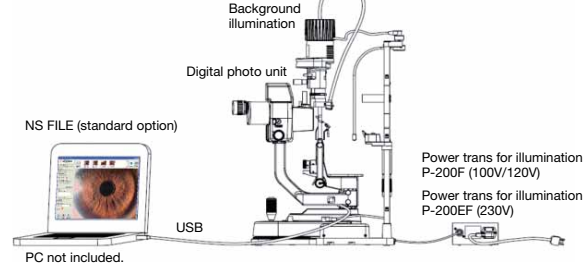
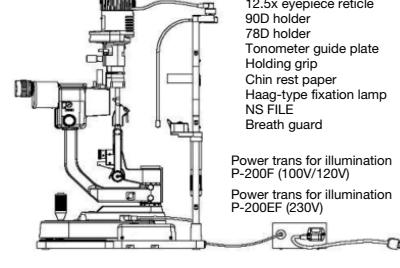


System Diagram

Digital Photo Set



Clinical Set



NS FILE (standard option)

Each slit lamp requires its own software.

Patient Information Screen



Patient Information
ID, Full Name, Sex, Birthday, Text Memo

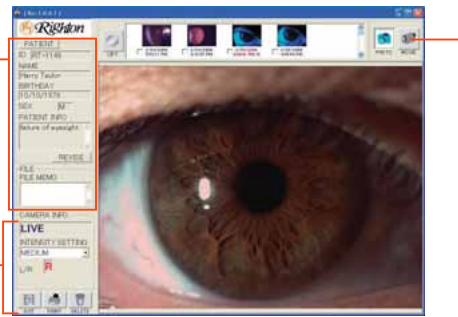


Image mode switch (stills or video)
Image capture conditions: Left/Right/Auto, text memo
Brightness: LIGHT/MEDIUM/DARK

Language:

UNICODE-compliant

NS-2D Major Specifications

Microscope	
Type	Greenough type
Variable magnification	Continuously variable magnification by manual zoom
Angle of inclination	12.5°
Objective magnification	-0.47x to -2.6x (zoom ratio: 5.5)
Eyeiece magnification	12.5x, 15x
Total magnification	5.9x to 32.5x (with 12.5x eyepiece), 7.1x to 39x (with 15.0x eyepiece)
Magnification click stops	6x, 10x, 15x, 20x, 25x, 30x, 32.5x (with 12.5x eyepiece) 7.2x, 12x, 18x, 24x, 30x, 36x, 39x (with 15.0x eyepiece)
Eyeiece diopter adjustment range	-8D to +8D (with 12.5x eyepiece), -6D to +6D (with 15.0x eyepiece)
PD adjustment range	55 mm to 75 mm
Barrier filter	Built-in, dial in/out
Illumination system	
Type	Goldman type
Light source	12V-30W halogen lamp
Slit projection magnification	1x
Slit width	0 mm to 16 mm continuously variable
Slit rotation angle	90° to right and left
Slit length	ø0.2, 1, 2, 5, 10, 14, 16 mm, 0 to 12 mm continuously variable
Slit vertical angle	0°, 5°, 10°, 15°, 20° from lower angle
Filters	Heat absorbing, ND (28% reduction), red-free, blue, UV cut (regular use)
Halogen lamp voltage	5 to 12V, 12.5V (boost)
Arm unit	
Rotation angle	90° to right and left
Cross slide table	
Horizontal movement	100 x 110 mm (joystick operation)
Vertical movement	30 mm (joystick rotation)
Control switches	Shutter switch (on top of joystick) Illumination adjustment knob (on the cross slide table) Boost switch (on the cross slide table) R/L selector switch (on the cross slide table)
Electrical specifications	
Input voltage	AC100V/120V (P-200F), AC230V(P-200EF)
Power consumption	82W (max.)

