



Symphony
by Keeler
BY KEELER
Symphony

Beautifully
Crafted
Slit Lamps

Keeler
www.keeler-symphony.com



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Symphony



Painstakingly crafted Slit Lamps

Introducing Symphony from Keeler – quality design and leading technology Slit Lamps with a contemporary design. It's very simple. We set ourselves the task of designing a slit lamp to exceed performance expectations. Our exemplary attention to detail has helped us to achieve just this. The result is Keeler Symphony, combining intricate performance with practical elegance.



“A symphony is like
the world. It must
contain everything”

Gustav Mahler


Elegant design

Keeler is known for exceptional design ability. We have combined classic beauty with modern technology, resulting in the perfect blend of style and substance.

Keeler Symphony provides the functionality and performance you want, need and expect from a Slit Lamp.

The controls are perfectly placed for ease of use, without compromising the clean and elegant lines of the product. Our design flair gives the product a sleek, beautiful profile.





“The world never needed
Beethoven’s Fifth Symphony
until he created it. Now we
could not live without it.”

Louis I Kahn

Exceptional optics

Keeler is renowned for market-leading optics and has been dedicated to optical design and manufacture for nearly 100 years. Our customers have absolute confidence in the quality, accuracy and reliability our optical design delivers.

Our advanced design and manufacturing techniques give Keeler Symphony the advantage of quite simply stunning optical performance.



Keeler
OPTICS



Keeler

Safety as standard

Keeler Slit Lamps have been rigorously designed and tested to comply with the most stringent medical device safety standards, set by global regulatory authorities.

Outstanding reliability

We understand how important the Slit Lamp is to your practice. You rely on it to provide accurate diagnostic and examination results day in, day out. Failure is simply not an option.

With Keeler Symphony, you can rest assured that our exceptional attention to detail, on every single component, will ensure optimum performance and reliability time after time. You also benefit from the added confidence of knowing your Keeler Symphony is backed by our 3 year guarantee.



Peace of mind with our 3 year warranty

Your new Keeler Slit Lamp comes with the piece of mind of a 3 year warranty. You will have access to our comprehensive online help pages and our global telephone and email technical assistance team.



Embrace and enjoy the change

When you use the Keeler Slit Lamp, you'll quickly appreciate the difference and realise what's missing from your current device. Technology has advanced, optics have greatly improved – making the Keeler Slit Lamp simply a pleasure to use. Make the change to Keeler and enjoy the difference.

With Keeler, it's all about the optics



Refraction and Combi-unit ready

Attaching the Symphony Slit Lamp to your unit couldn't be easier. We've kept the technician front of mind when developing the fitting mechanics to ensure you can be up and running in no time.

Our unique Slit Lamp power management system allows input from both DC (direct current) and AC (alternating current) sources to give a 6V DC, 12V DC or a constant current (CC) output.

INPUT	OUTPUT
12v DC	6V DC, or CC
24V DC	6V DC, 12V DC or CC
12V > 16V AC	6V DC, 12V DC or CC



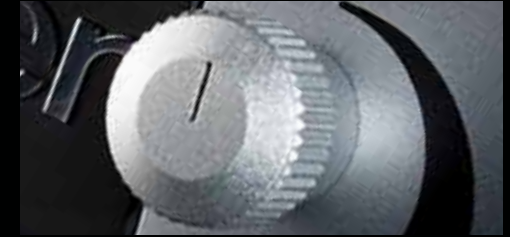
Integrated Yellow Filter

Ease of use is key to Keeler's product development. This is why our designers have integrated the all-important yellow filter into the optical body. You simply need to 'drop it in' when you are looking to detect subtle corneal staining - no more fumbling around with hand held wratten filters.



Built in diffuser

The Symphony Slit Lamp has been built with an integrated diffuser in the filter wheel. Another nice design touch - instant access to a diffuse light which gives an improved general overview of the eye under examination.



On board illumination control

The illumination control panel has been placed close to the joystick, giving you convenient and constant access to this vital control.



“I hadn’t heard
a symphony
orchestra before,
and I was so
deeply impressed
I said I have to be
a conductor.”

Kurt Masur






Let there be LEDs

50 years ago, the LED was leading edge technology. Today it comes as an optional, simple to replace light source for the Keeler Symphony. The Symphony comes with a Halogen Lamp as standard, but offers the powerful LED module if that's your preferred light source.

Our LED has been carefully selected for its performance, with a colour temperature of 3,800k, and a truly homogeneous light patch. The imperceptible increase in blue light levels will increase efficiency when fluorescence is required and give increased detail to small structures, such as the endothelium.

Most halogen lamps have a life of around 100 hours. Typically, a Keeler LED will provide 10,000 or more hours, giving you 100 times the life of your halogen lamp. A small additional initial investment will reap significant lifetime cost benefits.



Keeler – Unrivalled experience in design and manufacturing

Keeler's sites in Windsor and Barnsley are at the heart of our design and manufacturing. With over 3000 square metres of factory at our disposal, we can easily meet the manufacturing requirement of our sales projections for many years to come.

With close to 100 years experience, Keeler manufactures and provides quality optical devices for medical professionals worldwide, through our extensive distributor sales and support network. Wherever you are in the world, Keeler will have a presence.

