



## 2012 Catalogue

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All Keeler products are designed to offer the ultimate in professional performance.

They are the result of the constant pursuit of perfection combining the aesthetic and ergonomic.

**Keeler**



## Keeler - almost a Century of innovation

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When you buy a Keeler instrument – What are you buying? Almost a century of experience in optics! Keeler has been manufacturing ophthalmic instruments since 1917. We continue to lead the market with our innovative instruments. This has been achieved through our continuous program of customer involvement in the design process to ensure our instruments meet the rigorous demands of daily practice.



### UK manufacturer

We still manufacture and assemble our instruments in the UK. Combining optical precision, high quality illumination, ergonomic design and lightweight, durable materials to provide you with the best possible choice of equipment.

### Reliability

The warranty on Direct Ophthalmoscopes, Retinoscopes and Indirect Ophthalmoscopes is 3 years with the exception of batteries and power supplies. All other products carry a one year parts and labour warranty.

### Service

Keeler Technical Services will carry out repairs and routine maintenance to your equipment on your premises or in our workshop in Windsor – whichever is more appropriate.

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## Indirect Ophthalmoscopes

Keeler are the No.1 supplier of Indirect Ophthalmoscopes in the UK



Since the launch of the Keeler Fison Indirect Ophthalmoscope in 1957, Keeler has established its reputation for providing the most durable and reliable Indirect Ophthalmoscopes available today. The introduction of wireless technology, bright, white, LED illumination and our new ground breaking Vantage Plus Digital, designed to capture still or dynamic images on your PC, are just some of our latest innovations. Read on to find out more.

### New Vantage Plus Digital Ophthalmoscope

As the world leader in binocular indirect technology we lead the way again with the first digital binocular indirect system. Not old analog video but true digital imaging.

### New LED exclusively on Vantage Plus, Spectra Plus and now All Pupil II

The LED cooler colour provides a brighter, whiter illumination providing greater detail, allowing you to find retinal pathology that is not visible with Xenon illumination.

### Comfort and balance

Lightweight materials with soft cushioning and a non slip contoured shaped headband maximise comfort and balance, particularly important during long examinations.

### Clear, sharp images – enclosed KeeView Optics™

Our optics are specially coated and individually laser aligned to provide the sharpest, clearest images every time.

### Adjustable brilliant illumination

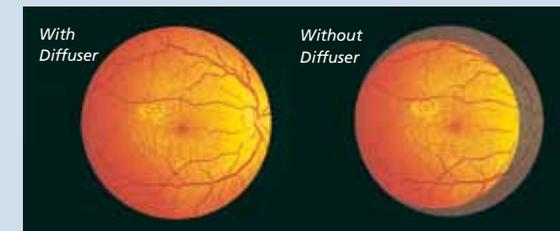
Why have all of the controls on the wall when the instrument is on your head? On the All Pupil II and Vantage Plus the illumination rheostat is located on the headband providing easily accessible fully controllable light. Keeler indirects have the brightest illumination that can be turned down to as low as 2% of maximum if required.

### Wide angle diffuser

The Keeler wide angle diffuser eliminates shadows on the edge of the condensing lens expanding the field of view significantly, particularly useful during difficult and peripheral examinations. There is also less discomfort for the patient because the light is softer.

### Apertures, graticules and filters

-  **Red Free** - This filter is used to examine blood vessels in fine detail. By filtering out the red light, blood vessels are silhouetted black against a green background.
-  **Cobalt Blue** - This filter is used with fluorescein dye for angiography.
-  **Large Aperture** - Ideal when examining fully dilated pupils.
-  **Intermediate** - Ideal for children and sensitive patients.
-  **Small Aperture** - Ideal for undilated pupils.
-  **Diffuser**





## Vantage Plus Digital

As the world leader in binocular indirect technology we lead the way again with the first digital binocular indirect system. Not old analog video but true digital imaging. Utilize the Vantage Plus Digital Wireless in your office, operating room, and teaching facility or anywhere you want to capture digital images.

### Keeler Software

The intuitive, easy to use, Keeler Software allows you to use your PC to provide still or dynamic images, which aid in the documentation and diagnosis of your patient.

Compatible with Windows 7 and Windows XP.

### Increase your practice profile

Educate your patients and their family with digital dynamic imaging in your office.

### USB interface

Plugs into your PC to record examinations in digital format.

### Vantage Plus LED Slimline Wireless

Built on the number one selling LED and wireless slimline system.



P D Range: 48 - 76mm

### Part number

1205-P-5010 Vantage Plus Digital Indirect Ophthalmoscope



*Note: The distance and range will vary with differing refractive errors of the user. To maximise performance of this product, the user should use refractive error correction aids and adopt a working distance of around 450mm (front of instrument to eye under test) when used with a 20D lens.*

# Vantage Plus Digital Technical Specifications

### Camera

- Interface** USB 2
- Supply** Taken from USB 2 interface
- Resolution** To test pattern 6 of group 2 on the 1951 USAF TEST PATTERN (conforms to MIL-STD 150A standard), when used in combination with a 20D lens
- Lead** To connect camera to PC, Keeler recommends a maximum of 5m long USB 2.0A to mini 5 pin (sometimes packaged as USB 2.0A to mini B lead)

### Convergence

- Range** The camera image can be adjusted  $\pm 7$  degrees

### Working distance

- Range** Nominal working distance of 440mm. The resolution value given above will be maintained at 350mm to 650mm distance from instrument to the eye under examination with a 20D lens

### Operating System

- Use with** Windows 7 and Windows XP

### Vantage Plus

- Controls** All controls and features of the Vantage Plus have been maintained

### Adjustment

- Vertical adjustment** The vertical adjustment is achieved by rotating the adjustment screw on the mirror holder. The image should be adjusted such that the light patch is in the centre

- Horizontal adjustment** Factory set

- Depth of Field**  $\pm 35$ mm @ 440mm

### Physical

- Size** The Vantage Plus Digital is approx. 50mm longer than the standard Vantage Plus
- Weight** The total weight of the complete Vantage Plus Digital is 662g (Vantage Plus is 596g)



## Vantage Plus LED Convertible Choice of illumination

We are delighted to present the new, exclusive Vantage Plus LED Convertible. When you purchase the Vantage Plus LED you will automatically receive a Xenon Bulb so you can decide which illumination you prefer without any extra cost!

### Natural LED cooler colour

The natural LED cooler colour provides brighter, whiter illumination, longer battery life, freedom from purchasing bulbs and a life expectancy of up to 10,000 hours.

Clinically, the superior optics combined with the natural LED illumination could provide greater detail, allowing you to find retinal pathology that was not visible with the Xenon bulb.



Vantage Plus LED

### New Slimline Lithium Polymer battery

Our new Slimline Lithium Polymer battery weighs only 53 grams and is as light and as small as the new mini iPod.



P D Range: 48 - 76mm

- Comfortable and perfectly balanced
- Wireless technology allows you to move from room to room
- Combined natural LED and Lithium Polymer battery can provide up to 6 hours of use on a single charge

### Quality and efficiency

The new high contrast optics combined with the new natural LED or Xenon light source offer brighter high definition retinal images - PLUS you get more life from whichever Keeler battery (Metal Hydride or Lithium) you use.

### 15% lighter

Advanced textured engineering materials provide a lighter, smaller and more compact instrument without compromising the renowned Keeler reputation for robustness, reliability and quality.

### Filters and Apertures

IR/UV filters are built into the optics of the Vantage Plus with optional filters and a choice of 3 apertures plus a soft light diffuser.

## Vantage Plus LED Convertible



### Unique - Intelligent Optical System (IOS) (Patented)

At last - now when you change the aperture the optics and mirrors automatically adjust for you, without the need to flip another lever! Keeler has designed this unique one step movement to make your examinations easier and faster. The (IOS) mechanism (patented) means that when you select the small, medium or large aperture the optics automatically adjust, providing 3 dimensional stereoscopic views of the retina through all pupil sizes.

#### Large Pupil

When looking through a large fully dilated pupil the optics are separated and the light source remains in the upper position, achieving maximum stereopsis.



#### Intermediate Pupil

The viewing optics and light sources are in a 'mid position' for maximum stereopsis.



#### Small Pupil

When looking through a small pupil the viewing optics and light source are converged to allow you to view the retina through the smallest pupils stereoscopically.



### Unique - The new HiMag™ lens just slides on and off with ease

This unique feature is only offered with the Vantage Plus indirect. It gives you 1.6X additional magnification than with a condensing lens alone, providing superb stereoscopic images. Scratch resistant coated optics guarantee high quality images at all times and HiMag™ can be simply flipped out of view when not required.

### Teaching mirror slides on and off with ease

Allowing two observers to view the retina at the same time.

#### Part numbers

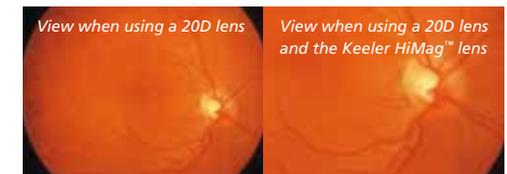
1204-P-1020	Wireless Vantage Plus LED Convertible
1204-P-1010	Wired Vantage Plus LED Convertible

#### Accessories

1202-P-7205	Vantage Plus Teaching Mirror
1202-P-7192	Vantage Plus Hi Mag Lens
1012-P-7006	Vantage Plus Bulbs (pack of 2)
1299-P-1028	Video Vantage including Camera in Carrying Case
3412-P-7000	Vantage Plus Carrying Case
1201-P-6075	Small Depressor
1201-P-6067	Large Depressor



HiMag™ Lens



For Wired Power Supplies see page 13



## All Pupil II

The All Pupil II is based on the design of the number one selling All Pupil indirect. Look out for the new features designed to make your examinations easier and more comfortable.

### Go Wireless patented technology

Leaves you free to move around without any wire or cord constraints.

### Outstanding brightness for difficult examinations

With 2000 lux of light, which can be turned down to 2% of total illumination when necessary, the All Pupil II offers maximum illumination with total control.

### Lightweight and comfortable

Weighing just 520 grams with extra padded materials.

### Simple controls

The All Pupil II has a unique single control to change aperture size and position in one movement to view through all pupil sizes.

### IR and UV barrier

There is a built in full time IR and UV barrier which guarantees improved patient protection and safety.

### New All Pupil II LED light source

Plugs simply into the back of the All Pupil II for brighter, whiter illumination and freedom from purchasing bulbs. The LED life expectancy is up to 10,000 hours and it has a 5 year warranty.



### Part numbers

1204-P-3041	Wireless All Pupil II Kit A with Power / Accessories
1204-P-3043	Wireless All Pupil II with Lithium Battery and Holder
1204-P-3038	Wired All Pupil II Kit A with Power / Accessories
1204-P-3036	Wired All Pupil II without Power

### Accessories

1205-P-5014	All Pupil II LED
1202-P-7117	All Pupil II Teaching Mirror
1012-P-7003	All Pupil II/All Pupil/Vantage Bulbs (pack of 2)
3412-P-7000	All Pupil II Carrying Case
1201-P-6075	Small Depressor
1201-P-6067	Large Depressor

For Wired Power Supplies see page 13





## Spectra Plus

The Spectra Plus has been specifically designed as a compact, lightweight and portable indirect with big benefits for professionals on the move. It can be tucked away in its neat carrying case or hung around your neck when not in use.

### LED long lasting illumination

No more bulbs! Just a long lasting, white homogeneous light patch.

### Supplied on the Keeler Sport Frame

A stylish wrap around frame providing maximum comfort and balance in a range of metallic colours.

### Variable PD

No restrictions. Just adjust your pd when you need it. It has a wide range between 48 to 76mm.

### Wear with your own prescription

You can wear your Spectra Plus over your frame or have your own lens prescription put in.

### Great Lightweight Lithium ion Battery

Simply clips on to your belt and can be stored in its charger when not in use. Provides up to 4 hours of continuous use.



### Flip up optics

The whole optical box and light pod can be flipped up allowing direct eye contact when talking to patients or for writing notes.

The Spectra Plus systems are supplied with a lithium battery, charger, indirect and choice of Keeler Sport Frame.

### Part numbers

1205-P-1000	Spectra Plus Indirect on Blue Keeler Frame
1205-P-1001	Spectra Plus Indirect on Red Keeler Frame
1205-P-1002	Spectra Plus Indirect on Black Keeler Frame
1205-P-1003	Spectra Plus Indirect on Sky Blue Keeler Frame

### Accessories

1205-P-7000	Spectra Plus Teaching Mirror
1919-P-5215	Spectra Plus Rechargeable Battery
1941-P-5385	Spectra Plus Lithium Charger and Battery
3412-P-7002	Spectra Plus Carrying Case
1201-P-6075	Small Depressor
1201-P-6067	Large Depressor



Keeler Sport Frames are available in the following finishes



Blue Red Black Sky Blue Pink



P.D. Range: 48 - 76mm



*Slimline Lithium Polymer Battery*



*Slimline Wireless Charger*

## Wireless Power Supplies

Keeler wireless technology allows you to move from room to room without any constraints. The chargers are either desktop or wall mountable and store an extra lithium battery as a back up, should you need it.

