALE-1600 — PATTENLESS LENS EDGER

3D

With high precision and no-parallax scanner

With grooving and safe chamfer function

**ALE-1600: Basic model**
**ALE-1600G: Model with grooving and safe chamfering**

### SPECIFICATIONS

Size....................................................728mmx600mmx442mm
Package size.....................................865mmx815mmx785mm
Weight.............................................................................75kg
Vlotage...............................................115V/60Hz, 230V/50Hz
Power............................................................................1500W
Pump voltage......................................115V/60Hz, 230V/50Hz
Pump power.................................................................≤350W
Noise.............................................................................≤75dB
Environment Temperature.......................................5°C~40°C
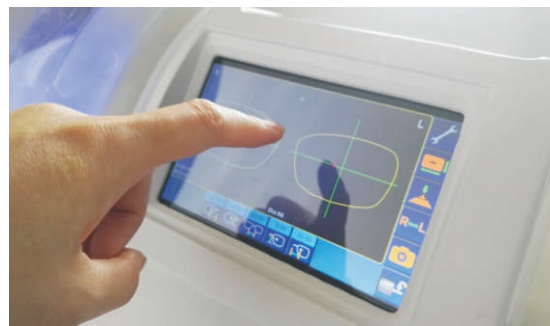
**7 inch HD LCD touch screen**
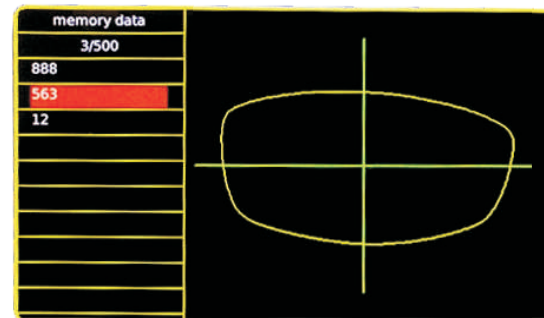
**Data storage**
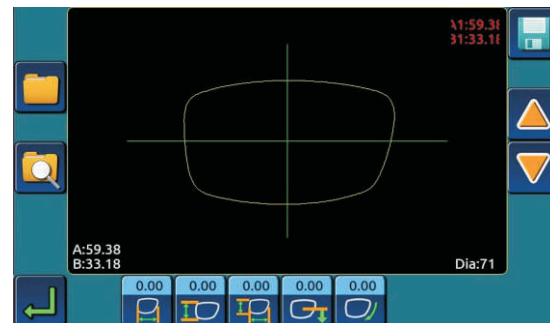
**Date form change**
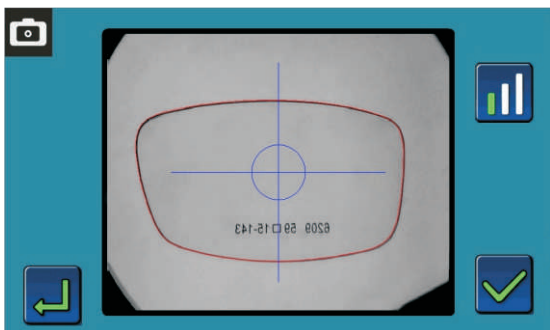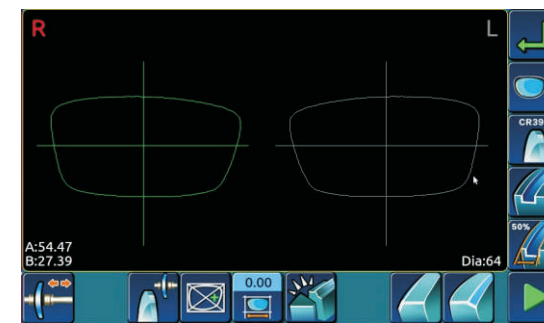
**The operation interface is simple and fast**

**3 seconds quick scan**
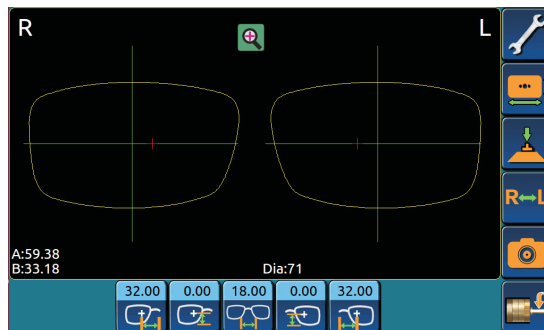
**Preview interface can input PD, PH conveniently.**

Many different lens material can be satisfied: (PC, HI, HR, Glass)

Have auto-bevel-setting and grooving(You can choose multiple position of bevel and grooving position)

Grooving Safe Chamfer

Precision, no-parallax optical scanner, optical center meter, with fast scanning speed, low failure rate.