Dimensions	
Distance from table top to patient's eye	375 mm
Working distance	100 mm
Reaching distance (from eyepiece to patient's eye)	314.0 mm (with 12.5x eyepiece) 316.4 mm (with 15.0x eyepiece)
Distance from table top to optical axis	339 mm
Main body	330 (W) x 735 (H) x 405 (D) mm
Weight	
Main body	Approx. 13.0 kg (without CCD imaging unit) Approx. 13.5 kg (with CCD imaging unit)
Power trans. for illumination (P-200F)	Approx. 2.3 kg
CCD imaging unit	
CCD	1/1.8" CCD, 2,010,000 effective pixels
Still image output	1600 x 1200 pixels (UXGA)
Video image output	800 x 600 pixels (SVGA)
Frame rate	Max. 30 fps
Beam-split ratio	70% for camera and 30% for eyepiece
Operating environment	
OS	Windows XP (32-bit only), Windows Vista (32-bit only)
CPU	Recommended: Pentium (Dual-Core) 2.0GHz or greater
Memory	XP: 1GB or above, Vista: 2GB or above
Hard disk	Still image: Approx. 200KB per file Video: Approx. 200MB per minute
Interface	USB 2.0
Monitor	XGA (1024 x 768 pixels) or greater
NS FILE	
Still image shooting	Review display time setting: 1 to 10 sec.
Still image format	JPEG
Movie shooting	Automatic termination time setting: 10 to 180 sec.
Movie format	AVI (MPEG-4 codec, on CD)
Patient information	Search by ID, full name, sex
Shooting data	Shooting date and time, R/L information (auto entry), text memo
Print	Print format, PREVIEW, printer setting
Language	UNICODE-compliant

WARNING: To ensure correct usage, read all manuals carefully before using equipment

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. The information in this brochure is valid as of June 2009.

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Zoom Slit Lamp NS-2D

Clinical Set / Digital Photo Set



Either a 12.5x or 15.0x eyepiece comes as a standard accessory, while the other is optional.



Breath guard

- 12.5x eyepiece set
- 15.0x eyepiece set
- 12.5x eyepiece reticle
- 90D holder
- 78D holder
- Tonometer guide plate
- Holding grip
- Chin rest paper
- Haag-type fixation lamp

Note: Righton does not manufacture tonometers.



Genuine Zoom Slit Lamps from *Righton*

New-generation Zoom Slit Lamp NS-2D Clinical Set

- Conversion-type zoom microscope (12.5°)
- 5.5x wide zoom ratio, yet a shorter reaching distance of 317 mm and a longer working distance of 100 mm.
- Two eyepiece options are available.
12.5x eyepiece: Total mag. 5.9x to 32.5x (field of view: 38.3 mm, image circle: 18.0 mm)
15.0x eyepiece: Total mag. 7.0x to 39x (factory option)
- Sharp and clear high-resolution zoom optics — inherited technology

PD adjustable with one hand only

Right and left eyepiece tubes are synchronized, so PD can be adjusted with one hand only.



PD adjustment:
52 mm to 75 mm

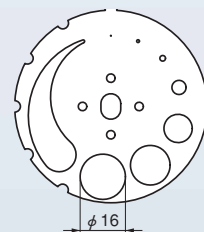
Wider eyepiece diopter adjustment range



Eyepiece diopter adjustment range has been widened to $\pm 8D$. The high eyepoint finder facilitates viewing of images. (With 12.5x eyepiece)

Slit length

The maximum slit length is 16 mm. Preset lengths of $\phi 0.2$, 1, 2, 5, 10, 14 mm and continuously variable lengths of 0 to 12 mm are also available.



(Photos for illustrative purposes only)

Wide view & high magnification

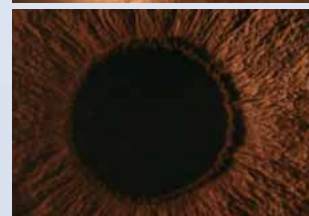
With 12.5x eyepiece:

5.5x wide view; operator can see all of anterior segment when using slit length of 16 mm. (Diopter adjustment range is $\pm 8D$.)



With 15.0x eyepiece:

Magnification up to 39x (Diopter adjustment range is $\pm 6D$.)



Built-in barrier filter (standard equipment)

Simple dial operation makes it easy to set filter on and off.



Fixation lamp

Easy-to-use flexible arm; yellow-green LED



Wide-angle isocentric movement

When isocentric knob is loosened, slit can be widened 8 mm to right or left. Convenient for retroillumination and scleral scattering for corneal surface.



Boost switch

Boosts illumination to maximum 12.0V



Filters

Heat-absorbing filters x 2 pcs, ND (28% reduction), red-free, blue

Slit tower tilting

Slit tower can be tilted, with stops at 5°, 10°, 15° and 20°.