### New Slimline Lithium Polymer Battery

The New Slimline Lithium Polymer battery can give you up to 6 hours of use, weighs only 53 grams, and is nearly 70% lighter than the standard battery. It is also much smaller and can fit nicely into the palm of your hand.

### New Slimline Wireless Charger

The new wall mountable charger remains as durable as the Standard Wireless battery charger with the facility to store your extra battery in the top compartment. The charger has an easy release button to remove your extra battery.

### Standard Lithium Battery

Our original lithium battery lasts up to 11 hours of use and fits neatly into the charging unit.



### Standard Wireless Charger

The Standard Wireless Charger can be wall or desk mounted with space for a spare battery, which means you will always have a back up. An LED indicates when the battery needs charging.



*Slimline Lithium Polymer Battery*



*Standard Lithium Battery*

### Part numbers

1919-P-5338 Slimline Lithium Polymer Battery

1945-P-5012 Slimline Wireless Charger

1919-P-1013 Standard Lithium Battery

1941-P-1384 Standard Wireless Charger

## Wired Power Supplies

Whether your power supply needs to be stationary or portable Keeler Wired Power Supplies are robust and reliable.

### SmartPack

SmartPack is a stylish power supply system that combines 3 options in one product. No longer will you need to purchase a portable system for domiciliary use, another system for mounting on your wall and another for tabletop use.

### Fast charge and long life

Nickel Metal Hydride technology provides a genuine long life and a fast charge. Instruments can be used when battery is charging. LEDs indicate when battery life is low, charging or fully charged.



SmartPack

### WallPack

Alternatively, if your power supply needs to be stationary you can purchase the WallPack which fits neatly on the wall. Your indirect can be mounted on the bracket it comes with.

Which system is right for you?

Vantage Plus Usable Life		
Power Source	Natural LED	Bulb
Slimline Battery	6 hours*	1.5 hours*
Standard Battery	11 hours*	2.5 hours*
SmartPack	17 hours*	4.25 hours*

\* This measurement is based upon the illumination being used at normal examination power

### Part numbers

1945-P-1001	SmartPack
EP39-22079	SmartPack Battery
1945-P-1000	WallPack



WallPack

For Volk Indirect Lenses  
see pages 61-65



## Direct Ophthalmoscopes



A combination of optical perfection, superb ergonomics and versatile features make Keeler direct ophthalmoscopes the ideal choice. Whatever your requirement from basic examination to detailed diagnosis, there is a Keeler ophthalmoscope for you. The next couple of pages will guide your choice but first read on to discover the benefits shared by all Keeler ophthalmoscopes as standard.

### Keeler optical system – the more you see the better the diagnosis

Keeler's wide angle light beam and individual mirror alignment ensures that whatever the patient's pupil size, you will see the clearest view of the retina.

### Comfort and fit

With curved surfaces and subtle patient side marking, the contoured, curved ophthalmoscope head guarantees an optimal viewing angle and the smooth line surfaces ensure a patient friendly non-threatening instrument.

### Slimline handles

Keeler hand holds are supplied on a slimline, lightweight robust handle.

### Light, tough and built to last

Keeler ophthalmoscopes are built from resilient, lightweight materials to give you many years of trouble free service. High impact resistant covers combined with a strong, rigid chassis protect the carefully aligned optics.

### Controllable light for bright, clear images

The bright white Halogen or Xenon illumination is fully adjustable from zero. This ensures the comfort of your patients and the best possible diagnosis for you.

### Reflex free images

Individually controlled optics reduce the effect of corneal reflex whilst minimising shadows and providing clearer retinal visualisation.



### Apertures, graticules and filters

-  **Wide Angle** - Illuminates the largest area of fundus for the best general diagnosis through a dilated pupil.
-  **Intermediate** - Easier access through undilated pupils and in peripheral examination. Ideal for paediatric examination.
-  **Macular** - For examination of the macular region of the fundus where a larger beam would create excessive pupillary reaction or patient discomfort.
-  **Slit** - To determine retinal elevations and depressions, can also be used to assess anterior chamber depth.
-  **Glaucoma** - Projects a graticule onto the retina to assess the optic cup/disc ratio as an aid to glaucoma diagnosis.
-  **Fixation Cross** - Projects a graticule onto the retina for assessment of the degree and direction of eccentric fixation.
-  **Semi Circle** - Provides a combination of depth perception and field of view.
-  **Red Free** - Used to examine blood vessels in fine detail. Blood vessels are silhouetted black against a dark green background.
-  **Cobalt Blue** - Use with fluorescein dye for the examination of corneal scars and abrasions.



The World's  
finest Direct  
Ophthalmoscope

## Specialist

We recognise that illumination is of fundamental importance to good diagnosis. The re-engineered optics give 30% more Xenon illumination and because it is longer lasting, that means fewer bulb changes giving greater peace of mind.

### 30% more illumination

Re-engineered optics give 30% more illumination to get through, for example, cloudy media and cataracts.

### Lightweight and well balanced

Almost 50% lighter, the Specialist combined with the slimline handle is perfectly balanced.

### Expanded dioptre range

The most comprehensive lens range available in a direct ophthalmoscope, +44D to -45D lens range guarantees optimal diagnosis in any situation.

### Slimmer optics

Slimmer and enclosed viewing optics enable you to get closer to the eye providing a wider field of view.

### Premium hand made optics

The Morton Lens Track system, made up of individually ground glass lenses ensures an optimal view.

### New Cobalt Blue filter

The new blue filter can be used in conjunction with fluorescein dye for the detection and examination of corneal scars and abrasions.

### Pupillometer gauge

The pupillometer disc allows quick and easy estimation of pupil size.



### Part numbers

1132-P-1157 3.6V Specialist Ophthalmoscope on Slimline Handle

1132-P-1149 2.8V Specialist Ophthalmoscope on Slimline Handle

### Accessories

1011-P-7034 Pack of 2 Vista 20/Specialist Ophth. Bulbs 3.6V Xenon

1011-P-7042 Pack of 2 Vista 20/Specialist Ophth. Bulbs 2.8V Halogen



## Professional

The Professional Ophthalmoscope has been designed to ensure ultimate control. Lenses, graticules and filters can all be introduced at the touch of a fingertip without the need to pull away from the patient.

### Positive action maywheel and comprehensive lens range

The positive action, easy access, maywheel not only allows you to dial up the required lens quickly, but also gives you total control of where you are in the lens range making each exam quicker and easier.

The extensive range of +29D to -30D in single dioptre steps ensures easy examination of all ocular structures and covers a wide range of patient/user prescriptions. A quick step swing of +/- 20D helps speed up diagnosis.

### Xenon illumination

The Professional also uses Xenon illumination for a brighter and whiter long lasting light. Giving you more power and fewer bulb changes.



### Swing over filter

The red free filter for enhanced vessel examination can be used in conjunction with any of the 6 diagnostic beams.

### Brow rest

The integral soft brow rest allows for easy positioning and protects your lenses if you are a spectacle wearer.

Professional  
Ophthalmoscope  
bulb



### Part numbers

1128-P-1014 3.6V Professional Ophthalmoscope on Slimline Handle

1128-P-1013 2.8V Professional Ophthalmoscope on Slimline Handle

### Accessories

1011-P-7114 Pack of 2 Professional Ophthalmoscope Bulbs 3.6V Xenon

1011-P-7106 Pack of 2 Professional Ophthalmoscope Bulbs 2.8V Xenon



## Professional Combi Retinoscope

Optimised for outstanding performance with either a Streak or Spot beam with a simple bulb change.

### 600 lux of brilliant halogen illumination

The Professional Combi Retinoscope guarantees you enough light to refract even the most difficult eyes.

### Neutralisation check (Patented)

The only Retinoscope allowing rapid confirmation of neutralisation. In both Streak and Spot modes you can change the beam from divergent to convergent enabling you to cross check the accuracy of the neutral point. The ability to double check neutralisation in the upper position guarantees the assessment is correct every time.

### Precision magnetic control (Patented)

Improved 360° access to a single control for both rotation and convergence adjustments. The precision movements are achieved by use of rare earth magnet technology.

### Two position aperture

A simple finger movement allows a choice of 4mm or 1.7mm aperture to optimise brightness or resolution of the retinal reflex.

### Unique spectacle bar

An interchangeable soft pad is available for spectacle wearers.

### Part numbers

1302-P-1011 Professional Streak Retinoscope 3.6V

1302-P-1009 Professional Spot Retinoscope 3.6V

1302-P-1010 Professional Streak Retinoscope 2.8V

1302-P-1008 Professional Spot Retinoscope 2.8V

### Accessories Professional Combi Retinoscope Bulbs

1013-P-7009 Pack of 2 Professional Streak Retinoscope bulbs 3.6V

1013-P-7011 Pack of 2 Professional Spot Retinoscope bulbs 3.6V

1013-P-7008 Pack of 2 Professional Streak Retinoscope bulbs 2.8V

1013-P-7010 Pack of 2 Professional Spot Retinoscope bulbs 2.8V

### Vista Retinoscope Bulbs

1013-P-7009 Pack of 2 Semi Reflector or Full Aperture Streak Bulbs 3.6V

1013-P-7007 Pack of 2 Semi Reflector or Full Aperture Spot Bulbs 3.6V

1013-P-7008 Pack of 2 Semi Reflector or Full Aperture Streak Bulbs 2.8V

1013-P-7006 Pack of 2 Semi Reflector or Full Aperture Spot Bulbs 2.8V

Professional/  
Vista Streak  
Retinoscope bulb



Professional/  
Vista Spot  
Retinoscope bulb



## Ophthalmoscope/Retinoscope Sets and Wall Units



### Ophthalmoscope/Retinoscope Sets

You can purchase your Ophthalmoscope and Retinoscope in a slimline double handle case and add in a Lithium Double Charger.

#### Part numbers

##### Specialist Ophthalmoscope/Retinoscope Sets

**1427-P-1063** Specialist & Professional Streak Ret. Set 3.6v Lithium Battery

**1427-P-1065** Specialist & Professional Spot Ret. Set 3.6v Lithium Battery

**1427-P-1062** Specialist & Professional Streak Ret. Set 2.8v Dry Cell Battery

**1427-P-1064** Specialist & Professional Spot Ret. Set 2.8v Dry Cell Battery

##### Professional Ophthalmoscope/Retinoscope sets

**1427-P-1059** Professional Ophth. & Streak Ret. Set 3.6v Lithium Battery

**1427-P-1061** Professional Ophth. & Spot Ret. Set 3.6v Lithium Battery

**1427-P-1058** Professional Ophth. & Streak Ret. Set 2.8v Dry Cell Battery

**1427-P-1060** Professional Ophth. & Spot Ret. Set 2.8v Dry Cell Battery

**1941-P-1368** Lithium Double Charger

**1999-P-7308** Wall Bracket for above

### Wall Units

Keeler's anti-theft designed Ophthalmoscopes and Retinoscopes have a lockable head and handle fitting so you'll always find them where you left them.

- Strong coiled tangle-free cable permits instrument use up to 3 meters from the transformer
- The robust construction is ideal for busy working conditions
- Automatic illumination when instruments are removed from cradle. With LED confirmation

#### Part numbers

**1964-P-2001** Double Cord handle power supply

**1132-P-1050** 3.6V Specialist Ophthalmoscope head only

**1128-P-1004** 3.6V Professional Ophthalmoscope head only

**1132-P-1042** 2.8V Specialist Ophthalmoscope head only

**1128-P-1003** 2.8V Professional Ophthalmoscope head only

**1302-P-1007** 3.6V Streak Retinoscope head only

**1302-P-1005** 3.6V Spot Retinoscope head only

**1302-P-1006** 2.8V Streak Retinoscope head only

**1302-P-1004** 2.8V Spot Retinoscope head only



Ophthalmoscope/Retinoscope Set



*If you require a wall unit you will need to order the transformer unit which comes with the 2 x handles and each individual head.*

Wall Unit



## Accessories

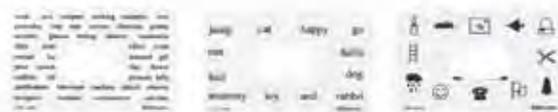


### Colour Coded Grips

Add a bit of colour to your diagnostic area with colour coded grips. Available in four colours these new grips are not only fun but functional too!

Available individually or as an assorted pack of four, choose from pink, green, blue or black.

### Near Point Cards for Retinoscopy



### Keeler Slimline Handles

Spare handles for your instruments available in 3.6V Lithium rechargeable (red base) or 2.8V Battery (blue base) options.