Combined Scanner with Center meter as one

## NH-35W    HAND EDGER

Water tank

Water valve

Diamond wheel

Sponge holder

Dual switch

Dual switch

Water drain system

**SPECIFICATION:**

Power....................................................150W
Dimension..............360(L)X200(W)X288(H)mm
Voltage.....110V~120V/60Hz or 200~240V/50Hz

35WV        35W        35V

Sponge     Down      Up        M4       Oil Stone
Holder     Sponge    Sponge    Belt     (120# and 240#)

| WHEEL OPTIONS | | |
|---|---|---|
| 35W | Width 35mm, right rough grinding 16mm, left fine grinding 19mm. | Rough grinding No. 180, fine grinding No. 240, 280, 320(Optional) |
| 35WV | Width 35mm, right rough grinding 16mm, left fine grinding 19mm edge trueing groove. | Rough grinding No. 180, fine grinding No. 240, 280, 320(Optional) |
| 35V | Width 35mm, large surface fine grinding, trimming by trueing groove. | Graduations No. 240, 280, 320(Optional) |

## NH-100WV    HIGH-SPEED HAND EDGER

**FEATURES:**

Original appearance design
Good adding and draining water system
Selector switch to change the rotating direction.
Good grinding effects: smooth and fine.

**WHEEL OPTIONS:**

Φ100 Large surface fine grinding

Φ100W Rough fine grinding

Φ100V Fine grinding with grooving

Oil stone

## H-83I    HAND EDGER

Water valve

Sensor

Diamond wheel

Water-blocking plate

Water container

Area of waste water

Water pump

Filter net

Area of clean water

**SPECIFICATIONS**

Power supply.....................AC 100-120V/60Hz,200-240V/50Hz
Motor.........................................................................150W
Water pump....................................................................3W
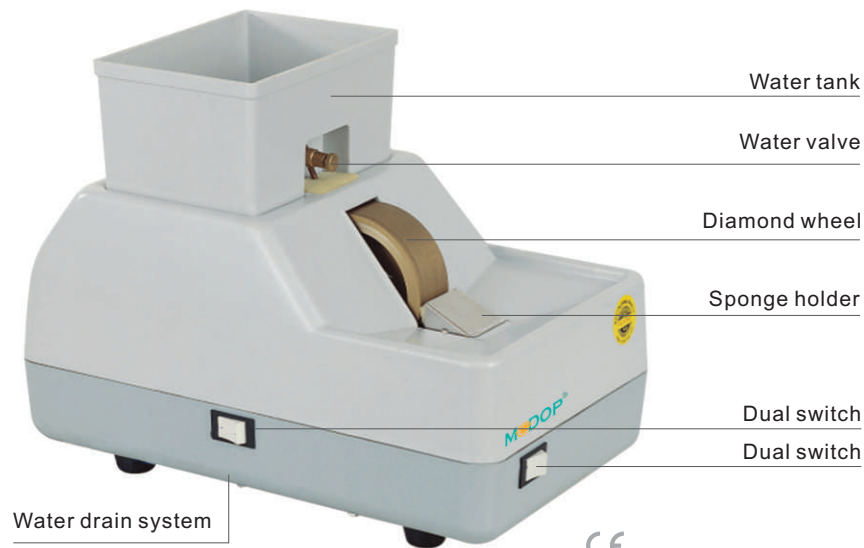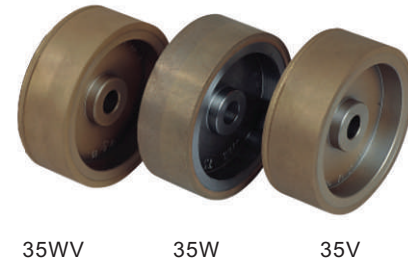Dimension with packing.....................430mmX270mmX280mm
Gross weight.................................................................9kgs

⚠ **Attention:** If the machine won't be used for long, please remember to keep the water container clean without water.

**Water circulation system:** A water container inside the housing can supply water continuously to the wheel by a pump inside. The filter net keep only the clean water to the pump, and the pump can be pulled out freely by hand when changing the water after some time. The filter net can be easily cleaned with brush. The water valve can adjust flux anytime during the grinding.

**DIAMOND WHEEL**

Width 35mm        Diameter 100mm

Fine | Rough        Fine        Fine

A (Standard)        B        C

**MECHANISM AND ACCESSORIES**

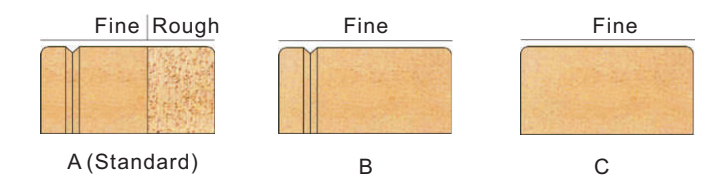**Sensor:** The sensor starts/stop the diamond wheel automatically when your hands approach/far away from the grinder work area. The sensor works only when needed, so you can save time and electric energy in safety. The sensor has a long service life, it can be also replaced easily.

## H-83II    HAND EDGER

**FEATURES**

Same as H-83I, just use ON/OFF switch instead of IR sensor, so that the price is much more competitive.