Note: Righton does not manufacture tonometers.

New-generation Zoom Slit Lamp NS-2D Digital Photo Set

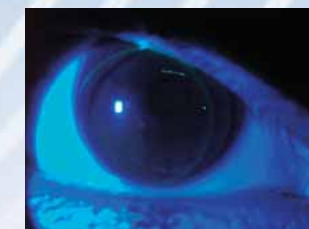
- Images can be captured with a simple press of the joystick button.
- CCD digital images (1/1.8-inch CCD, UXGA 1600 x 1200 pixels)
- Both video and still images can be captured.
- Still images can be captured from video.
- No delay on motion image with frame rate of maximum 30 fps
- Movie SVGA: 800 x 600
- When the cross slide table is moved, NS2D automatically distinguishes between right and left eye.
- Three brightness levels are available for NS FILE that suit eye color pigmentation or condition of patient: [LIGHT] (blue, green, hazel, etc.), [MEDIUM] (light brown) and [DARK] (dark brown).
- Image capture files
Original NS FILE is available as a standard option.
- Beam-split ratio is 70 for camera and 30 for eyepiece.
- A CCD digital set can be mounted on the NS-2D Clinical Set.



Anterior segment



Endothelium



Blue filter



Iris (Tangential Illumination)



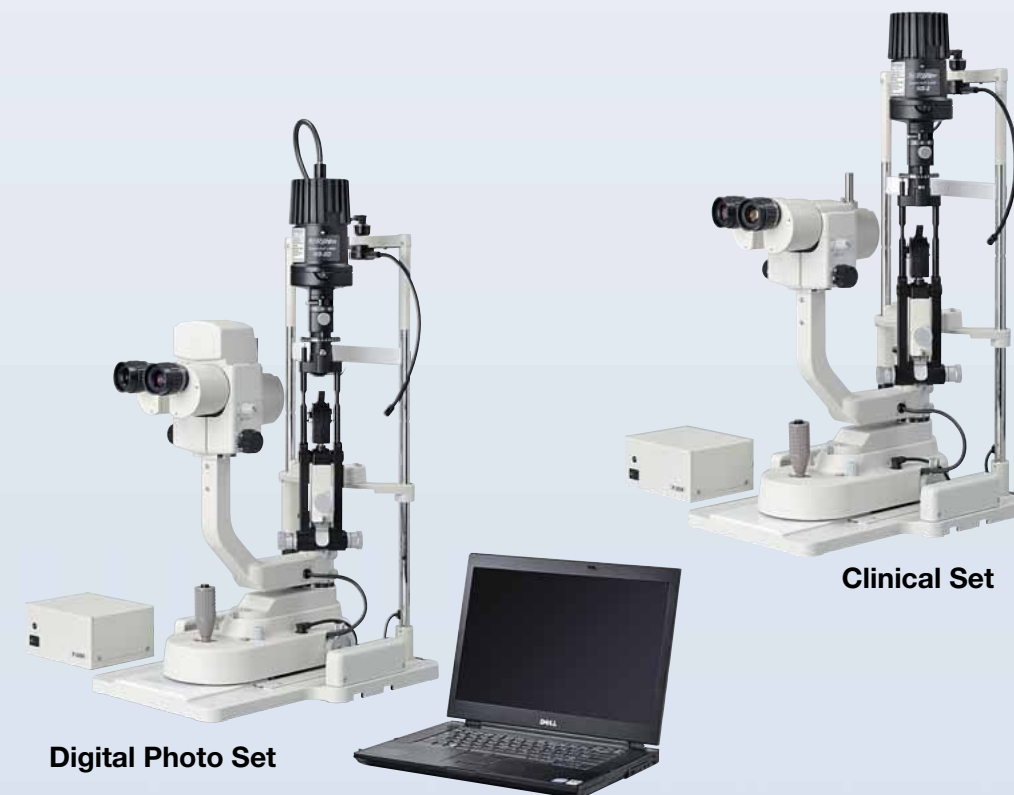
Conjunctiva



Corneal Surface (Sclera Scattering)



Cornea (Background Illumination On)



Digital Photo Set

Clinical Set

Note: NS FILE cannot be used with the RS-1000.

When connecting to an outside filing system, Righton will release SDK and API information to the vendor or manufacturer of the filing system.