#### Part numbers

##### Colour Coded Grips

1901-P-7028 Pink

1901-P-7036 Green

1901-P-7044 Blue

EP29-05365 Black

1901-P-7052 Pack of Four Assorted Colour Coded Grips

##### Near Point Cards for Retinoscopy

1321-P-7021 Near Point Cards for Retinoscopy

##### Keeler Slimline Handles

1911-P-1201 3.6V Slimline Handle

1901-P-1101 2.8V Slimline Handle



## Chargers and Upgrade Kits

A two hour fast charge and over 2 hours continuous use means your instrument is always ready for use. Choose between the Lithium-ion Double or Mini Chargers.

### Over 2 hours of continuous use

Ideal for long examinations especially while first learning with your instrument.

### LED displays

LEDs indicate when battery life is low, charging or fully charged.

### Lithium-ion Double Charger

The compact charger takes two handles and fits neatly into your immediate testing environment, allowing easy access to your hand held instruments. It can be desk or wall mounted.

### Lithium-ion Mini charger

Can be connected quickly and simply to the base of your Keeler handle, making it the perfect choice for domiciliary visits or practitioners on the move. Your instruments can still be used whilst the battery is charging.



### Upgrade Kits

Keep your existing heads and upgrade to Lithium-ion. The Double Lithium Upgrade Kit (pictured) includes 2 x handles and a Lithium-ion Double Charger.

The Mini Charger Upgrade Kit includes 1 x handle and a Lithium-ion Mini Charger.

### Part numbers

1941-P-1368 Lithium-ion Double Charger

1941-P-1341 Lithium-ion Mini Charger

### Upgrade Kits

1911-P-1228 Lithium-ion Double Charger and 2 Handles (Upgrade Kit)

1911-P-1236 Lithium-ion Mini Charger plus Handle (Upgrade Kit)

### Lithium Battery

EP39-18918 Lithium Battery





## Cryomatic



Reliability doesn't happen by accident. Superior mechanical and pneumatic engineering is at the heart of this premium quality cryosurgery unit designed and built to withstand the rigours of modern usage. The Cryo engine is a design masterpiece of interconnecting tunnels and chambers controlled by a series of microprocessor managed solenoid valves that results in reliable freeze after freeze after freeze.

### Surgeon not included

The advanced technology is activated as soon as you start the system, and its test procedures work quickly, meaning your Cryomatic is ready to use within minutes.

First it will interrogate the probe you have attached for specific information regarding optimum performance, and then the Cryomatic will clean and purge the probe to ensure all impurities are removed. Finally it will test the probe and adjust the gas flow automatically to ensure its optimum performance.

It really is as simple as attaching the Carbon Dioxide or Nitrous Oxide gas bottle and the probe and turning the system on – your Cryomatic will do everything else – all you need is the surgeon and a patient.

### New Disposable Cryo Probes

The single use sterile retinal cryo probe is the perfect answer when a sterile probe is demanded at short notice. Lightweight and comfortable to use, the single use probe is a must to manage your infection control processes and cut sterilisation time and costs.



## Cryomatic Console and Accessories

Keeler, the first name in Ophthalmic Cryo Surgery. Designed for ease of use and built to the highest standards, we manufacture the Cryomatic and Keeler probes in our Windsor factory.

### Reliable and easy to use

The Keeler Cryomatic System including the probes, results from a complete re-engineering process aimed at producing greater reliability and a better freeze, as well as simplicity of set-up and operation, all of which combine to make it uniquely superior.

### Cylinder adaptors

Your Cryomatic can be used with either Carbon Dioxide (CO<sub>2</sub>) or Nitrous Oxide (N<sub>2</sub>O) gas from non-syphonic bottles via one of the Pin Index Yokes (PIY) or screw thread adaptors.

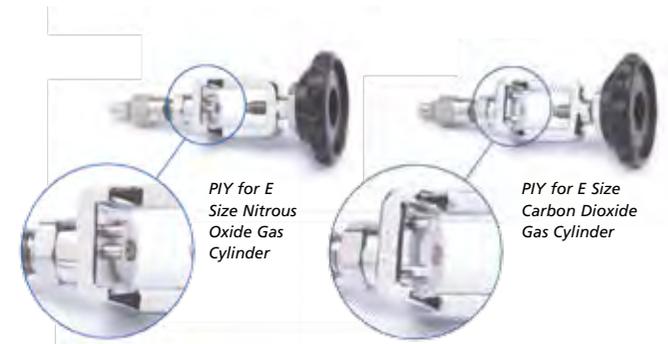


Adaptor for F Size Carbon Dioxide Gas Cylinder

Adaptor for F Size Nitrous Oxide Gas Cylinder

E F

E Cylinder Dimensions 50cm x 15cm, Gr. Weight 7kg  
F Cylinder Dimensions 86cm x 14cm, Gr. Weight 18kg



PIY for E Size Nitrous Oxide Gas Cylinder

PIY for E Size Carbon Dioxide Gas Cylinder

### Part numbers

2509-P-1000 Cryomatic Cryo Console with footswitch

### Accessories

2508-P-7016 Adaptor for F Size Carbon Dioxide Gas Cylinder

2508-P-7015 Pin Index Yoke (PIY) for E Size Carbon Dioxide Gas Cylinder

2508-P-7018 Adaptor for F Size Nitrous Oxide Gas Cylinder

2508-P-7017 Pin Index Yoke (PIY) for E Size Nitrous Oxide Gas Cylinder

2509-P-8015 Probe Sterilisation Boxes (for Cryomatic Probes Only)

2508-P-7005 Cryo Trolley



## Cryomatic Probes

The best freeze in ophthalmic cryo-surgery.

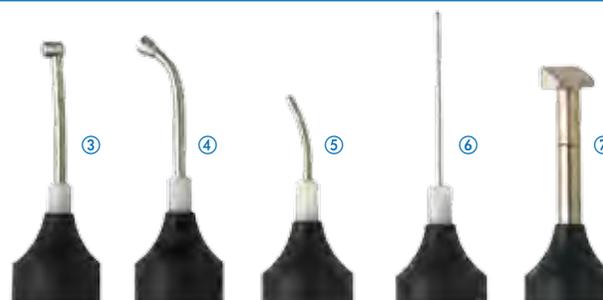
### Keeler quality you can trust

Whilst retaining classical tip configurations, the probes and their manufacturing processes have been fundamentally redesigned to minimise blocking due to impurities in the cryogen gas or from moisture resultant from sterilising.

- Rock solid reliability
- Fast freeze and defrost
- Simple set-up
- No need to set the gas pressure

### Disposable Cryo Probes - no more sterilisation concerns

The single use sterile retinal cryo probe is the perfect answer when a sterile probe is demanded at short notice. Lightweight and comfortable to use, the single use probe is a must to manage your infection control processes and cut sterilisation time and costs. Just throw them away.



#### Part numbers

##### Disposable Cryosurgical Probes

2508-P-7022 2.5mm Standard Retinal Probes, Box of 10

2508-P-8026 Cryomatic Disposable Probe Adaptor

##### Cryomatic Standard Probes

① 2509-P-8000 2.5mm Standard Retinal Probe

② 2509-P-8001 2.5mm Extended Retinal Probe

##### Cryomatic Special Order Probes

③ 2509-P-8002 2.5mm Mid-reach Retinal Probe

④ 2509-P-8005 3mm Glaucoma Probe

⑤ 2509-P-8004 1.5mm Curved Cataract Probe

⑥ 2509-P-8003 0.89 mm Intra-Vitreous Probe

⑦ 2509-P-8006 4 x 10mm Collins Trichiasis Probe



Standard probes



Disposable probes



## Keeler Tonometers



For over 90 years Keeler has continued to innovate, design and manufacture world class ophthalmic instruments.

In 1986 the Pulsair Tonometer revolutionised non contact tonometry with it's unique hand held and portable system bringing a new dimension to patient care and the management of space and time.

Pulsair and tonometry are synonymous – the 5th generation intelliPuff hand held model combines contemporary style together with new technologies and the new Pulsair Desktop brings the Pulsair name to those requiring a chinrest desktop device.

Applanation Tonometry is a widely practiced and respected technique; the Keeler Applanation Tonometer (KAT) will match that level of respect with our exceptional build quality and manufacturing consistency.





## Pulsair Desktop

The Pulsair Desktop has a small and space saving footprint that combined with the elegant, slim optical mainframe allows it to blend seamlessly into the clinical environment. The openness of the design increases the confidence of both patient and clinician.

### Comfort and Speed

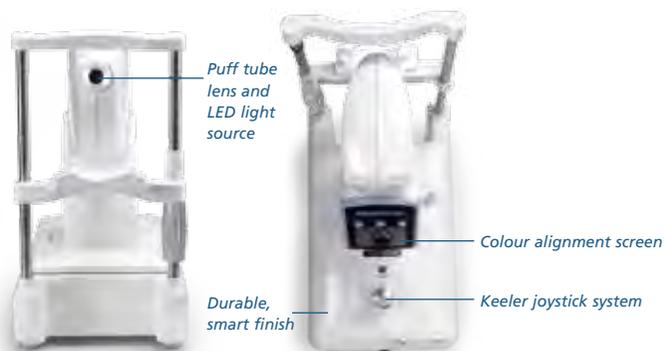
Less is more. Pulsair Desktop is uncomplicated and therefore quick to use for the novice and professional alike.

Taking control of tonometry has never been easier or faster. Clear user controls and a colour video alignment screen combine to set a new standard in usability.

### Sophisticated technology

Keeler Pulsair tonometers use advanced optical and sensor technology for positional detection and puff control.

Pulsair Desktop and Pulsair intelliPuff have software controls to manage the measurement data; if two consecutive readings are within +/- 1mmHg of each other the Pulsair will inform the user that sufficient readings may have been taken for that eye, saving precious time and increasing patient comfort.



### Part numbers

2417-P-2000	Pulsair Desktop Tonometer
3104-L-8201	Chinrest Papers
2208-L-7008	Printer Paper



## Pulsair Desktop Technical Specifications

Calibrated range	5mmHg to 50mmHg
Displayed accuracy	Display accuracy to 1 decimal place e.g. 12.3
Displayed scale	Single line 16 character alphanumeric display
Illumination system	LED infra red
Working distance	20mm
Dimensions	475 x 410 x 245mm (H x D x W)
Weight	16kg
Complies with	Electrical Safety (Medical) BS EN 60601-1:2006. Electromagnetic compatibility EN 60601-1-2:2007. Ophthalmic instruments - fundamental requirements and test methods ISO 15004-1:2006. Optical radiation hazard ISO 15004-2:2007
Power Supply Unit	Switch mode, (110 – 240V)+/- 10% multi plug type compliant to EN 60601-1 EN 61000-6-2, EN 61000-6-3
Power supply output	30 VA (12V DC 2.5A)
Frequency	50/60 Hz
Printer	Thermal line printer





## Pulsair intelliPuff

Pulsair intelliPuff brings versatility to tonometry; wall mounted or desk mounted the lightweight hand held optical mainframe allows the clinician to measure all patients with equal comfort and respect. The flexibility of use and space saving makes this instrument virtually unbeatable for performance and value.

### Hand held and wall mounted

Being hand held, the Pulsair intelliPuff avoids the need to position the patient in a chinrest removing an entire process from the patient journey – fast and easy to use while the patient is already seated in an examination chair, space and time under control.

### Engineering and design excellence

Pump, solenoid control valves, plenum chamber and optical mainframe are all designed to function optimally leading to efficient and fast measurement. LED illumination provides a constant and reliable light source for the alignment camera and the positional detection systems.

Quietly cost effective, the Pulsair tonometers require no sterile consumables, printing is under your control so ongoing costs are managed.

### Part numbers

2414-P-2001	intelliPuff unit
2208-L-7008	Printer paper roll
EP79-43563	12V Car Socket Power Adapter





## Pulsair intelliPuff Technical Specifications

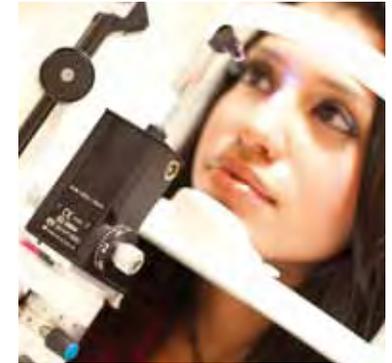
Calibration range	5mmHg to 50mmHg
Measurement scale	mmHg (millimetres of mercury)
Displayed accuracy	0.1mmHg
Display	4 character dot matrix scrolling
Firing system	Automatic and objective
Illumination system	LED infra red
Working distance	20mm
Mounting system	Table/desktop/wall
Base unit dimensions	260 x 215 x 220mm (H x D x W)
Base unit weight	2.465Kg
Handpiece dimensions	315 x 150 x 46mm (H x D x W)
Handpiece weight	0.890Kg
Umbilical cord length	2.0m
Printer	Thermal line printer





KAT BQ type

## KAT - Keeler Applanation Tonometer



Reliable and repeatable applanation tonometry, the Keeler Applanation Tonometer (KAT) is a perfect example of British manufacturing experience delivering great quality and value. We have applied 21st Century design techniques to an old established principle to deliver a premium quality instrument.