H83Ⅱ

## NH-800　AUTOMATIC LENS GROOVER

### SPECIFICATIONS

Dimensions....................................270(L)X210(W)X150(H)mm
Net Weight.................................................................2.7kgs
Power Requirement........................................110V/220V, 90W

### FEATURES

•Non corrosive machine body.
•Suitable for plastic and glass lenses.
•Adjustable groove position(front-central-rear)
•No water system required.
•Accurate on all profiles.
•Adjustable groove depth: from 0 to 0.7mm.
•Groove width: 0.65mm.
•Len thickness: from 1.5 to 11mm.
•Len Φ: from 18 to 70mm
•Power: 90W
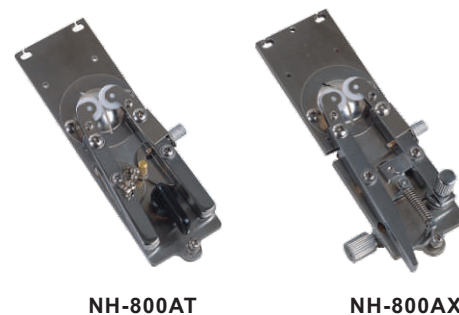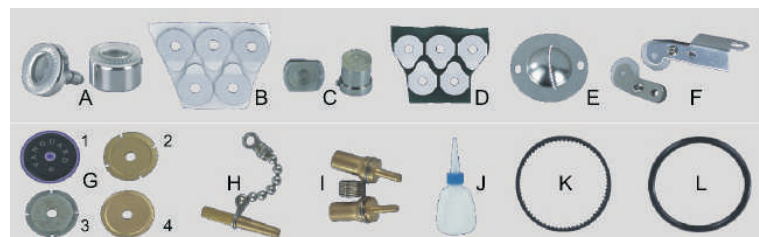
**NH-800AT**　　　　**NH-800AX**

## NH-800G　AUTOMATIC LENS GROOVER

### FEATURES OF NH-800ATG

•Improving the structure of grooving table based on origin, the grooving length has been increased greatly.
 Suit for modern and fashion eyeglasses' manufacturing.
•No grooving deformation by improving the lens chuck.
•Improving on the angle of cutter wheel guarantee the steady of grooving.

### FEATURES OF NH-800AXG

•Manual adjustable, precise controlling
•Limited sizes of grooving
 For oblong corner lenses: Φ22X52mm
 For round corner lenses: Φ22X56mm
•Adopt new cutter wheel for grooving
•Adopt low sound electric motor(100Watt)

Limited size of grooving
Oblong corner lenses:22X56mm
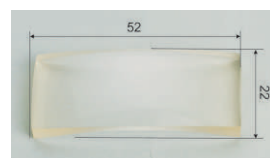
Limited size of grooving
Oblong corner lenses:22X52mm
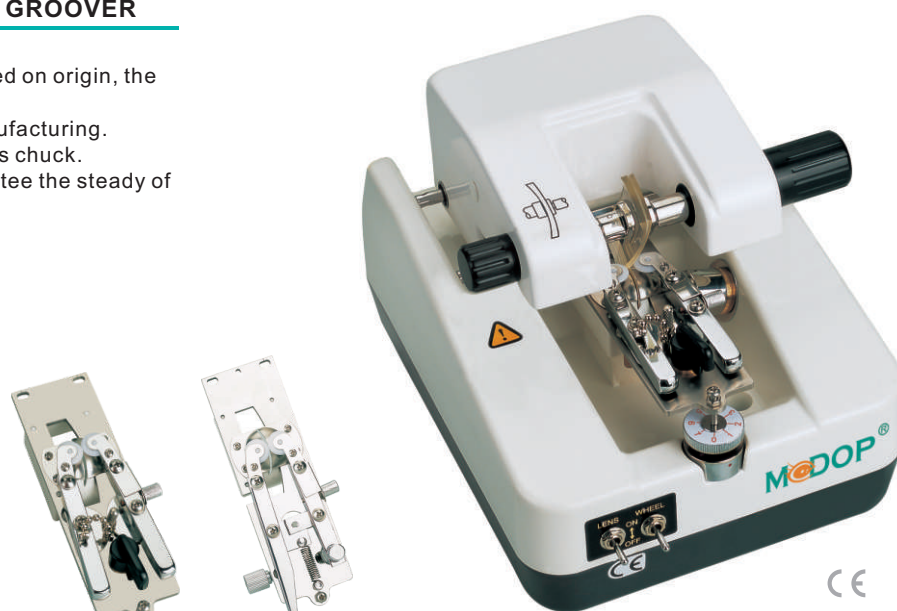
**NH-800ATG**　　　**NH-800AXG**

G-1　G-2　　　G-3　G-4　G-5　G-6　G-7　G-8　G-9

## NH-3G　DIGITAL LENS DRILLER

### MAIN FUNCTIONS

•The operation procedures are highly intelligent and totally digital.
•Compared to the hole position of the pattern lenses, it has higher process accuracy whose process deviation is less than 0.075mm in both X-axis and Y-axis.
•It has auto-position clamping equipment which allows to remain the same process accuracy after the change of clamps.
•The screen shows the drill position and coordinates data, and gives guidance to the operation.
•The hole position memory function allows to process the set hole positions continuously.
•There're two measure modes to choose which are original pattern measure mode and frame position measure mode.
•It has mirroring mode in the process.
•The head can automatically reposition if it's removed from its position accidently.
•The instrument drills automatically in a set order, and can be corrected by pressing the number button if any hole is missed by wrong operations.

