



# Vantage Plus Digital

The next generation of indirect ophthalmoscopy

**Keeler**  
— A world without vision loss —



# Vantage Plus Digital Documentation at the touch of a button

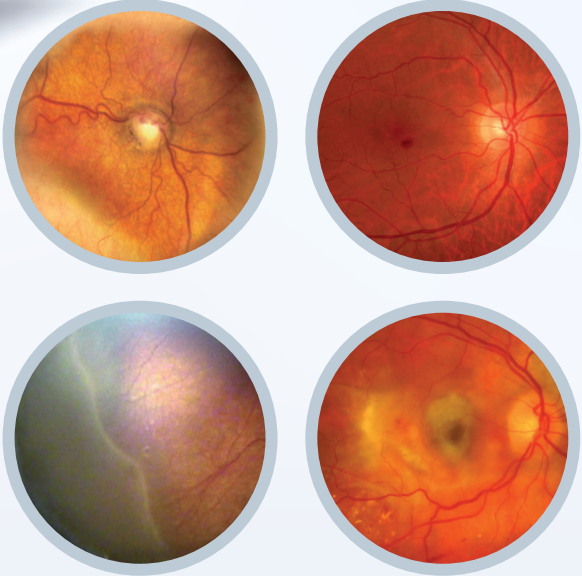
The Keeler Vantage Plus Digital is designed to provide the same great optical system, enhanced with digital imaging.

An Indirect Ophthalmoscope is an AC or battery-powered device containing illumination and viewing optics; and it is intended to be used to examine the cornea, aqueous, lens, vitreous and retina of the eye. The device is intended for use by a trained healthcare professional, and is mounted on the user's head.



## Key features

- Renowned Keeler binocular optics, with digital imaging to capture everything seen
- Intuitive Kapture software provides still images or video documentation of findings
- Sharable digital findings to enhance your workflow:
  - Increase your practice profile through patient engagement
  - Simplify education with live streaming of examinations
  - Access secondary opinions and references



Vantage Plus Digital has been specifically designed as an intuitive documentation tool at the cutting edge of indirect ophthalmoscopy to increase your practice profile.

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

Increase your practice profile by educating your patients and their family with digital dynamic imaging in your office.



Vantage Plus Digital with intuitive Keeler software



The high contrast viewing optics use natural LED illumination

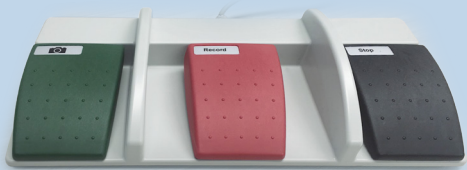
## Part Numbers

### Vantage Plus Digital Indirect Ophthalmoscope

1205-P-5009	Vantage Plus Digital Indirect
1205-P-5010	Vantage Plus Digital Kit

### Accessories

EP39-53748	Eye lens plano (qty 2)
EP39-53799	Rubber eye cap (qty 2)
3412-P-5047	Vantage Plus Digital carry case
1205-P-7001	Vantage Plus Digital footswitch
1205-P-7034	Binocular Indirect face shield
2105-K-1159	Volk 20D black condensing lens
2415-P-7001	Instructions for use



Vantage Plus Digital footswitch



# Unique benefits

## Bright white LED illumination for a superior retinal view

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 BIO's.



Vantage Plus LED light source



## Intelligent Optical System (IOS) (Patented No. US8132915B)

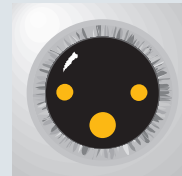
At last - now when you change the aperture, the optics and mirrors automatically adjust for you, without the need to flip another lever!

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.

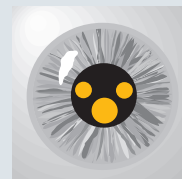
### Large Pupil

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



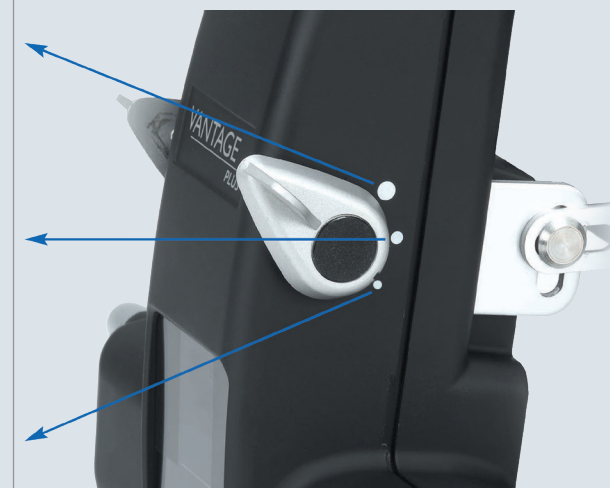
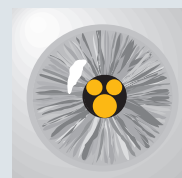
### Intermediate Pupil

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

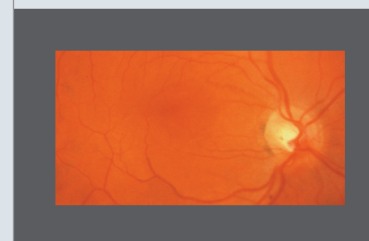


### Small Pupil

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.