### Goldmann applanation principle

The Goldmann applanation principle is widely acclaimed as the most common and direct method of assessing IOP.

The KAT is made with precision machined components, subject to stringent quality controls pre, during and after assembly to add reliability and repeatability to an established technique.



KAT T type on Slit Lamp



KAT R type on Slit Lamp

### T type, R type or BQ type

The take-away T type KAT is fitted to the guide plate on the optical axis for the microscope and illumination unit arm. The fixed R type is mounted on a post fitted to the microscope optical body.

The BQ KAT is designed specifically to fit the Haag Streit BQ, BP and BX Slit Lamps and fits directly to the optics support arm.

### Robust and reliable

Our all metal parts, manufactured to a high precision engineering design will withstand the test of time and deliver reliable results year after year.



### Part numbers

2414-P-2030 KAT – Keeler Applanation Tonometer T type

2414-P-2040 KAT – Keeler Applanation Tonometer R type

2414-P-2020 KAT BQ type Tonometer

## KAT Technical Specifications

<b>Measurement force</b>	By leverage weight
<b>Installation:</b> <b>Keeler T type: for tower illumination Slit Lamps</b>	Fitted to the guide plate on the optical axis for the microscope and illumination unit arm
<b>Keeler R type: for tower illumination Slit Lamps</b>	Mountable on a post fitted to the microscope optical body
<b>Measurement range</b>	0 - 80 mmHg (0 – 10.64 kPa)
<b>Approximation of the impact force on the measurement head for a 0 to 58,84 mN measurement range</b>	Standard divergence: $0.49 \text{ mN} \leq 3s \leq 1.5\%$ of nominal value
<b>Operating temperature range</b>	from 10°C to 35°C
<b>Measurement accuracy</b>	$\leq 0.49 \text{ mN}$
<b>Net weights:</b> <b>Keeler T type</b>	0.41 kg (without accessories)
<b>Keeler R type</b>	0.69 kg (without accessories)

## KAT Accessories

The T type and R type KATs are supplied with a reusable doubling prism, the calibration check bar and either the R type post or the T type aluminium guide plate for Slit Lamp use.

### Protective case

To protect your investment when travelling or for when the instrument is not in use, our high quality aluminium carrying case will ensure your tonometer is always stored and protected.



*T type guide plate*

*R type mounting post*

### Part numbers

#### Accessories

3414-P-7000	KAT Aluminium carrying and storage case
2414-P-5001	KAT doubling prism
2414-P-5032	KAT T type guide plate
2414-P-5042	KAT R type mounting post
2414-P-5005	Calibration arm assembly



*Doubling prism*

*Calibration arm assembly*



*Protective carrying case*



## Slit Lamps, Keratometer and Practice Room Furniture



### Slit Lamps

Quality without compromise. One of the most important optical diagnostic devices in ophthalmology and optometry is your Slit Lamp. Making the right choice will pay dividends for years to come.

Desktop slit Lamps remain the mainstay of the busy clinic or consulting room, but they have their shortcomings when it comes to examining children, larger patients, those with mobility issues and many other groups of patients.

The Keeler PSL (Portable Slit Lamp) range addresses these issues by providing the clinician with a fully featured, top quality hand held device.





## PSL Portable Slit Lamps

Versatility and portability are key benefits of the Keeler PSL one and PSL Classic Slit Lamps. Keeler designed and manufactured with the strength to withstand the daily traumas of the demanding ophthalmic environment, the PSL is lightweight, durable and robust.

### Advanced optics: 10x magnification, PSL one 10x and 16x magnifications, PSL Classic

Top quality multi-layered glass is crafted into our Keeler multi-element and multi-layer coated optical system to give maximum performance. Clarity is guaranteed.

### Controllable illumination

Proven halogen illumination system. Illumination levels are controlled by a rheostat giving you control of your examination parameters. From zero to maximum, you choose.

### Big Slit Lamp features, portable usability

Unique features such as the fixation targets, and the 1mm square light patch for assessing anterior chamber flare set the new standard for Portable Slit Lamps.



### Carrying Case

Protect your investment with a rugged aluminum carrying case - perfect when your Slit Lamp is not in use or when you are travelling.



### Part numbers

3010-P-2002	PSL Classic with charger base, case and iPhone adapter
3010-P-2000	PSL Classic with charger base
3010-P-2001	PSL one with iPhone adapter





## PSL iPhone 4 imaging adapter

Apple iPhone 4 PSL imaging adapter for the PSL Portable Slit Lamp.

- Instant imaging capability for your Keeler PSL
- Easily attached or removed, takes seconds
- Full iPhone imaging capabilities
- Affordable, efficient and a powerful clinical recording tool



*iPhone not included*

### Accessories Part numbers

3010-P-7010	Keeler Portable Slit Lamp iPhone 4 imaging adapter
3010-P-7000	Carry case
1030-P-7187	Spare lamp
EP39-70737	Test bar
3010-P-7004	Eye caps (2)

## PSL Specifications

	PSL classic	PSL classic	PSL one
Part number	3010-P-2002	3010-P-2000	3010-P-2001
Magnification	10x and 16x	10x and 1x	10x
Charging base	Yes	Yes	No
Direct charging	Yes	Yes	Yes
Colour	Blue and White	Blue and White	Blue and Black
iPhone adapter	Yes	Option	Yes
Aluminium Case	Yes	Option	Option

*iPhones not included*



## PSL Technical Specifications

### Slit and filter system

<b>Slit type</b>	Rotating Slit wheel selection Slit Lamp
<b>Slit length</b>	12mm
<b>Slit widths</b>	0.15mm, 0.5mm, 0.8mm and 1.6mm slits, 12mm circle and a 1mm square
<b>Filters</b>	Red free, Blue, Neutral density 0.8 and Clear
<b>IR protection</b>	Inbuilt IR cut filter
<b>Slit angle</b>	+/- 60°
<b>Illumination control</b>	Continuously variable from low to full brightness
<b>Fixation targets</b>	LED system, double click of trigger

### Power supply

<b>Power supply unit</b>	Switch mode, (110V – 240V) +/- 10% multi-plug
<b>Power supply output</b>	30VA (12V DC 2.5A)

### Biomicroscope

<b>Type</b>	Binocular Hand held Biomicroscope Slit Lamp
<b>Optics</b>	Converging binoculars at 13°
<b>Magnification</b>	10x and 16x lever change (PSL Classic) 10x (PSL one)
<b>Objective lens working distance @ 10x</b>	16mm

## Desk Top Slit Lamps

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Tower Illumination systems, featuring up to 20° tilting tower illumination allows examination in the vertical, horizontal and oblique sections plus the option to offset the slit for corneal transillumination. Filters include Cobalt blue; green (red free); neutral density; heat absorbing.

### SL-40H

- Drum change 6x, 10x, 16x, 25x and 40x magnifications
- Comfortable 8.5° converging optics
- Optional beam splitter for imaging upgrade
- Optional fibre optic external illumination system
- Illumination control conveniently located next to the joystick
- Integrated yellow barrier filter for fluorescein examination

### Part numbers

3009-P-1010 SL-40H Slit Lamp on table top (6x, 10x, 16x, 25x and 40x)

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SL-40H





## SL-40D Digital Slit Lamp

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Imaging is now an important part of the clinical process; whether it is for protection against litigation or simply to have a quality clinical record of the patient's conditions to monitor any change in the future, or, to help educate or impress your patient.

### Capture still or video clips

Building on the outstanding optical system of the Keeler SL-40H, the illumination system is upgraded, an external fibre optic illumination system with diffuser added and the optics optimised for a digital camera. The result is an excellent digital optical system for video imaging.

With the option of capturing stills or video clips this top quality affordable device represents superb value.

- Quality optics
- Great illumination
- Powerful software with patient database and image processing features



### Part number

3009-P-1013 SL-40D Digital Slit Lamp on table top with software

---

## Zeiss type System and Javal Keratometer

Zeiss type illumination systems are significantly more compact and tidier in overall looks yet retain many of the excellent features of the more comprehensive Tower Illumination systems, such as the cobalt blue, green (red free), neutral density and heat absorbing filters.

### SL-40Z

- Drum change 6x, 10x, 16x, 25x and 40x magnifications
- Comfortable 8.5° converging optics
- Optional beam splitter for imaging upgrade
- Illumination control conveniently located next to the joystick
- Integrated yellow barrier filter for fluorescein examination

### Part numbers

2402-P-2198 SL-40Z Slit Lamp (6x, 10x, 16x, 25x and 40x)

### Slit Lamp Accessories

1030-P-7160 6V 20W Slit Lamp Halogen bulb

1030-P-7152 Slit Lamp Halogen bulb for Digital Slit Lamp

### Javal Keratometer

As the Keratometer becomes destined for less regular use, the price value relationship becomes key to the purchasing decision. The top quality traditional Javal type Keratometer offers exceptional value.

- 30 to 60 Dioptres measuring range
- Single Joystick control for height and position
- Illuminated measuring scale
- Extremely accurate

### Part numbers

2402-P-2147 Javal Keratometer

### Accessories

2402-P-2155 Javal Keratometer illumination bulb (6V, 10W)

2402-P-2163 Javal Keratometer scale lamp (6V, 3W)



Zeiss type System



Javal Keratometer

For Volk Slit Lamp Lenses  
see pages 58-60



Single Table Top



Double Boomerang Table Top



Electric Elevation Table - centre leg

## Gas Lift Stool and Tables

### Gas Lift Stool

A comfortable and lightweight gas lift stool with a backrest – ideal for most purposes in the busy practice.



### Tables for Slit Lamps

Most Slit Lamps are supplied on their own tabletop requiring only either a table leg or to be fitted to a refraction stand.

The Electronic Elevation Table is a virtually silent motorised centre leg.



Electric Elevation Table - centre leg

### Table Tops

For 'stand alone' instruments such as Fundus Cameras or Autorefractors, a table with a top is required.

Choose our Electronic Elevation Table - centre leg then select your chosen table top.

Select from the Single Table Top - size 45 x 58cm or the Double Boomerang Table Top.

### Part numbers

3303-P-7002 Gas Lift Stool with backrest and 5 star base, blue vinyl

### Table Leg

3304-P-7045 Electric Elevation Table - centre leg

### Table Tops

3009-P-7016 Single Top 45 x 58cm

3009-P-7024 Double Boomerang Table Top

## Tables with Tops

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### Electric Elevation Table - side leg

The Electric Elevation Table has a 43 x 80cm top and a side leg, ideal for wheelchair access.

### Centre Leg Table

The Centre Leg Table has a small angled top size 100 x 56cm suitable for two instruments or an instrument with a laptop or notebook PC.



*Centre Leg Table*



*Electric Elevation Table - side leg*

### Part numbers

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3304-P-7061	Electric Elevation Table with 43 x 80cm top and side leg
3304-L-1303	Centre Leg Table with small angled top 100 x 56cm

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## Keeler eye shop

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Keeler offer a wide range of practice essentials for everyday use. Choose from our high quality Cross Cylinders to our robust Four Sided Test Types. Whatever your practice essential need you will find it on our Keeler eye shop range.

### Oculus Trial Frames

The Keeler eye shop offers a wide range of Oculus Trial frames including the new Children's frame. Oculus frames are lightweight, comfortable and robust with user friendly controls.

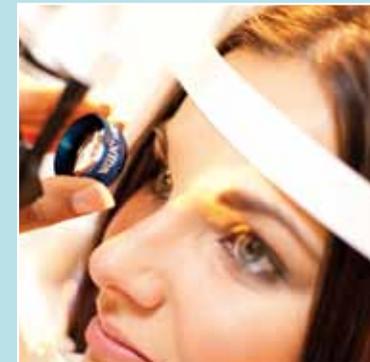
A comprehensive range of Trial Lens Sets are also available.



### Volk Lenses

Volk produce the finest quality lenses and imaging systems available. Known worldwide as the premier designer and manufacturer of precision diagnostic and laser lenses.

Volk's unmatched image quality can be appreciated across the comprehensive range of imaging products available through the Keeler eye shop, including Slit Lamp, Indirect Ophthalmoscope and Gonio Lenses.





## Test Types

### Finesse Four Sided Test Types

Depending on your size of examination area you can choose a direct test type which tests at 6 metres or an indirect test type which tests at 3 metres. Three movement options are available; Manual, Motorised and Infrared Remote Control.

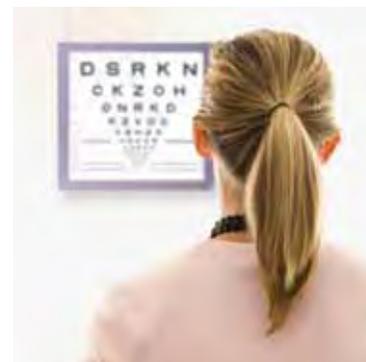
Internally illuminated with four upper Snellen panels and four lower panels.

- Spot light
- Duochrome
- Friend
- Worth 4 Dot

### LogMAR Test Type

LogMAR is the new method of testing visual acuity. It tests at 4 metres with 14 rows of LogMAR letters.