### SPECIFICATIONS

Power Requirement................................AC100V-240V DC24V
Power..............................................................................50W
Weight............................................................................5kgs
Dimensions................................................302x228x270mm
Drilling Speed........................................................0~5000rpm
Moving Range...............................X-axis 155mm Y-axis 38mm

Φ1.0　Φ1.2　Φ1.42　Φ1.5　Φ1.6　Φ1.7　Φ2.0　Φ1.1　G1　G2　G3　G4　G5　G6
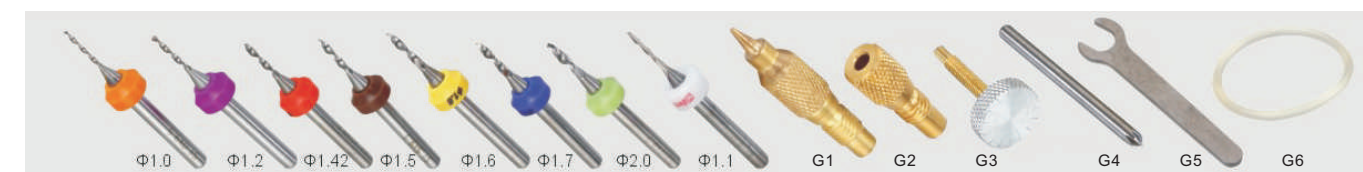
•Drill bit: orange, purple, red, brown, yellow, blue, green
•Milling cutter(white), Probe, Drill chuck, Height adjusting screw, Chamfer tool, Chamfer tool, Wrench, Belt

## CP-2AT　LENS DRILLING MACHINE

### FEATURES

Ideal for drilling holes in glass and plastic lenses.
Opposing taper drill bits system allow holes to be drilled from both sides simultaneously for precise place and avoids chipping and breaking of all lenses, especially those made of glass.
After hole drilled, placed the lens under reamer and lifted upwards to be enlarged to desired size.

### SPECIFICATIONS

Dimensions................................................250x200x330mm
Weight............................................................................3kgs
Power requirement........................110V/220V 60Hz/50Hz 40W

## W84I DIGITAL FRAME WARMER
(HIGH CLASS)

**MECHANISM AND ACCESSORIES**

Digital temperature: Display the real-time work temperature inside the housing.

Temperature control system: The standard version of frame heater is fitted with an electronic system to monitor and control the actual work temperature inside. It records the latest work temperature when restart the machine.

Heat collecting device: The heated air is collected through one wind outlet for special frame or position of frame.

**SPECIFICATIONS**

Power supply...................AC 100~120V/60Hz,200~240V/50Hz
Motor..................................................................................6W
Available temperature..........................................40°C~140°C
Power of Heating wires...................................................580W
Power rating..................................................................800W
Wind speed.................................................................1.8m/s
Weight.....................................................................1.26kgs
Dimension........................................235mmX125mmX250mm

**OPERATION GUIDE**

1.Turn on power switch
2.Turn on heating switch
3.Adjust the temperature you need by the temperature
   adjustment key ⊕⊖

**RJ-84** Round Jet   **PB-84** Plastic Baker

Heating up

Heating down

Heating switch
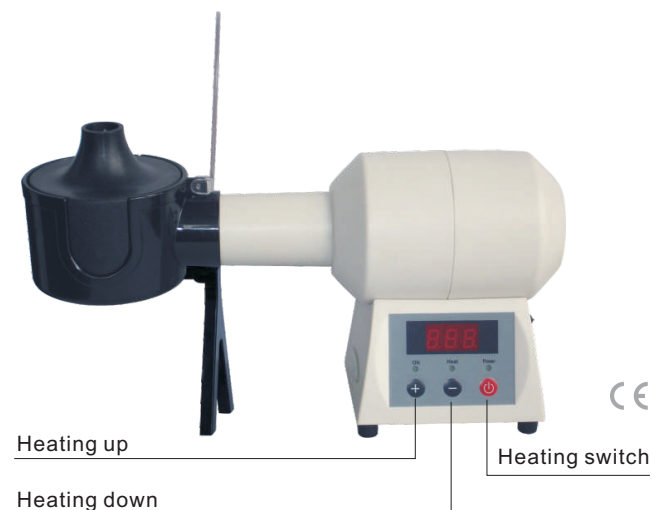
## RS-30 LENS COLOR MACHINE

**SPECIFICATIONS**：

1. Make the lens colored simply and quickly.
2. Only for CR-39 Non-coated lens.
3. 6 pcs coloring cups and 2 pcs clips.
4. The main body from stainless steel.
5. Temperature set and automatically kept.
6. Dimension: 49X29X18cm
7. Net weight: 9.4kgs
8. 110V/220V, 1500W

**CL-30**
Clip

## CP-18C UV&PHOTOCHROMIC LENS TESTER

**FEATURES**

1.UV-400 Test
2.Transmittance Test
3.Radiation-Resistant Test

**SPECIFICATIONS**

Dimensions...................................................290x180x110mm
Weight............................................................................1.5kg
Power requirement......................110V/220V  60Hz/50Hz  10W

## UVR-3 UV TESTER

1.Anti-UV rays shading monitor.
2.Anti-UV optical lens detector.
3.Anti-radiation monitor-E.M.I.
4.Voltage: 220V / 110V

UV-375 standard lens
for adjusting machine

## CP-14 TESTER FOR COLOUR-CHANGING LENS

**FEATURES**

1. Instantaneous color change of chameleon glass block.
2. It is an ideal instrument for the glasses factories and store.

