

Orion	Diagnostics

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1. Introduction

The Timesco Otoscopes are intended for use by qualified medical personnel to conduct the examination of the ear, the external auditory canal and the tympanum. The Timesco ophthalmoscopes are used to examine the interior of the eye including the retina, fovea, choroid, macula, optic disc and blood vessels.

2. Product Function & Performance

The intended users of the Timesco diagnostic devices are trained healthcare professionals. The care and maintenance of the device as per the instructions for use is required to ensure that the device performs as intended. Care and maintenance of the device is to be done by qualified facility personnel.

The tables below outline the principle of operation and mode of action for the Timesco Orion Otoscope and Ophthalmoscope.

	Table 1 Principle of Operation & Mode o			
Device	Product Function & Performance	Description		
Orion (Bayonet & Screw Pin Fitting)	Screw/Pin Fitting C1 Bayonet Fitting Bayonet Fitting	 A. Attach the magnifying lens onto the otoscope chamber by aligning the pin and rotating to lock it in. B. Attach the reusable speculum onto the otoscope chamber by similarly aligning the pin and rotating to lock it in. (A separate adaptor may be attached, for use with standard disposable specula.) C. 1 – Insert the otoscope head and screw the pin to lock. 2 – Attach the otoscope head onto the handle taking care to align the bayonet and twist to lock. D. Hold down the power button to unlock the rheostat. E. Twist the rheostat to adjust the brightness of the bulb as required. A. The bulb can be replaced from the otoscope head when required. 		
Orion	A C	 A. Rotate the wheel to select the desired lens. B. View through the window. C. The power of the selected lens is visible through the window. D. The bulb can be replaced from the Ophthalmoscope head when required. This is done by unscrewing the bottom which unlocks the bulb. 		



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3. Technical Specifications

The Orion Diagnostics devices are recommended to be operated and stored in the following conditions.

Table 2 Operating conditions for Orion.

Operating Conditions				
Temperature	10°C - 40°C			
Humidity	30% – 75%			
Ambient Pressure	70kPa – 106 kPa			
Storage Conditions				
Temperature -20°C - 60°C				
I I	10% – 90%			
Humidity	Non-condensing			
Ambient Pressure 50kPa – 106 kPa				

The Orion Otoscope head features:

- A swivel 3X magnification lens
- Compatible with reusable Specula
- Compatible with single-use Specula
- Insufflation Port for pneumatic testing of the tympanic membrane
- Replaceable bulbs

The Orion Ophthalmoscope head features:

Apertures:



Standard spot: for dilated pupils, general application.

Lenses:

There are 24 colour coded lenses, green for + and red for -.

0	1	2	3	4	5	6	8	10	12	15	20	40
	1	2	3	4	5	6	8	10	15	20	25	



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4. Components

The otoscopes and ophthalmoscopes are simple devices which are based on well-established designs. The table below provides an overview of the key functional elements of the devices.

Table 3 Otoscope & Ophthalmoscope key functional elements.

Table 3 Otoscope & Ophthalmoscope key functional elements.				
Device	Key Functional Elements	Description		
	3 2	Reusable Speculum Otoscope Chamber		
Orion		3. Magnifying Lens (3x)		
		4. Insufflation Port		
	5	5. Bayonet/Pin Locking		
Orion Ophthalmoscope	1. Eyebrow Rest			
	2	2. View Window		
		3. Aperture Selector		
	4	4. Lens Window		



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5. Material Specification

The tables below outline the material specification for the Orion Otoscope and Ophthalmoscope.

Table 4 Orion Otoscope material specification.

Part	Material	Image
Wiring Sleeve	Polypropylene	
Plastic Bulb Cap	Polypropylene	STATE OF STA
Chamber Pipe	Brass Tube	
Insufflations Adaptor	Brass	
Cannula Lock Pin	Brass Rod	Orion
Contact Pin	Brass Rod	OFFICE POCO POCO POCO POCO POCO POCO POCO PO
Brass Wire	Brass Wire	
Glass Lens Magnification 3X	Glass	

Table 5 Orion Ophthalmoscope material specification.

Part	Material	Image
Upper Side	Plastic	
Lens disk for outer body	Polypropylene	
Rubber Eye	PVC Rubber	
Wiring Sleeve	Polypropylene	
Lower Side	Plastic	
Light Beam Filter	ABS	orion
Lens	PMMA	ENGLING (C
Assembling Ring	Brass	
Adaptor	Brass	
Holder	Stainless Steel	
Contact Pin	Brass	
Wiring Sleeve	Polypropylene	