It can be wall mounted or an optional lower base is available. Additional charts are available.



#### Part numbers

##### Finesse Four Sided Test Types

##### Direct Test Types

2204-P-2402	Four Sided Test Type Manual
2204-P-2381	Four Sided Test Type Motorised/Air Switch
2204-P-2349	Four Sided Test Type Infra Red Remote Control

##### Indirect Test Types

2204-P-2365	Four Sided Test Type Manual
2204-P-2357	Four Sided Test Type Motorised/Air Switch
2204-P-2349	Four Sided Test Type Infra Red Remote Control

##### Accessories

2204-P-7393	Floor Stand for Four Sided Test Types
2204-P-7406	Wall Bracket for Four Sided Test Types

##### LogMAR Test Type

2204-P-2437	LogMAR 4 Metre Test Type
2204-P-2445	Base for LogMAR Test Type
2204-P-2461	Letter Chart
2204-P-2453	Number Chart



Finesse Four Sided Test Types



LogMAR Test Type



Oculus Universal



Oculus Standard



Oculus Adult Half Eye



Oculus Children's Half Eye

## Trial Frames

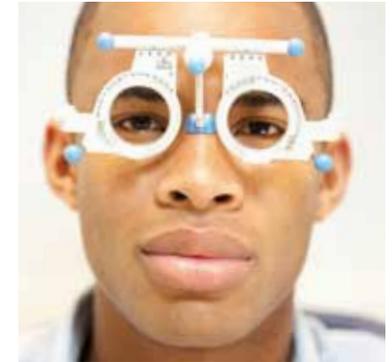
### Oculus Universal

The Oculus Universal is a lightweight, comfortable and robust Trial Frame with easy clean, user friendly controls. It can hold 5 pairs of lenses.

### Oculus Standard

The Oculus Standard is of strong metal construction with a full range of adjustments and can hold 5 pairs of lenses.

Trial Frame Specifications					
Features	Oculus Universal	Oculus Standard	Oculus Adult ½ Eye Adjustable	Oculus Children ½ Eye	Simple Frame
Pair of lenses	5	5	3	3	4
Adjustable bridge	Yes	Yes	Yes	No	Yes
Bridge material	Rubber	Rubber	Plastic	Plastic	Plastic
Lens rotation control	Yes	Yes	No	No	Yes
Adjustable PD	Yes	Yes	Yes	Yes	Yes
Adjustable side length	Yes	Yes	Yes	Yes	Yes
Adjustable side angle	Yes	Yes	No	No	Yes
Vertex measurement	Yes	Yes	No	No	Yes
Colour	Grey	Black	Grey	Grey	Grey
Frame Material	Plastic	Metal	Plastic	Plastic	Plastic/Metal



### Oculus Half Eye Trial Frames

The Oculus Half Eye Trial Frames are lightweight, comfortable and robust with easy clean, user friendly controls. Available as an Adult or Children's Half Eye Trial Frame.

### Simple Trial Frame

The Simple Trial Frame is as its name states simple to use and easy to operate. It can hold 4 pairs of lenses.



### Part numbers

2207-P-1173 Oculus Universal

2207-P-1114 Oculus Standard

2207-P-1149 Oculus Adult Half Eye with adjustable nose rest

2207-P-1130 Oculus Children's Half Eye with adjustable nose rest

2207-P-1181 Simple Trial Frame

## Children's Trial Frame and Trial Lens Set



### New Children's Trial Frame

A lightweight UB5 Trial Frame, designed specifically for children. The new nose rest is made from soft, skin friendly material for extra comfort.

- PD range 40 to 72mm
- Requires Children's Trial Lens Set 2201-P-1172

### Trial Lens Set for Children's Trial Frame

The Children's Trial Lens Set has lenses with a diameter of 28mm to fit into the Children's Trial Frame.

#### Contents:

- 20 pairs each +/- sph. Lenses 0.25 – 12 dpt
- 10 pairs each +/- cyl. Lenses 0.25 – 3.00 dpt
- 5 prism lenses
- 2 coloured lenses
- 1 occluder
- 1 pinhole
- 1 maddox cylinder red

#### Part numbers

2207-P-1202 Children's Trial Frame

2201-P-1172 Children's Trial Lens Set





Premium Trial Lens Sets



Trial Lens Set in vinyl brief case

## Trial Lens Sets

### Premium Trial Lens Sets

In the Premium Trial Lens Sets all lenses are marked on both sides so you don't need to think about right and left lenses.

- Cylinder lenses have axis markings on the lenses
- Supplied in solid wooden case with removable tray



Reduced aperture plastic

Reduced aperture metal



Full aperture metal



### Trial Lens Sets in vinyl brief case

The widest range of lenses available that are easy to fit and remove from trial frames with clear markings and a removable tray.

#### Part numbers

##### Premium Trial Lens Sets

2201-P-1228 232 Reduced aperture plastic lenses in wooden case

2201-P-1236 232 Reduced aperture metal lenses in wooden case

2201-P-1244 232 Full aperture lenses in wooden case

##### Trial Lens Set in vinyl brief case

2201-P-1121 Reduced Aperture Trial Lens Set in vinyl case (232 lenses)

2201-P-1148 Full Aperture Trial Lens Set in vinyl case (266 lenses)

## Occluders and Accessories

### ABDO Pocket Rule

Offers an Interpupillary distance and measures distance between lenses. Designed to measure most specifications relating to spectacles.

### Fixation Bar

An ideal orthoptic aid for children. Policeman and coloured budgie on one side. Two reduced Test Types plus N5 text on reverse.

### Green and Red Maddox Rods

Ideal for muscle balance examination.



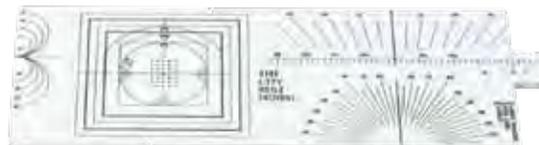
Maddox Rod

### Romanes Occluder

### Clip on Occluder

### City Rule

Designed to take frame and multifocal measurements. Designed to BS3521 – 1991 (latest version).



City Rule

### Part numbers

2299-P-1217	ABDO Pocket Rule
2301-P-1014	Fixation Bar
2299-P-1049	Clip on Occluders
2299-P-1233	Romanes Occluder
2203-P-1184	Green Maddox Rod
2203-P-1176	Red Maddox Rod
2299-P-1305	City Rule



ABDO Pocket Rule



Fixation Bar



Romanes Occluder



Clip on Occluder



Keeler Binocular Confirmation Tests



Keeler Cross Cylinders in Case

## Cross Cylinders, Twirls and Confirmation Tests

### Keeler Binocular Confirmation Tests

Useful sliding lens system that allows the PD to be adjusted to your patients requirements.

### Keeler and Jackson Cross Cylinders and Confirmation Tests

Clearly marked high quality lenses.

### Keeler Monocular Confirmation Tests



### Part numbers

#### Keeler Binocular Confirmation Tests

22203-P-1299	Confirmation Test (4 lenses, 2 Pairs Each +/-0.25D)
2203-P-1096	Confirmation Test (4 lenses, 2 Pairs Each +/-0.50D)
2203-P-1109	Confirmation Test (4 lenses, 2 Pairs Each +/-1.00D)
2203-P-1117	Confirmation Test (4 lenses 2 Pairs one +/-0.25D, one +/-0.50D)

#### Keeler and Jackson Cross Cylinders and Confirmation Tests

2203-L-1318	Keeler Cross Cylinder 0.25D
2203-L-1326	Keeler Cross Cylinder 0.50D
2203-P-1029	Pair of Keeler Cross Cylinders in case
2203-P-1205	Jackson Cross Cylinder +/-0.25D
2203-P-1213	Jackson Cross Cylinder +/- 0.50D
2203-P-1221	Jackson Cross Cylinder +/-0.75D
2203-P-1248	Jackson Cross Cylinder +/- 1.00D

#### Keeler Monocular Confirmation Tests

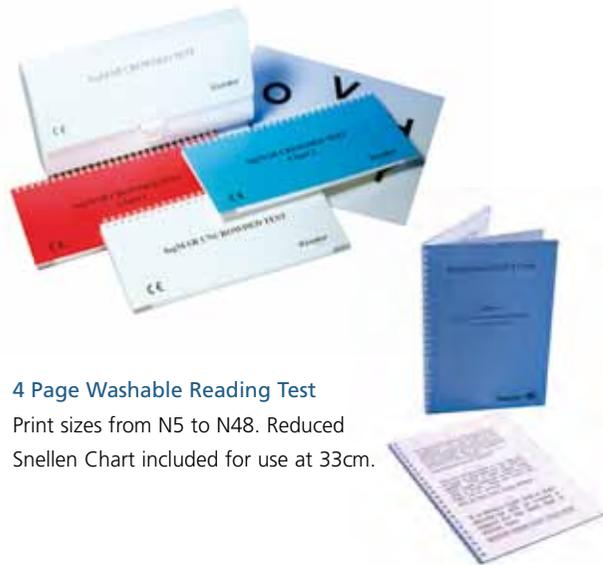
2203-L-1350	Monocular Spherical Twirl +/- 0.25D
2203-L-1369	Monocular Spherical Twirl +/-0.50D

## Children's Tests and Near Vision Reading Tests

### LogMAR Crowded Test

More subtle definition of changes between acuity ranges specifically in amblyopic children.

Ideal for testing acuity of children from 3 years of age. 3m working distance. 4 letters at each acuity level from 6/3 to 6/38. Laminated and washable.



### 4 Page Washable Reading Test

Print sizes from N5 to N48. Reduced Snellen Chart included for use at 33cm.

### Thomas the Tank Engine Reading Test

Designed specifically for children.

Colour pictures encourage full child participation.

Print size N5 to N24.

### Sheridan Gardiner Test

Well established test designed for children but suitable for disabled people, those with learning difficulties or patients who do not share a common language with the examiner.

#### Part numbers

2204-P-1231	LogMAR Crowded Test
2205-P-1014	Vocational 4 Page Reading Test
2205-P-1022	4 Page Washable Reading Test
2205-P-1065	Thomas the Tank Engine Reading Test
2205-L-1004	Peter Rabbit Test
2205-P-1057	Jaeger Reading Test

#### Sheridan Gardiner Test

2204-P-1004	Sheridan Gardiner Test without Orthoptic booklets
2204-P-1063	Sheridan Gardiner Test with Orthoptic booklets



Thomas the Tank Engine, Peter Rabbit and Jaeger Reading Tests



Sheridan Gardiner Test without Orthoptic booklets



Sheridan Gardiner Test with Orthoptic booklets



3rd Edition City University Colour Vision Test and Recording Charts

## Colour Vision Tests

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### 3rd Edition City University Colour Vision Test

This test displays normal protan, deutan and tritan colours, differentiation is stronger in the red/green.

Significant tritan defects may be detected if used in conjunction with the Ishihara. The test includes a screening option.

### Recording Charts for City University Test

### 38 and 24 Plate Ishihara Colour Vision Test

Ideal for commercial/industrial colour screening. Tests for protan and deutan defects.

Patients must identify numbers or patterns formed in a matrix of small coloured dots varying in colour and intensity (pseudo-isochromatic plates).

Two editions available: 38 plate for detailed investigation – 24 plate for quick screening.



38 and 24 Plate Ishihara Colour Vision Test

### Part numbers

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#### 3rd Edition City University Colour Vision Test

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2206-L-1057 City University Colour Vision Test

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2206-L-7125 Recording Charts for City University Colour Vision Test

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#### 38 and 24 Plate Ishihara Colour Vision Test

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2206-P-1008 38 Plate Ishihara Colour Test

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2206-P-1016 24 Plate Ishihara Colour Test

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## General Tests

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### Mallett Near Vision Unit

A lightweight and compact Near Vision test unit that incorporates a comprehensive range of Mallett near tests.

The unit supplied is rechargeable and the tests are controlled by a switch located on the side of the unit. High contrast and definition on all charts. A matching polarising visor is included.

### RAF Binocular Gauge

Useful device for determining the objective and subjective convergence points, measuring accommodation and determining the dominant eye.

Lightweight bar, 500mm in length on which a sliding four sided drum is mounted with different tests on each panel.



### Wirt Stereo Fly Test

The fly dramatically demonstrates presence of stereoscopic vision.

Two supporting tests enable estimation of level of stereoscopic vision.

### Maddox Wing Test

Convenient hand held quick and efficient near test for heterophoria which is measured on the red vertical scale. Esophoria and exophoria are measured by the white horizontal scale. Cyclophoria may be assessed by moving the red arrow pointer parallel to the horizontal scale.

#### Part numbers

##### Mallett Near Vision Unit

2205-P-1110	Mallett Near Vision Unit 90/180° (UK)
2205-P-1137	Mallett Near Vision Unit 45/135° (USA)

##### General Tests

2301-L-1020	RAF Binocular Gauge
2406-L-1000	Wirt Stereo Fly Test
2301-P-1022	Maddox Wing Test



Mallett Near Vision Unit



Wirt Stereo Fly Test



Maddox Wing Test



Horizontal/Vertical Prism Bar



Retinoscopy Rack



Amsler Manual

## General Tests

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### Keeler Horizontal/Vertical Prism Bar

Comes complete in its own case. A unique integrated design with no need for two separate bars.