**SPECIFICATIONS**

Unit dimension............................................220X110X115mm
Net weight.....................................................................0.3kg
Power requirements......................110V/220V 60/50Hz AC 30W

## CP-29B MULTI-FOCAL LENS TESTER

**SPECIFICATIONS**

Dimensions.........................................................30x16x15cm
Weight.............................................................................1kgs
Power requirement........................110V/220V 60Hz/50Hz  12V

## CP-12 POLARISCOPE

**FEATURES**

1.Easy ,clear and  simple to test lens
   or finished glasses, LED lamp.
2.Test the inside stress situation

**SPECIFICATIONS**

Voltage:100V-240V
Power:12V
Dimension:30 X 16 X 15(cm)
Weight: 1kg

# MODOP ®

## HFC-01 HAND-HELD FUNDUS CAMERA

Manual Focus

High definition and stable image
Non-mydriatic and large field of view
Easy one-handed operation and excellent portability
Large data service and a variety of image acquisition mode

It's a portable medical camera for fundus imaging, diagnosis and especially for fundus disease screening.
It's compact, easy to obtain high definition fundus image.
It can be conveniently applied to rapid screening, out diagnosis, bedside diagnosis and remote medical treatment, etc.

### FEATURES

•Images real-time display, two times magnification
•Non-mydriatic and high definition imaging.
•Micro SD memory card up to 80,000 images
•USB and WiFi connection
•Low weight 450g, movable and portable
•Rechargeable battery provides up to more than 4 hours of continuous operation.
•Optional imaging modules for examination, posterior ophthalmoscope, anterior segment ophthalmoscope, otoscope, and dermatoscope.
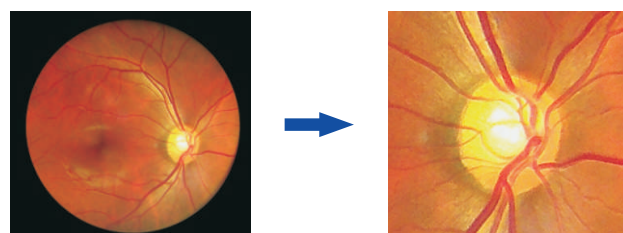
### SPECIFICATIONS

FOV....................................................................................45°
Minimum pupil.................................................................. 2.5mm
Refractive compensation............................................-20D ~ +20D
Light source...........................................................white LED/IR
Image resolution.........................................................1920 x 1080
Focus Mode...................................................................Manual
Screen..............................................................................3.5"
Power.............................................................................≤6VA
Storage...............................................................Micro SD card
Power supply...............................................3.7V Lithium Battery
Interface..................................................................Mini USB/WiFi
Size...................................................160mm X 90mm X 1900mm
Weight....................................................................450g(Typical)

---

# MODOP ®

## HFC-02 PORTABLE FUNDUS CAMERA

Auto Focus

**Intelligent and advaced fundus screening**
•Non-mydriatic and minimum pupil size 2.5mm
•Low light LED flash and 480X800 HD touch screen
•Auto focus and 8 target fixation

**Fast and HD fundus imaging**
•16 mega pixe

**Android system application**
•Android system, easier operation and data storage.
•Reading, wireless transfer
•DICOM interface
•4G networks
•No additional computer or mobile device will be required
•Integrated design only 560g
•Wireless printing

### SPECIFICATIONS

FOV....................................................................................45°
Minimum pupil.................................................................. 2.5mm
Refractive compensation............................................-20D ~ +20D
Focus way.................................................................Auo/Manual
Focus Mode.......................................................8 targets fixation
Image resolution..................................................................16MP
Screen...........................3.97" multi targets touch screen 800x480
Shoot type...............................................................IR/white light
Image format........................................................................JPEG
Transmission.......................................................USB/WiFi/BT/4G
Storage......................................................Internal capacity 16GB
Weight................................................................................560g
Power supply.................................3.7V 3400mAh Lithium Battery
The battery continuously working time......................................6h
(standby time exceeds 24h)
Total charging time..........................................................3.5~4h
Operating system....................PC: Windows system; APP: Android
ID Card reading and collection.........................................support
NFC card reader..............................................................support
Connect function...............................Prrofessional software, APP,
support DICOM, cloud service system,
patient data management software, wireless printing

## BIO-1000    VISUAL FIELD ANALYZER

### FEATURES

•Comprehensive real-time monitoring, heiji-krakau physiological blind spot monitoring, gaze tracking/head position tracking, automatic measurement of pupil diameter, reduce the impact of pupil effect on visual field detection.

•Personalized design, accurate clinical analysis accurate and rapid examination strategy.