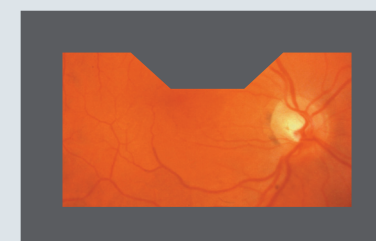


## Exclusive - IOS Optics allows Small Pupil Imaging without any obstructions



View through Vantage Plus with IOS Optics.

When small pupil is selected there is no obstruction of the retina.



View through NON IOS Optical Systems.

When small pupil is selected there is an obstruction, reducing your clinical information.

## Comfortable and perfectly balanced

A soft cushioned headband has been designed to maximise comfort, it adjusts and balances perfectly to suit all head shapes and sizes.

## Slim professional carrying case



Transport your instrument in style and choose if you want to use your wheels or carry it on your shoulder.



# Specifications

## Vantage Plus Digital - Digital Imaging

CAMERA	USB 2 to mini B / 5 pin lead
RANGE	Image adjustment +/- 7 degrees
RESOLUTION	To test pattern 6 of group 2 on the 1951 USAF Test Pattern with a 20D lens (conforms to MIL-STD 150A)
OPERATING SYSTEM	Windows 7, 8 and 10
DEPTH OF FIELD	+/- 35mm at 440mm working distance

## Vantage Plus System

LIGHT OUTPUT	1000 Lux
COLOUR TEMPERATURE OF LED	3800K
ILLUMINATION MIRROR ADJUSTMENT	84mm up, 53 mm down (about centre axis)
ADJUSTMENT RANGE OF OPTICS	+/- 4 degrees
WORKING DISTANCE	Nominal 440mm, with resolution maintained at 350mm to 650mm from instrument to eye with a 20D lens
PUPIL SIZE	1-10mm
PD RANGE	48-76mm
BATTERY	Up to 6 hours continuous on a single charge
FILTERS	<div><div></div> Cobalt Blue</div> <div><div></div> Red-free</div> <div><div></div> Diffuser</div>
PATCH DIAMETER	20mm, 40mm, 60mm
APERTURE	<div><div></div> Large</div> <div><div></div> Intermediate</div> <div><div></div> Small</div>
TEMPERATURE LIMITS	Operation +10°C to +35°C Storage -10°C to +55°C Transport -40°C to +70°C
HUMIDITY LIMITS	Operation 30% to 75% Storage 10% to 95% Transport 10% to 95%
CLEANING	Wipe with water / isopropyl alcohol solution (70% IPA by volume)

## Electrical Ratings

INPUT MAINS DATA	100-240V - 50/60Hz
POWER SUPPLY RATING	12V : 2.5amps
PHOTOCHEMICAL SOURCE RADIANCE	1mm aperture (mW cm <sup>-2</sup> sr <sup>-1</sup> )
APHAKIC, LA (305-700nm)	1.32
PHAKIC, LB (380-700nm)	1.16

## Dimensions and Weight

DIMENSIONS	150 x 230 x 360mm (HxWxD)
WEIGHT	662g

## Classification and Safety Standards

CLASSIFICATION	Class II Equipment. Type B protection against shock
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“The cooler colour temperature of the natural LED light source resulted in a level of image clarity that I’ve not found in another BIO”

Todd J. Purkiss, M.D., Ph.D., Chief Resident, Ophthalmology & Visual Sciences, University of Louisville

## Minimum System Requirements

PROCESSOR	Intel Pentium 4 or later
RAM	2 GB (4 GB recommended)
HARD DRIVE	128 GB (256 GB recommended)
GRAPHICS CARD	Intel HD Graphics (2010 or later); 24-bit
MONITOR RESOLUTION	1024 x 768 (HD recommended)
OPERATING SYSTEM	Windows XP / Vista / 7 / 8 / 10
USB PORT	USB 2.0 or 3.0



## Vantage Plus Digital Overview

The Keeler Vantage plus digital is a head-mounted indirect ophthalmoscope, designed to provide an illuminated binocular optical view, enhanced with digital imaging.

This is intended to be used in conjunction with a condensing lens as prescribed through indirect ophthalmoscopy techniques to illuminate and examine the fundus, with Kapture software to document findings.

This equipment is to be used only by a healthcare professional.

## What's in the box?

### 1205-P-5009

#### *Vantage Plus Digital LED*

- Vantage Plus Digital Indirect Ophthalmoscope
- Wall-mounted charging unit
- Slimline battery
- Keeler BIO face shield
- Kapture software USB memory stick and license
- Lens cloth
- +2D and plano ocular lenses
- Instructions for use

### 1205-P-5010

#### *Vantage Plus Digital LED with Carry Case*

- Contents as above plus a Vantage Plus Digital carry case

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## Manufacturing address



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