Optical surfaces are recessed for optimum protection. Extensive prism power 1,2,3,4,6,8,10,15,20,25,30 and 36 dioptres.

### Keeler Retinoscopy Rack

An excellent tool for fast objective refraction, particularly with uncooperative patients and children.

Comes complete in its own carrying case.

There are 24 lenses, 13mm diameter  $-6D$  to  $+6D$  in  $0.5D$  steps. Mounted in tough, yet light alloy frame.

### Amsler Manual

Assists in early recognition of changes in the macula and foveal areas.

Only 6 patient responses required for diagnosis of functional disturbances, from small scotoma to distortions. Full instructions include the interpretation of results.

### Part numbers

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2203-P-1002 Keeler Horizontal/Vertical Prism Bar

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2202-P-1000 Keeler Retinoscopy Rack

### Amsler Manual

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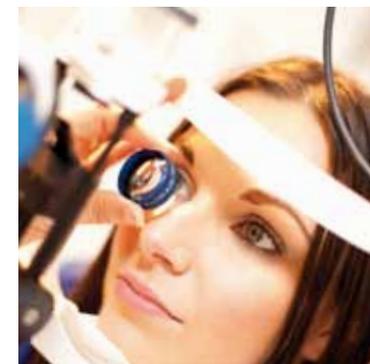
2215-P-1034 Amsler Manual

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2215-P-7057 Amsler Recording Charts

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## Volk Digital Slit Lamp Lenses

### Digital High Mag Lens™

The Digital High Mag Lens™ provides highest resolution, high magnification imaging of the central retina, providing topographical views of the nerve fibre layer and outstanding stereopsis allows detection of optic disc swelling, cupping and macular serous fluid.

### Digital Wide Field Lens®

The Digital Wide Field Lens® gives the highest resolution pan retinal examination and the advanced double aspheric design provides enhanced imaging. The ultimate 90D lens with similar magnification and widest field of view past the vortex.

### Digital 1.0x Imaging Lens

The ultimate lens for Digital Slit Lamp photography. The Digital 1.0x Imaging Lens provides the highest resolution flat plane imaging of the posterior pole and the high index, high resolution glass provides improved stereopsis and image clarity.

### Digital Slit Lamp Lens Set

You can now purchase the Digital Wide Field Lens® and the 1.0x Imaging Lens as a handy set.

Volk Digital Slit Lamp Lens Specifications				
Lens	Field of View	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°	.72x	1.39x	Highest Resolution Pan Retinal Examination
Digital 1.0x Imaging Lens	60° / 72°	1.0x	1.0x	High-resolution diagnosis of the posterior pole and reduced glare and reflections

### Part numbers

2105-L-1816 Digital High Mag Lens™

2105-L-1787 Digital Wide Field Lens®

2105-P-2060 Digital 1.0x Imaging Slit Lamp Lens

2105-L-1808 Digital Slit Lamp Lens Set

## Volk Super Series Slit Lamp Lenses

### SuperField® Lens

Its small 30.2mm diameter housing proves to be highly useful for dynamic funduscopy, allowing the lens to be more easily manipulated, which in turn effectively increases its dynamic field of view to 116°.

### Super 66® Lens

The Super 66® lens provides an expansive 96° dynamic field of view. Ease of use and working distance are comparable to that of the 78D lens but with higher resolution, image clarity and enhanced depth perception.

### Super VitreoFundus® Lens

Ultra wide-field viewing and outstanding small pupil properties for quick comprehensive fundus examinations at the slit lamp. Delivering an incredible 124° dynamic field of view with ample .57x magnification.

### SuperPupil® XL Lens

The widest pan equatorial fundus view of any non contact lens available with over 100° field visible in a single view! Allows detailed inspection of the posterior pole as well as peripheral lesions including retinoschisis and retinal detachments.

Volk Super Series Slit Lamp Lens Specifications				
Lens	Field of View	Image Mag.	Laser Spot Size	Primary Application
SuperField® Lens	95° / 116°	.76x	1.3x	General retinal scanning lens
Super 66® Lens	89° / 96°	1.0x	1.0x	High resolution viewing of the posterior pole
Super VitreoFundus® Lens	103° / 124°	.57x	1.75x	Wide field retinal scanning and small pupil examinations (3-4 mm)
SuperPupil® XL Lens	103° / 124°	.45x	2.2x	Examination through small pupils (2-3mm)

#### Part numbers

2105-P-1121 SuperField® Slit Lamp Lens

2105-P-1199 Super 66® Slit Lamp Lens

2105-L-1541 Super VitreoFundus® Slit Lamp Lens

2105-L-1517 Super Pupil® XL Slit Lamp Lens





## Volk Classic Slit Lamp Lenses

### 60D Lens

The 60D lens provides the highest magnification of the non contact slit lamp lenses and is ideal for detailed disc and macular viewing. The 31mm ring diameter facilitates easy handling with the orbital area.

### 78D Lens

The patented Double Aspheric 78D lens is an excellent general diagnostic laser treatment lens offering an ideal .93x image magnification and wide 97° dynamic field of view.

### 90D Lens

The original Volk 90D lens features a small 26mm diameter ring design which is outstanding for dynamic funduscopy and has good small pupil capabilities, making it ideal for a quick look at the posterior pole.

Volk Classic Slit Lamp Lens Specifications				
Lens	Field of View	Image Mag.	Laser Spot Size	Primary Application
60D Classic Lens	68° / 81°	1.15x	.87x	High magnification views of the posterior pole
78D Classic Lens	81° / 97°	.93x	1.08x	General diagnosis and treatment
90D Classic Lens	74° / 89°	.76x	1.32x	General diagnosis / small pupil examinations

### Part numbers

2105-P-1084 60D Classic Lens

2105-P-1009 78D Classic Lens

2105-L-1103 90D Classic Lens



## Volk Digital Indirect Ophthalmoscope Lenses

### ClearField Digital Lens

Highest resolution pan retinal examination lens.

The advanced double aspheric design provides wide field imaging previously unattainable with the indirect method of examination.

Low dispersion™ glass delivers enhanced resolution whilst reduced ring diameter and working distance facilitate lens manipulation.

### ClearMag Digital Lens

Highest resolution high magnification optic disc and posterior pole examination lens.

The advanced double aspheric design provides high magnification imaging previously unattainable with the indirect method

Low dispersion™ glass delivers enhanced resolution whilst reduced ring diameter and working distance facilitate lens manipulation.



Volk Digital Indirect Ophthalmoscope Lens Specifications				
Lens	Field of View	Image Mag.	Laser Spot Size	Primary Application
ClearField Digital Lens	55° / 72°	2.79x	0.36x	Highest Resolution Pan Retinal Examination
ClearMag Digital Lens	38° / 49°	3.89x	0.26x	Highest Resolution High Magnification Optic Disc and Posterior Pole Examination

### Part numbers

2105-L-1240 ClearField Digital Indirect Ophthalmoscope Lens

2105-L-1859 ClearMag Digital Indirect Ophthalmoscope Lens



## Volk Indirect Ophthalmoscope Lenses

### 15D Lens

The 15D lens provides high magnification along with optimised working distance from the cornea. With its 4.11x magnification, it is also well suited for optic disc and macular observation.

### 20D Lens

The 20D lens is perfectly corrected for field curvature, astigmatic aberrations and coma – delivering the best retinal image of any 20 Dioptre lens on the market. Its advanced Double Aspheric

design further maintains linear image magnification and perfect image clarity across the entire field of view for unsurpassed fundus examinations.

### Pan Retinal® 2.2 Lens

The Pan Retinal® 2.2 lens uniquely combines magnification nearly that of the 20D lens with a field of view approaching that of the 30D lens. It is excellent for virtually every examination procedure, including small pupil examinations.

Volk Digital Indirect Ophthalmoscope Lens Specifications					
Lens	Field of View	Image Mag.	Laser Spot Size	Working Distance	Primary Application
Macula Plus® 5.5 Lens	36° / 43°	5.50x	.18x	80mm	Ultra-high resolution viewing of the posterior pole
14D Large Lens	36° / 47°	4.30x	.23x	75mm	High magnification viewing of the posterior pole
15D Large Lens	36° / 47°	4.11x	.24x	72mm	High magnification viewing of the posterior pole
20D Large Lens	46° / 60°	3.13x	.32x	50mm	General diagnosis and treatment
Pan Retinal® 2.2 Lens	56° / 73°	2.68x	.37x	40mm	General diagnosis and treatment

### Part numbers

2105-L-1218 15D Indirect Ophthalmoscope Lens

2105-K-1159 20D Indirect Ophthalmoscope Lens

2105-P-1017 Pan Retinal® 2.2 Indirect Ophthalmoscope Lens

## Volk Indirect Ophthalmoscope Lenses

### 28D Lens

This lens provides exceptional resolution and fundus scanning capability. Excellent for small pupil diagnosis and treatment.

### 30D Lens

The 30D lens is designed to provide the practitioner with a wide field of view, shorter working distance and it is excellent for use with small pupils.

### 40D Lens

The 40D lens is ideal for paediatric ophthalmology and other examinations requiring expansive fundus visibility.

Volk Digital Indirect Ophthalmoscope Lens Specifications					
Lens	Field of View	Image Mag.	Laser Spot Size	Working Distance	Primary Application
25D Large Lens	52° / 68°	2.54x	.39x	38mm	Median field diagnosis and treatment
28D Large Lens	53° / 69°	2.27x	.44x	33mm	Small pupil diagnosis and treatment
30D Large Lens	58° / 75°	2.15x	.47x	30mm	Small pupil diagnosis and treatment
40D Large Lens	69° / 90°	1.67x	.6x	20mm	Paediatric ophthalmology / veterinary applications

### Part numbers

2105-L-1568 28D Indirect Ophthalmoscope Lens

2105-L-1250 30D Indirect Ophthalmoscope Lens

2105-L-1234 40D Indirect Ophthalmoscope Lens





## Volk Indirect Diagnostic Laser Contact Lenses

### High Resolution Wide Field Lens

Extreme wide field examination and PRP treatment lens that has advanced double aspheric design which provides unparalleled field views. It has a superior low dispersion™ glass design that eliminates distortion, ensuring the highest resolution imaging to the extent of the viewing field.

### SuperQuad® 160

The ultimate PRP lens! Volk's SuperQuad® 160 offers the widest field of view of any lens ever produced. Its ideal .5x magnification provides simultaneous visualisation of the posterior pole to the peripheral retina, providing a greater margin of safety during pan retinal photocoagulation. The SuperQuad® 160 is the ideal lens for visualisation and treatment of proliferative diabetic retinopathy, ischemic retinal vein occlusion and peripheral retinal holes and tears. Laser beam transmission and fundus image quality are sharp and undistorted to the full extent of the viewing field.

Volk Indirect Diagnostic Laser Contact Lens Specifications				
Lens	Field of View	Image Mag.	Laser Spot Size	Primary Application
High Resolution Wide Field Lens	160° / 165°	.5x	2.0x	Extreme wide field examination and PRP treatment lens
SuperQuad® 160 Lens	160° / 165°	.5x	2.0x	Extreme, wide angle pan-retinal photocoagulation
Equator Plus® Lens	114° / 137°	.44x	2.27x	Small pupil diagnosis and treatment
Quad Paediatric Lens	100° / 120°	.55x	1.82x	ROP and other paediatric conditions

### Part numbers

2105-L-1891 High Resolution Wide Field Lens

2105-L-1525 Super Quad® 160 Indirect Contact Lens

## Volk Indirect Diagnostic Laser Contact Lenses

### QuadrAspheric®

The original 130° QuadrAspheric® lens is the preferred wide field fundus laser lens. Its sleek 28.6mm diameter housing provides a definite advantage over competitive wide field lenses for peripheral retinal viewing, reflection displacement and ease of use. This lens is excellent for small pupil fundus examination and as a general diagnostic/laser lens delivering a quality combination of wide field viewing, image magnification and manoeuvrability in the orbit.

### Area Centralis®

The Volk Area Centralis® lens is excellent for critically evaluating and treating subretinal neovascularization and changes from macular degeneration, retinal vascular occlusions, diabetic macular oedema, proliferative diabetic retinopathy and other retinal conditions. It is ideal for focal laser treatment of these conditions providing excellent magnification combined with a good field of view.