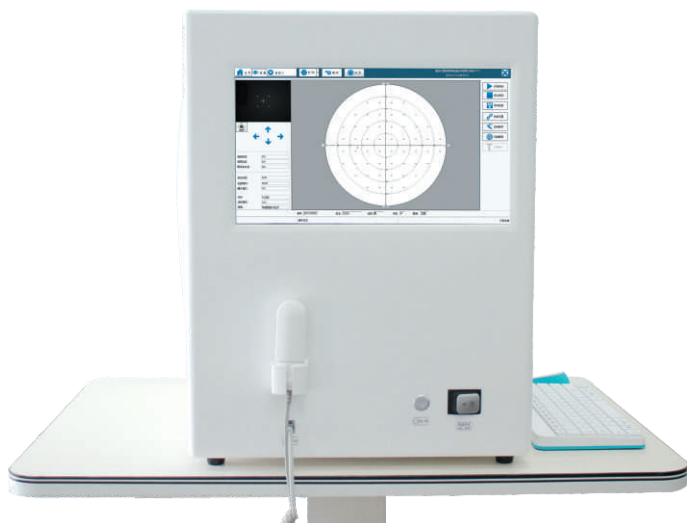•Under international Goldman standard, providing a variety of classic test procedures and report analysis.

The BIO-1000 automated perimeter absorbs the advantages of international advanced perimetry devices. It comprises the highly integrated computer, optics, machinery and electronics systems. Incorporated with the advanced configuration, comprehensive software inspection categories and offering up to 11 analysis reports by international standards, the device provides scientific approaches for clinical diagnosis of glaucoma, retinal diseases, visual impairments and related neurological diseases, etc..

### SPECIFICATIONS

Inspection range..........................90° full-functioned perimeter
Inspection distance........................................................30cm
Background luminance.....................................White 31.5asb
Visual target brightness........................................1~10000asb
Visual target size.................................................Goldmann III
Visual target interval time.............................................200ms
          Standard or adjustment according to patient reflection
Threshold test model...................Center 5°-16, center 10°-68,
                         24-2,30-2,30°-60°, nasal step
Upper threshold test model............30°-40, 30°-76,P-60,60°-81,
                       60°-120, 90°-135, nasal side
Special detection strategy.......................Esterman monocular,
          Esterman binocular, user-customized test,
               150° driver monocular fast detection,
            150° driver monocular standard detection,
           upper 36° detection, blind spot detection,
          150° horizontal straightness detection
Pupil size test...............................................................Automatic
Fixation monitoring..............Blind spot monitoring, eye position monitoring, eye position deviation alarm, eye deviation curve
Environment light detection.......................................Automatic
Analysis software.........Reliability analysis, single vision report, triple vision report, GPA half vision analysis, GPA glaucoma developing analysis, VFI vision index analysis
Operation system.................................................WIN7 above

### Others

Size....................................412mm(L)X497mm(W)X513mm(H)
Weight............................................................................17kg
Power.......................................................100-240V, 50-60Hz

## ET-200    OPERATION TABLE + DOCTOR CHAIR

### FEATURES

•The table is designed and made specially according to ophthalmologists' advices and can apply to various operations for ophthalmology.
•Tabletop lift adopts electro-hydraulic type, easy to operate.
•All cover made of 304 stainless steel, easy to clean.
•Nice appearance, stable performance, can be regarded as and ideal ophthalmological operating table.
•Equipped with electric chair,makes the doctor more comfortable and convenient in operation.

EC-200

### ELECTRIC CHAIR

Chair seat diameter......................................................420mm
Electric chair elevation range.................................460-600mm

Electric chair
•Adjustable armrest support with rotation 180°
•Adjustable backrest in height.
•Chair elevation(up/down):two buttons on the chair base, the doctor can be adjusted by foot.
•Double brakes system on the wheels.

### SPECIFICATIONS

### OPERATION TABLE

Size of table top.......................................2080(L)X550(W)mm
Table top elevation range..............................500~700mm
Head plate Movements...............................up≥45° down≥90°
Leg plate Movements.................................up≥30°down≥30°
Back plate Movements...............................up≥45°down ≥20°

Ophthalmological operating table
•Foot switch: several groups of different functions is convenient for operation by doctor.
•Back plate and leg plate: adopted the foot switch that enables flexible and smooth adjustments.
•Head plate: is easy to control by mechanical gear.

J

K

## SOM-2000D OPERATION MICROSCOPE
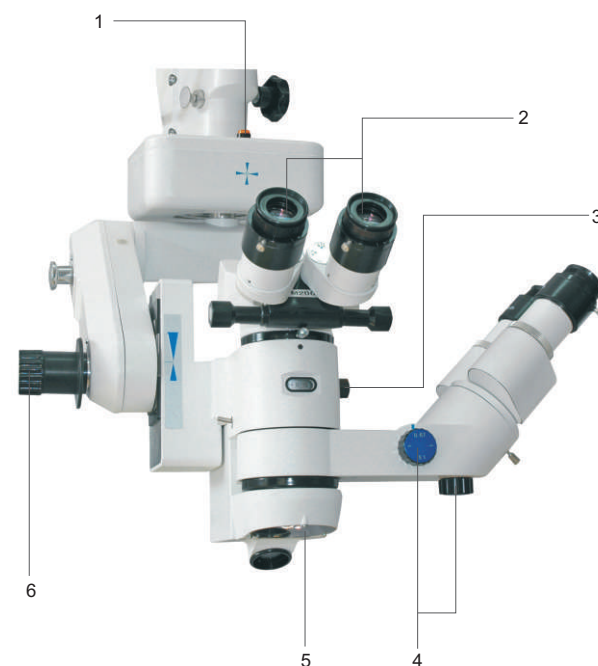
(HIGH TECHNOLOGY & ZOOM)



Foot Control

CE FDA

1. X/Y movement and focusing can be automatically centered.
2. Lens is made of glass which imported form Germany. It can reduce the optical aberration. All of the lens are multi-coated, mildew-proof and anti-reflection.
3. Zoom magnification for main microscope.
4. Three-step magnifications for assistant microscope; Fine focusing for assistant microscope keeps the same clearness as main microscope.
5. Special protection device for objective can keep the objective clean.
6. Special motorized inclinations are suitable for special observation angle.