Handy additions

Choose from a range of diagnostic accessories that will perfectly complement your Keeler Slit Lamp.



Volk Digital lenses

The Digital Series of lenses is Volk's 3rd generation of patented double aspheric optic lenses. These are an evolution of the Classic Slit Lamp (eg. 90D) and Super Series lenses, with features to deliver the highest resolution retinal imaging of any non-contact lenses. The shape of the lenses, and a coating optimized for visible light, reduce the incidence of glare and reflections and maximise traditional examination and digital slit lamp photography results.

LENS	OUTPUT	IMAGE MAG.	LASER SPOT SIZE	PRIMARY APPLICATION
Digital High Mag Lens	57° / 70°	1.30x	0.77x	Highest resolution, high magnification imaging of the central retina
Digital Wide Field Lens	103° / 124°	0.72x	1.39x	Highest resolution pan retinal examination
Digital 1.0x Imaging Lens	60° / 72°	1.0x	1.0x	Highest resolution, diagnosis of the posterior pole and reduced glare and reflections

Motorised Instrument Table

The Keeler table comes with castors as standard and a virtually silent motor. Two IEC female power outlets and a switch mode power input make the Keeler table the perfect partner for your new Keeler Symphony Slit Lamp.



Tonometers

Choose from the T type or R type KAT (Keeler Applanation Tonometer).

The T type is removable and conveniently fits into a shaped guide plate that, in turn, fits in the test bar locating hole.

The R type is fitted to a mounting post, located on the optics block, and can be swung in and out for use, as required.



R type

T type



Keeler Lenses and Optics

As you'd expect from Keeler, brilliant stereoscopic imagery, high chromatic correction and crisp clarity come as standard with the Symphony Slit Lamp. We use high anomalous dispersion glass within the 15 element optical system to achieve this.

Combining top quality materials with our superior optical design enables us to achieve remarkably low field curvature and low optical distortion levels.

And to further enhance the optical performance, all glass to air surfaces are multi-layer coated to improve light transmission.



Slit Lamp Specification

OPTICAL SYSTEM

Type	Galilean converging binoculars @ 8°
Magnification	Rotating drum change x6, x10, x16, x25 & x40
Eyepiece	x12.5
Field of view	34, 22, 14, 8.5 and 5.5 mm
Interpupillary distance	49.0 to 77mm
Objective lens focal distance	107mm
Objective lens convergence angle	13°

SLIT PROJECTION SYSTEM & BASE

Slit Width	0-12mm continuously variable
Slit Length	12mm (1mm – 12mm continuously variable)
Aperture diameters	0.2, 1mm square, 2, 3, 5, 9 and 12mm
Filters	Clear; red free; neutral density; diffuser; blue; IR heat absorbing filter permanently installed
Slit angle	+/- 90° continuous
Slit rotation	+/- 180° with reference scale
Slit vertical Tilt	0°, 5°, 10°, 15° & 20°
Base travel	25mm Z-axis, 107mm X-axis, 110mm Y-axis
Horizontal fine adjustment	12mm
Table top dimensions	405 x 500mm
Fixation lamp	LED
Light source	LED / 6V 20W Halogen lamp

WEIGHT, PACKED (APPROX.)

Slit Lamp with chinrest	20.0Kg, 75 x 54 x 45cm W x D x H
Table top with PSU & Acc drawer	5.2Kg, 51 x 42 x 15cm W x D x H

SYSTEM COMPONENTS

	Part number
Slit Lamp Symphony 40H, Standard Set complete with Table Top Slit Lamp PSU	3020-P-2000 3020-P-5032 3020-P-5040
Slit Lamp Symphony 40H, Refraction Unit Set Slit Lamp Power Supply and Socket Kit	3020-P-2003 3020-P-5032 3020-P-7017
Slit Lamp Symphony 40H LED, Standard Set complete with Table Top LED Slit Lamp PSU	3020-P-2007 3020-P-5056 3020-P-5040
Slit Lamp Symphony 40H LED, Refraction Unit set LED Slit Lamp Power Supply and Socket Kit	3020-P-2006 3020-P-5056 3020-P-7017
The power supply forms part of the ME Equipment	

PROTECTION AGAINST INGRESS IPx0

CLASS II ME EQUIPMENT

Insulation between mains parts and the functional earth provide at least two means of protection.

POWER SUPPLY

	Part number
Power supply unit	Switch mode, (110V – 240V input) +/- 10% multi plug compliant to EN60601-1 EN 61000-6-2, EN 61000-6-3 3020-P-5040/ 3020-P-7017
Power supply output	12V DC: 2.5 amps must be IEC/EN 60601 compliant
Complies with	Electrical Safety (Medical) BS EN 60601-1 Electromagnetic compatibility EN 60601-1-2 Ophthalmic instruments - Fundamental requirements and test methods ISO 15004-1 Ophthalmic instruments - Optical radiation hazard ISO 15004-2

ENVIRONMENTAL

	Temperature	Humidity	Pressure
Use	+10°C to +35°C	30% to 90%	800 hpa to 1060 hpa
Storage	-10°C to +55°C	10% to 95%	700 hpa to 1060 hpa
Transport	-40°C to +70°C	10% to 95%	500 hpa to 1060 hpa

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