Volk Indirect Diagnostic Laser Contact Lens Specifications				
Lens	Field of View	Image Mag.	Laser Spot Size	Primary Application
QuadrAspheric® Lens	120° / 144°	.51x	1.97x	Wide field diagnosis and treatment of the retina
PDT Laser Lens	115° / 137°	.67x	1.5x	Photodynamic Therapy
TransEquator® Lens	110° / 132°	.7x	1.44x	Mid peripheral diagnosis and grid laser therapy
Area Centralis Lens	70° / 84°	1.06x	.94x	High resolution viewing and treatment of the posterior pole
SuperMacula® 2.2 Lens	60° / 78°	1.49x	.67x	Ultra-high resolution diagnosis and treatment near the fovea

### Part numbers

2105-P-1076 QuadrAspheric® Indirect Contact Lens

2105-P-1164 QuadrAspheric® Lens (NF)

2105-P-1113 Area Centralis® Indirect Contact Lens

2105-P-1148 Area Centralis® Lens (NF)





## Volk Direct Contact and Laser Treatment Lenses

### Centralis Direct®

Volk's Centralis Direct® laser lens provides a direct upright image of the posterior segment of the eye. Utilising a unique solid methyl methacrylate optic with a bonded protective glass LaserWindow® exterior, this special optical design eliminates filament reflection common to other lower profile fundus lenses. The Centralis Direct® lens also features an aspheric corneal contact design for improved fit and manoeuvrability, visible wavelength and laser beam transmission exceeding 99% and the convenience of a knurled grip area extending beyond the orbital margin for easier handling.

### Fundus Laser Lens

An advanced Fundus laser lens designed with Volk's patented Double Aspheric optics for superior high magnification viewing and treatment of the optic nerve head and macula.

State-of-the-art computer designed aspheric optics provide improved performance over existing fundus lens designs. The Volk Fundus laser lens comes standard with LaserWindow® for optimal laser beam transmission and imaging element protection. This unique feature also creates a "closed" system - protecting the imaging element from dirt, oils and debris - ensuring precise laser placement.

### Capsulotomy Lens

Laser capsulotomy procedures are now greatly improved with Volk's patented Double Aspheric Capsulotomy laser lens. This new lens promotes precise and focused laser beam placement at the capsular bag. This new aspheric design comes standard with a LaserWindow® for optimal laser beam transmission.

Volk Direct Contact and Laser Treatment Lens Specifications			
Lens	Field of View	Image Mag.	Laser Spot Size
Centralis Direct® Lens	22° / 26°	.9x	1.11x
Fundus Laser Lens	35° / 40°	1.25x	.8x
Iridectomy Lens	N/A	1.7x	.58x
Capsulotomy Lens	N/A	1.57x	.63x

### Part numbers

2105-L-1728 Centralis Direct® Lens

2105-L-1736 Fundus Laser Lens

2105-L-1592 Capsulotomy Lens

## Volk Direct Contact and Laser Treatment Lenses

### Iridectomy Lens

Volk's patented Double Aspheric Iridectomy lens provides superior treatment capability of all basal and peripheral iridectomy procedures.

This new aspheric design comes standard with LaserWindow® for optimal laser beam transmission and imaging element protection.

### Blumenthal Suturelysis Lens

The New Volk Blumenthal Suturelysis lens assists in suture removal after glaucoma surgery enabling you to cut sutures that were inaccessible with prior suturelysis lens designs.

The lens magnifies the suture appearance 2 to 3 times – allowing enhanced visibility for difficult situations as well as smooth suturelysis in routine cases. The pointed tip provides a strong compressive force that adds to the stabilisation of the treated area. This feature provides particular benefit in patients with a thick Tenon's layer of a subconjunctival haemorrhage.



Volk Direct Contact and Laser Treatment Lens Specifications			
Lens	Field of View	Image Mag.	Laser Spot Size
MagPlus Iridectomy Lens	N/A	1.6x	.63x
Fundus 20mm Laser Lens	25° / 30°	1.44x	.7x
Blumenthal Suturelysis Lens	N/A	2x - 3x	.50x - .33x

### Part numbers

2105-L-1605 Iridectomy Lens

2105-L-1744 Blumenthal Suturelysis Lens



## Volk Gonio Lenses

### 3 Mirror Lens

The 3 Mirror lens incorporates 3 mirrors angled at 60°, 66° and 76°. It is ideal for anterior chamber as well as central and peripheral fundus viewing and treatment. The retinal viewing mirrors are accurately angled and spaced to eliminate “gaps” in the visualised fundus. The central portion of the lens also provides direct observation of the central portion of the posterior pole. Available in Volk’s exclusive 18mm ANF (Advanced No Fluid) contact design, or the 15.5mm “No Flange” version for use on infants and patients with narrow palpebral fissures. Please specify coating for Diagnostic/Laser lenses or the uncoated diagnostic version.

### G-4 Glass High Mag Lens

A new lens that gives the crispest, clearest views with high magnification to appreciate details previously unattainable with Gonio lenses. The all glass design provides superior clarity and durability compared to acrylic lenses.

4 precisely angled mirrors provides 360° views of the anterior chamber. This is a no flange design which does not require interface solution allowing quick eye contact.

Volk Gonio Lens Specifications				
Lens	Field of View	Image Mag.	Laser Spot	Contact Diam.
3 Mirror Lens (no flange)	60° / 66° / 76°	1.06x	.94x	15mm
3 Mirror Lens (ANF+)	60° / 66° / 76°	1.06x	.94x	18mm
G-1 trabeculum Lens	62°	1.5x	.67x	15mm
G-1 trabeculum nf Lens	62°	1.5x	.67x	8.4mm
G-2 trabeculum Lens	60° / 64°	1.5x	.67x	15mm
G-2 trabeculum nf Lens	60° / 64°	1.5x	.67x	8.4mm

### Part numbers

2105-L-1656 Volk G-3 Gonio Fundus

2105-L-1883 G-4 Glass High Mag Lens

## Volk Gonio Lenses

### G-4 Goniolaser and G-4 Gonio NF (No Flange)

The G-4 Goniolaser lens features 4 precisely angled 64° mirrors to deliver a complete view of the anterior chamber angle with slight rotation. The standard fluid design (flanged glass contact element) provides a stable platform during laser treatment of the anterior segment.

The NF design features a small 8.4mm radius contact surface that's ideal for both static and dynamic gonioscopy while eliminating the need for viscous interface solutions such as methylcellulose. Four NF models are available, including: small hand held (25.5mm diameter), large hand held (29mm diameter), extended handle (3 1/2" straight handle) or angled handle (3 1/2" 45° angled handle).

Volk Gonio Lens Specifications				
Lens	Field of View	Image Mag.	Laser Spot	Contact Diam.
G-3 Goniofundus Lens	60° / 66° / 76°	1.06x	.94x	15mm
G-3 Goniofundus NF Lens	60° / 66° / 76°	1.03x	.97x	11.4mm
G-3 mini Goniofundus NF Lens	60° / 66° / 76°	1.0x	1.0x	9.6mm
G-4 Goniolaser Lens	4 x 64°	1.0x	.67x	15mm
G-4 Gonio NF Lens	4 x 64°	1.0x	.67x	8.4mm
G-6 Six-Mirror Gonio Lens	6 x 63°	1.0x	1.0x	8.4mm

### New 2-in-1 handle

The new 2-in-1 handle can be removed or re-attached to create a straight or angled handle design.

### G-6 Six-Mirror Glass Gonio Lens

The six mirror Gonio lens provides the most comprehensive sweeping views of the anterior segment. With no gaps between the mirrors, you can appreciate a true 360° view, reducing examination time by 25% or more.

- Six closely aligned mirrors eliminate gaps providing a true 360° panoramic view
- Simpler to locate position and scan across mirrors
- Reduces need to maneuver slit lamp
- A taller, narrower body - easier to hold within the orbit
- No flange/fluid design simplifies the examination

### Part numbers

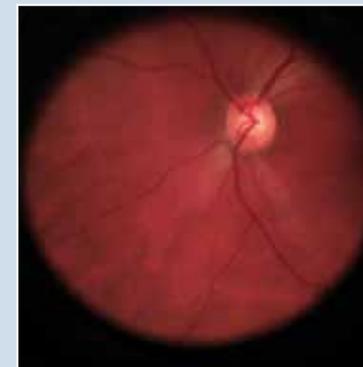
2105-L-1664	G-4 Gonio Fundus Lens
2105-L-1795	G-4 Gonio Fundus 2-in-1 Handle
2105-L-1998	G-6 Six-Mirror Glass Gonio Lens
2105-L-2003	G-6 Six-Mirror Glass Gonio Lens on a handle



All Volk lenses are listed but not shown - for details on other Volk lenses, please contact Keeler on 0800 521251.



## Volk Pictor



Volk Pictor is a truly portable digital imaging device that provides a variety of imaging capabilities with interchangeable modules. This versatile hand held device is available with the option of four key imaging modules for examination: ophthalmic - posterior and anterior segment, dermatoscopic and otoscopic.

### Improved Patient Care

Digital still and video images created with the Pictor provide accurate first diagnosis and planning for consistent follow up treatment.

### Simple Integration

The Pictor is easily adopted into daily examination routines. Connecting to any patient database system providing standard jpeg image files enables fluent image data storage and sharing that may be used for consultation purposes.

### Maximum Portability

Lightweight and portable, the Pictor is easily used in field conditions outside the office to examine convalescing patients and for geriatric or pediatric care. It also has an adapter to mount to a slit lamp if needed.





## Volk Pictor

Two easily interchangeable modules provide high resolution retinal (non-mydratic) or external eye imaging. Two further modules for otoscopic and dermatoscopic examination are also available.

### Retinal Module

Pictor retinal imaging enables non-mydratic eye fundus examination with a 45° field of view. With digital still and video images, the appearance of optic disc, macula and retinal vasculature can be screened and documented for ocular lesions and anomalies.



- Reflection free imaging with ten illumination levels
- Image targeting and capture using infrared or white light
- Not necessary to dilate pupils (minimum pupil size 3.5mm)
- Automatic focusing
- Silicone rubber eye cup for support and comfort
- Image resolution 1920 x 1440 pixels
- Diopter compensation -20D to +20D

### Anterior Module

Pictor anterior imaging provides high resolution digital image data of the surface of the eye and areas directly surrounding the eye. The cobalt blue LED light allows fluorescent imaging to detect a dry eye or any cuts or rashes on the surface of the eye.



- White and blue LED light for image targeting and capture
- Silicone rubber eye cup for support and comfort
- 6x digital zoom
- Image resolution 2560 x 1920 pixels
- Autofocus and optional manual adjustment



### Part numbers

3108-P-1013	Volk Pictor with Posterior Module
3108-P-1014	Volk Pictor with Posterior and Anterior Modules
3108-P-1015	Volk Pictor with Posterior, Anterior and Otopscopic Modules
3108-P-102	Volk Pictor with All Modules

## Volk Pictor Technical Specifications

### Handset

Dimensions	82 x 166 x 66mm (W x H x D)
Weight	400 g
Power Supply	Rechargeable Ni-MH battery
Slit lamp adapter	For fixed image capture
Display	2.4" TFT-LCD, anti-reflective coating
Image memory size	2 GB SD memory card
Bayonet connector	For optics modules attachment
Integrated lens	For general imaging (without module)
Average usage time	1 hr 30 minutes continuous use

### User Interface Features

Patient folders
Image preview

### Imaging

Image Sensor	CMOS 5.0 megapixel
Image format	JPEG
Video format	MPEG-4 and MPEG-1
Resolution	2560 x 1920 pixels in general mode
Focusing	Automatic

### Connectivity

Hardware	Computer with USB port – no driver installation needed
Software	Patient data management software provided with sales package





## Surgical Loupes



Magnification allows you to do a better job. If you can't see it, you can't work on it. The benefits of Keeler Loupes are immediately clear: improved working posture, reduced eye strain and now, with the K-LED head light, your working view is even clearer.

Laser aligned optics for magnification of superb optical quality, a lightweight aluminium assembly and a precise pupil alignment system make Keeler loupes the perfect choice for dental, surgical and veterinary professionals.

### Let Keeler loupes take the strain

Keeler loupes are comfortable to wear and work with, helping to reduce eyestrain. By bringing your patients closer, you can improve your posture and avoid stooping.

### Recommended working distances

Your Height	Sitting	Standing
< 5' 7" (150cm - 170cm)	34cm	34cm
5' 7" - 5' 10" (170cm - 178cm)	34cm	42cm
5' 10" - 6' 0" (178cm - 183cm)	42cm	46cm
> 6' 0" (183cm)	46cm	50cm

### Patient comfort

Patients will feel more comfortable and at ease with increased personal space as you will work from a greater distance.

### Multiple magnification levels

Keeler loupes offer performance matched to your requirements. Multiple magnification levels enable you to see more, spot problems earlier and offer even higher levels of precision treatment.





Mini Loupes

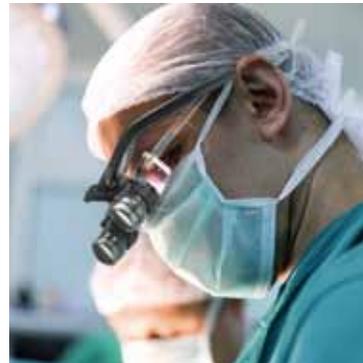


Standard Loupes

## New Mini and Standard Loupes

### New Mini Loupes Delivering 2.5x magnification.

Mini Loupes are designed to be ultra light and comfortable with minimal compromise in field of view. Absolute comfort is our achievement; excellent peripheral vision is the added benefit of our slim design.