### SPECIFICATIONS

Magnifications of Eyepiece...........................................12.5X/18B
Big objective foci..............................................................200mm
Working Distance.............................................................170mm
Magnifications of Main Microscope..................4X~27X Continuous Magnification
Magnifications of Assistant Microscope........................6X/10X/16X
Diameter of Field................................................Φ46mm~Φ85mm
Adjustable Dioptor..................................................................±7D
Adjustable range for Pupil Distance..........................50mm~75mm
Illumination Source..................................12V/100W Halogen lamp
Illumination Type.................................6°+0° Coaxial Illumination, 26° oblique illumination
Coaxial Illumination..................................................≥80000lx
Oblique Illumination..................................................≥60000lx
Reaching Range of Arm.................................................1230mm
Adjustable Vertical Range..................................880mm~1420mm
Fine Focusing Speed and Range........................≤2mm/s, ≥50mm
Speed for X/Y and Range Voltage...............≤2mm/s, 50mmX50mm AC220V±10%/50Hz±1Hz, AC110V±10%/60Hz±1Hz
Power..............................................................................170VA
Fuse............................................AC250V T4.0A, AC125V T8.0A
Electric safety standard...................................................IEC601-1
Whole Packing Volume................................................0.756CBM
Carton Number....................................................................5
G/weight.......................................................................215kgs



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### OPTIONAL ACCESSORY

•Teaching tube, Beam Splitter.
•1/3" CCD Camera, CCD Adapter, Beam Splitter and relevant cables.

## SOM-2000DX OPERATION MICROSCOPE

(HIGH TECHNOLOGY & ZOOM)

### CHARACTERISTICS

•Develop from SOM-2000D, with the illumination source of 100W medical Xenon lamp which provides a clear and fine observations.
• -2° and +6° coaxial illumination greatly improve the intension and range of red light reflex.



Xenon lamp

## SOM-2000E OPERATION MICROSCOPE

Electromagnetic lock and balance technology of the microscope ensure the easy operation and stable orientation. Developed from model SOM-2000D.

### FEATURES

•Electromagnetic lock and balance technology of the microscope ensure the easy operation and stable orientation.
•6°±2°coaxial illumination results in the stronger red light reflection and sharper image of posterior capsula.
•The cold light source is bright and uniform enough, which has no harm to tissue.
•Germany optics and Apochromatic technology ensure clear field of view and high resolution.
•Retinal aspherics and BIOM added on objective could meet the demand of posterior operation.
•The equipment is applied not only in ophthalmic operation, but also in neurosurgical, ENT, Cardio-Thoracic Surgical operations, etc.







### SPECIFICATIONS:

Eyepiece Magnification.........................................12.5X/18B
Magnifications of Main Microscope.........4.6X~27X(8.5~46 mm) zoom magnification
Magnifications of Assistant Microscope..............6.2X,9.3X,14X
Focus.................................................................................f=200
Working Distance...............................................................195mm
Adjustable Diopter...............................................................±6D
Adjustable Range for Pupil Distance....................55mm~75mm
Illumination Type...................................6° coaxial illumination 6°±2°coaxial illumination
Coaxial Illumination...............................................≥50000lx
Maximum Height of Microscope..................................1710mm

Reaching Radius of Arm........................................1320mm
Balanced Arm Adjustable Range.............................±300mm
Adjustable Vertical Range.........................880mm~1420mm
Lens Inclination Range.......................-40°(back)/90°(front)
Fine Focus Range..................................................50mm
Fine Focus Speed...............................................≤2mm/s
Range for X-Y.........................................50mm×50mm
Speed for X-Y.......................................................≤2mm/s
Illumination Source.......................15V/150W, Cold-reflection halogen lamp for medical use
Electrical Safety Standard.....................Conform to Standard GB9706.1-2007, Class I

CE FDA

## YZ-20T4    OPERATION MICROSCOPE(multi-function)

Five-step magnifications for main microscope, three-step magnifications for assistant microscope.
Lens made of imported glass from Germany can reduce the optical aberration. All of the lens are
multi-coated, mildew-proof and anti-reflection.
Equipped with three Objectives and applicable to OPHTHALMOLOGY, ORTHOPAEDICS, SURGERY.
Oblique illumination can be used for slitting and slitting width is adjustable.
X/Y movement can be automatically centered.