### Standard Loupes Delivering 2.0x, 2.5x and 3.0x magnification.

The true benefit of this system is ease of use. Movement whilst maintaining focal clarity is possible due to superior depth of field. The lightweight aluminium bar with individual pupillary adjustment provides the mounted loupes with stability and optimal focal alignment, eliminating headache and eyestrain.



#### Part numbers

##### Mini Loupes

##### 2.5x Magnification

2112-P-1064 Mini Loupe 2.5x @ 34cm working distance

2112-P-1065 Mini Loupe 2.5x @ 42cm working distance

2112-P-1066 Mini Loupe 2.5x @ 46cm working distance

2112-P-1067 Mini Loupe 2.5x @ 50cm working distance

##### Standard Loupes

##### 2.0x Magnification

2112-P-1002 Standard Loupe 2.0x @ 34cm working distance

2112-P-1003 Standard Loupe 2.0x @ 46cm working distance

##### 2.5x Magnification

2112-P-1010 Standard Loupe 2.5x @ 34cm working distance

2112-P-1011 Standard Loupe 2.5x @ 42cm working distance

2112-P-1012 Standard Loupe 2.5x @ 46cm working distance

2112-P-1013 Standard Loupe 2.5x @ 50cm working distance

##### 3.0x Magnification

2112-P-1022 Standard Loupe 3.0x @ 34cm working distance

2112-P-1023 Standard Loupe 3.0x @ 42cm working distance

2112-P-1024 Standard Loupe 3.0x @ 46cm working distance

2112-P-1025 Standard Loupe 3.0x @ 50cm working distance

## Hi-Res Loupes and Keeler Sport Frames

### Hi-Res Loupes

Delivering 3.0x magnification.

Keeler have designed a new high resolution loupe which exceeds the standards previously attained. The 5 element loupe gives a true 3x magnification with a 15% increased field of view and a visually flat field from edge to edge.



Protective Caps

### Keeler Sport Frames

All Keeler loupes are available on the Keeler Sport Frame. Stylish, comfortable and attractive, the new Keeler frame is available in a choice of bright colours as shown. The frames will fit over many styles of glasses, or with the free insert, can be easily adapted to all prescriptions.

*Sport Frames are available in the following finishes*



### Part numbers

#### Hi-Res Loupes

#### 3.0x Magnification

2112-P-1050 Hi-Res 3.0x @ 34cm working distance

2112-P-1051 Hi-Res 3.0x @ 42cm working distance

2112-P-1052 Hi-Res 3.0x @ 46cm working distance

2112-P-1053 Hi-Res 3.0x @ 50cm working distance

#### Accessories

2112-P-8049 Protective Caps

2112-P-8057 +1D Near distance Caps



Hi-Res Loupes



Keeler Sport Frames



Prismatic Loupes

## Prismatic Loupes

Delivering 3.5x, 4.5x and 5.5x magnification.

Higher magnification for advanced surgical procedures. Prismatic quality guarantees a true image. Edge to edge clarity and precise colour rendition are ideal for intricate applications. The Prismatic Loupe's precision lenses are treated with an anti-reflective coating to produce a superior image.



### Part numbers

#### Prismatic Loupes

#### 3.5x Magnification

2113-P-2004 Prismatic Loupe 3.5x @ 34cm working distance

2113-P-2005 Prismatic Loupe 3.5x @ 42cm working distance

2113-P-2006 Prismatic Loupe 3.5x @ 46cm working distance

#### 4.5x Magnification

2113-P-2008 Prismatic Loupe 4.5x @ 34cm working distance

2113-P-2009 Prismatic Loupe 4.5x @ 42cm working distance

2113-P-2010 Prismatic Loupe 4.5x @ 46cm working distance

#### 5.5x Magnification

2113-P-2012 Prismatic Loupe 5.5x @ 34cm working distance

2113-P-2013 Prismatic Loupe 5.5x @ 42cm working distance

2113-P-2014 Prismatic Loupe 5.5x @ 46cm working distance

## K-LED gives long lasting white light



The K-LED head light produces a homogeneous light patch of up to 18000 lux. The 3W LED is mounted paraxially on the loupe bar and is powered by a lithium battery pack allowing 4 hours of continuous use.

The K-LED is available in two packages; a twin charger with a tray to hold loupes when not in use that will charge two batteries simultaneously, or a kit bag with a compact single charger that gives the K-LED even greater portability. Both are available with either a universal clip for attachment to most brands of metal framed loupes or glasses, or a fitting for all current and previous Keeler loupe models.

### Designed for comfort

Choose between the Keeler Sport frame or a headband mounted system to mount your loupes. Adaptable to all prescriptions.



*K-LED with single charger and bag*

### Part numbers

2004-P-1007	Keeler fit K-LED system with twin charger tray
2004-P-1009	Universal fit K-LED system with twin charger tray
2004-P-1011	Universal fit K-LED system with single charger and bag
2004-P-1012	Keeler fit K-LED system with single charger and bag



*K-LED and Hi-Res Loupes Co-axial fitting*



*K-LED and Hi-Res Loupes in twin charger tray*



## Low Vision Aids and Assessment Sets

As a world leader in optical instruments, Keeler has long believed that it can and should use its renowned optical skills to make a major contribution to the quality of life of low vision patients.

The involvement of Charles H Keeler OBE in this field began when an Ophthalmologist based at Moorfields Eye Hospital asked him to observe the problems of people with low visual acuity in the 1950's.



The original series of magnifying lenses characterised by accurate assessment of required magnification has been developed into the widest, most versatile range available today.

### Low Vision Aids

Keeler are now delighted to introduce a new range of Low Vision Aids that are uniquely interchangeable and can be quickly and easily upgraded year after year as your eyes change.

Whether you want a magnifier to help you to read and write, watch television or go to the theatre, Keeler can offer you the full range that you can fit onto your existing frame or on a Keeler frame.

### Low Vision Assessment Sets

A new range of Assessments with something to suit every practitioner and every patient. Each set can add a service to your practice, whether prescribing simple Low Vision Aids or offering full Low Vision Assessments.





Read-Write Mag



Wide-Vu Mag



Hi-Mag Illuminated and Non Illuminated



Stedi-Fit Mag

## Near Vision Range of Magnifiers

### Read-Write Mag (LVA21)

Magnifications: 2x, 3x, 4x, 5x

- Ideal for reading and writing
- Can be used for either one eye or both eyes
- Longer working distance

### New Wide-Vu Mag (LVA22)

Magnifications: 2x, 3x, 4x, 5x, 6x, 8x

- Ideal for reading
- Extra wide field of view which is ideal for checking statements or bills
- The 2x and 3x can be mounted for one eye or both eyes

### New Hi-Mag Illuminated and Non Illuminated (LVA9)

Magnifications: 10x, 12x, 15x, 20x

- Perfect for credit cards statements or utility bills
- Non illuminated is available with clear housing to take advantage of natural light
- Illuminated housing is powered by two batteries

### New Stedi-Fit Mag (LVA10c)

Magnifications: 6x, 8x

- Ideal for patients with tremor or focusing problems
- New lens curvature gives improved clarity and image flatness

### Bifocal Mag (LVA12)

Magnifications: 2x, 3x, 4x, 5x, 6x, 7x, 8x, 9x, 10x

- Discreet and lightweight
- Full segment bifocal near vision magnification



#### Part numbers

LVA21	Read-Write Mag
LVA22	Wide-Vu Mag
LVA9	Hi-Mag Illuminated and Non Illuminated
LVA10c	Stedi-Fit Mag
LVA12	Bifocal Mag



## Intermediate and Distance Telescopes

### New TV Mag (LVA50)

Magnification: 1.9x

- Lightweight and ideal for watching television
- Large 23° field of view at infinity
- Rapid focusing from 42cm to infinity

### Sports Mag (LVA40)

Magnification: 2.5x

- Ideal for open areas such as sporting events or theatre and cinema
- Galilean optics with working distance of 70cm to infinity
- Choice of one eye or both eyes

### Multi-Cap (LVA51)

- Interchangeable caps for near and distance vision in one telescope
- Near cap: choice of magnifications 2x, 3x or 4x
- Distance telescope: magnification 1.75x
- Extra cap for 0.5m and 1m working distance

### Multi-Range Mag (LVA53)

Magnification: 2.8x, 4.2x - Field of Views 12.5°

- Ideal for use while outdoors or shopping
- Available on a frame or finger ring
- Working distance of 20cm to infinity

### Hand held Multi-Range Mag (LVA53)

Magnification: 8.25x - Field of View 7°

- Hand held telescope that fits into pockets for travelling and outdoor use
- Working distance of 30 cm to infinity



#### Part numbers

LVA50	TV Mag
LVA40	Sports Mag
LVA51	Multi-Cap
LVA53	Multi-Range Mag
LVA53	Hand held Multi-Range Mag



TV Mag



Sports Mag



Multi-Cap



Multi-Range Mag



*Advanced Assessment Set*



*Basic Assessment Set*

## Advanced and Basic Assessment Sets

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### Advanced Assessment Set

This set offers a range of Keeler Magnifiers and Telescopes enabling you to provide your patients with a full Low Vision Service including:-

- 1.9x Distance Magnifiers
- 10 Near Magnifiers from 2x to 12x
- 3 pairs of binocular telescopes 2x, 3x and 4x magnification
- Near and distance testing charts
- Keeler LVA standard frame and PD bars
- Trial Clip and Clip on occluder

### Basic Assessment Set

Designed as an introduction to Low Vision and the Keeler Telescope System.

- 1.9x distance magnifier
- 7 near telescopes from 2x to 12x
- Near and distance testing charts
- Small, medium and large Keeler frames
- Trial clip and clip on occluder

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#### Part numbers

2280-P-1161 Advanced Assessment Set

2280-P-1153 Basic Assessment Set

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## Redi-fit Assessment Set and Tool Kit

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### Redi-fit Assessment Set

A simple testing set for prescribing aspheric spectacle magnifiers includes:

- Testing lenses from 2x to 8x magnification
- Lenses that fit left or right eye
- 3 Keeler frames in small, medium and large sizes
- 'A' series reading chart for assessment of magnification requirements

Redi-fit lenses are available for instant dispensing which are cut and edged to fit our standard LVA frame.

Due to the specialist nature of the Keeler Low Vision range we prefer to sell / dispense via distributors. For details of these distributors please refer to the Low Vision section of our website [www.keeler.co.uk](http://www.keeler.co.uk)

### Tool Kit

Provides the tools required to mount Keeler telescopes onto spectacle lenses using the advanced method:

- Telescopes can be fitted directly onto plano or prescription lenses (CR39)
- Any suitable frame may be used
- Spectacle mounted aids can be assembled in practice, saving time and money
- Assembly instructions are included for both monocular and binocular mounting

### Part numbers

2280-P-1065	Redi-fit Set
2280-P-1102	LVA Tool Kit for assessment sets



*Redi-fit Assessment Set*



*Tool Kit*



# Bulbs



All Keeler instruments use genuine Halogen and Xenon technology, yielding a brighter, whiter illumination and a longer life. Look at the bottom of your bulb to identify if your instrument is 2.8V (Dry cell battery) or 3.6V (Rechargeable battery).

Pocket Ophthalmoscope Bulb		Professional/ Vista Streak Retinoscope Bulb, 35mm length	
Professional Ophthalmoscope Bulb		Professional/ Vista Spot Retinoscope Bulb, 35mm length	
Specialist/Vista Ophthalmoscope Bulb		All Pupil and Vantage Bulb	

Part numbers	
1011-P-7050	Pocket Ophthalmoscope Bulb
1011-P-7106	Professional Ophthalmoscope Bulb 2.8V
1011-P-7114	Professional Ophthalmoscope Bulb 3.6V
1011-P-7042	Specialist/Vista Ophthalmoscope Bulb 2.8V
1011-P-7034	Specialist/Vista Ophthalmoscope Bulb 3.6V
1013-P-7008	Professional/Vista Streak Retinoscope Bulb, 35mm 2.8V
1013-P-7009	Professional/Vista Streak Retinoscope Bulb, 35mm 3.6V
1013-P-7006	Professional/Vista Spot Retinoscope Bulb, 35mm 2.8V
1013-P-7007	Professional/Vista Spot Retinoscope Bulb, 35mm 3.6V
1012-P-7003	All Pupil and Vantage Bulb
1030-P-7160	Halogen Bulb 6v 20w
1030-P-7152	Halogen Bulb 12v 30w
2402-P-2155	Javal Keratometer Bulb
2402-P-2163	Javal Keratometer Bulb

Halogen Bulb



Javal  
Keratometer  
Bulbs



2402-P-2155    2402-P-2163

All bulbs are  
supplied in  
packs of 2





## Contact us

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