MODOP®
YZ20T4

Foot Control

CE FDA

**OPTIONAL ACCESSORY**
•Teaching tube.
•1/3" CCD Adapter and relevant cables.

**SPECIFICATIONS**

Magnification of Eyepiece........................................................12.5X/18B
Adjustable Dioptor...........................................................................±7D
Adjustable range for Pupil Distance........................................50mm~75mm
Illumination Source.............................................12V/100W, Halogen Lamp
Coaxial Illumination.....................................................................≥50000lx
Oblique Illumination.....................................................................≥45000lx
Reaching Range of Arm...............................................................1040mm
Adjustable Vertical Range..............................................850mm~1350mm
Fine Focusing Speed and Range.....................................≤2mm/s, ≥50mm
Speed for X/Y and Range.......................................≤2mm/s, 50mmX50mm
Voltage..........................AC220V±10%/50Hz±1Hz, AC110V±10%/60Hz±1Hz
Power...........................................................................................330VA
Fuse...............................................................AC250V T4A, AC125V T8A
Electric safety standard...........................................GB9706.1-2007 type 1
Whole Packing Volume...............................................................0.727CBM
Carton Number.....................................................................................5
G/weight....................................................................................210kgs

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| Objective/Working Distance(mm) | Magnifications of Main Microscope | Magnifications of Assistant Microscope | Diameter of Field(for Main Microscope)(mm) |
|---|---|---|---|
| F200/190 | 4X<br>6X<br>10X<br>16X<br>25X | 6X<br>10X<br>16X | Φ58<br>Φ38<br>Φ23<br>Φ14<br>Φ9 |
| F250/240 | 3.2X<br>5X<br>8X<br>12.8X<br>20X | 5X<br>8X<br>12.8X | Φ72<br>Φ46<br>Φ29<br>Φ18<br>Φ12 |
| F300/290 | 2.7X<br>4.2X<br>6.7X<br>11X<br>17X | 4.2X<br>6.7X<br>11X | Φ87<br>Φ55<br>Φ34<br>Φ22<br>Φ14 |

## YZ-20P5    OPERATION MICROSCOPE

(OPHTHALMOLOGY)

**SPECIFICATIONS**

Magnifications of Eyepiece......................................12.5X/16B
Objective.................................................................200mm
Working distance.....................................................190mm
Magnifications of main microscope.......................5.3X,8X,12X
Diameter of field..............................Φ38mm,Φ25mm, Φ17mm
Adjustable dioptor........................................................±7D
Adjustable range for pupil distance.....................50mm~80mm
Illumination source..........................12V/100W, Halogen Lamp
Maximal resolution.............................................100LP/mm
Illumination type............................6°+0° Coaxial Illumination
Coaxial Illumination................................................≥30000lx
Reaching range of arm..............................................870mm
Adjustable vertical range.............................700mm~1100mm
Fine focusing range...................................................30mm
Voltage......AC220V±10%/50Hz±1Hz, AC110V±10%/60Hz±1Hz
Power......................................................................120VA
Fuse.........................................AC250V 1.25A, AC125V 2.5A
Safety Electrical Standard.....................GB9706.1-2007 type 1
Carton Number...............................................................1
Whole Packing Volume...........................................0.2CBM
G/weight.....................................................................41kgs

MODOP®  YZ20P5

**OPTIONAL ACCESSORY**

•1/2" or 1/4" CCD Camera, CCD Adapter, Beam Splitter and relevant
  cables.
•Straight Binocular Tube, Universal Structure (for ENT).
•Five Objectives: f175mm(standard), f250mm, f300mm, f350mm,
  f400mm (12.5X eyepiece)
•10X eyepiece
•Desktop Parts (Holding Bracket, Column).
•Portable Package (including two aluminum case and a suitcase
  with castor).

K

## T605 TOOL SET

Quantity of the tool total: 13pcs
Plier: 7pcs
Screwdriver: 6pcs

## T606 TOOL SET

Quantity of the tool total: 16pcs
Pliers: 9pcs
Screwdriver: 6pcs
File: 1pc

## T608 TOOL SET

FOR SEMI-RIMLESS GLASSES

## T604 TOOL SET

FOR RIMLESS GLASSES

## T634 TOOL SET

8 slots of pilers,
6 slots of screwdrivers

## T619 SCREWDRIVER SET

## T602 SMALL SCREWDRIVER

L

# ACCESSORIES

**B1101 12V30W**
Bulb for Slit Lamp
YZ-5J/5F/5F1

**B1102 12V30W**
Bulb for Slit Lamp
YZ-5S/5G

**B1103 6V20W**
Bulb for Slit Lamp
YZ-5X/5X1

**B1201 6V20W**
Bulb for Slit Lamp
S350 series

**B1301 6V30W**
Bulb for Slit Lamp
SL-700 series

**E2201 12V50W**
Bulb for Projector
ACP-1000

**E2101 3.7V5W**
LED Bulb for Projector
NH-500LED

**K2111**
Ink of lensmeter

**H2101 3.5V2.5W**
Bulb for Retinoscope
YZ-24/24B

**H1101 3.5V2.8W**
Bulb for Ophthalmoscope
YZ-11D

**H1201**
Bulb for Ophthalmoscope
DM6D

**H2201**
Bulb for Retinoscope
SR24A

(Aluminum)

**B1112**
Chin-rest rack riser

**B1115**
Chain cover of YZ slit lamp

**A1201**
Thermal printing paper
ID:14mm, OD:38mm, L:56mm

**B1121**
Chinrest Paper

M

## STANDARD PLUGS FOR DIFFERENT COUNTRIES

**EP-3** Euro VDE Plug

**AP-3** American UL Plug

**UKP-3** UK BS Plug

**SAP-3** S. A. SABBS Plug