



Inspecta

PORTABLE MICROSCOPES
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British Made



- Portable Microscopes with Image Erection
- PCB Through - Hole Scope
- Depthscope
- Brinell Hardness Impression Microscope
- Cathode Ray Tube Inspector
- Portable Video Scope
- Metallurgical Microscope

The Inspecta range of superior portable microscopes are all fitted with high quality precision optics to give the best possible performance. Their robust construction ensures many years of trouble free use. Unusual in products these days is the ability to service these microscopes

Typical Applications

Measurement and inspection of:

- Artworks
- Negatives and transparencies
- PCB tracks and holes
- Material imperfections
- Metal finish
- Slits and apertures
- Printing and packaging
- Micro circuits
- Particles and droplets
- Paint finish

Portable Microscopes

Inspecta Portable Microscopes are the no nonsense solution to inspection. Ranging in magnification from 20x to 100x and with direct reading measurement reticles, these instruments can be used with only the bare minimum of training. We can even put special reticles in the focussing eyepiece for specific applications. These instruments can be used on-line, at-line, in the field or in the laboratory giving the most flexible solution to your microscope needs.

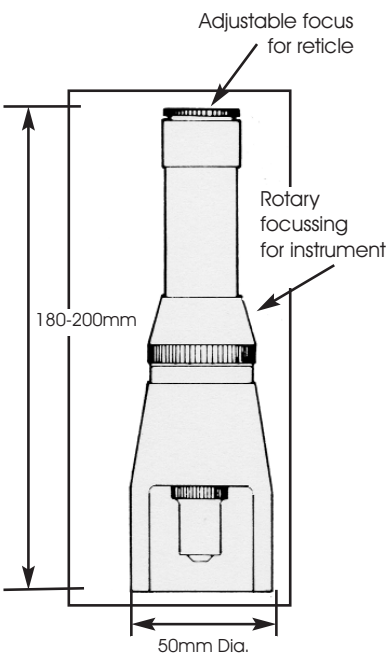
The focussing range of up to 20mm means that uneven specimens can be viewed and measured. Additionally the battery operated torch accessory that is included as standard provides extra illumination in poor light conditions or when analysing dark or low contrast objects.

High quality optical components and metal body provide a robust microscope with exceptional resolution and, unusually, the instrument is fully serviceable.



Microscope shown with standard torch accessory

Portable Microscopes Specifications



Standard Models (Supplied with torch illumination)

Cat. Ref.	Order Code	Approximate Magnification	Useful Field	Calibration
P821	50E02027	x20	7.5mm	6mm in 0.02mm
P822	50E02028	x20	0.25"	0.2" in 0.001"
P825	50E02029	x40	3.7mm	3mm in 0.01mm
P826	50E02030	x40	0.15"	0.1" in 0.001"
P827	50E02031	x80	2mm	1mm in 0.01mm
P828	50E02032	x80	0.08"	0.05" in 0.0005"
P830	50E02033	x100	1.3mm	1mm in 0.01mm
P831	50E02034	x100	0.06"	0.05" in 0.0005"

Models with Erecting Prism

The following three models have an erecting prism in the optical system so that the image is the right way up to the eye.

Cat. Ref.	Order Code	Approximate Magnification	Useful Field	Calibration
P841	50E02035	x20	6mm	4mm in 0.02mm
P845	50E02036	x40	2.5mm	2mm in 0.01mm
P850	50E02027	x100	1.3mm	1mm in 0.01mm

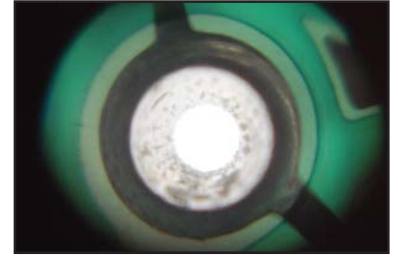
Magnifications of up to x200 are also available.

PCB Through Hole Scope

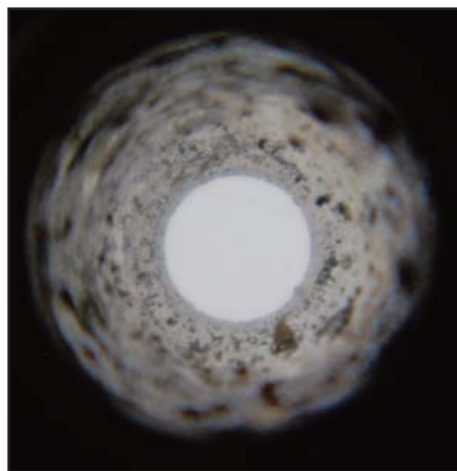
The Inspecta P875 microscope allows fast inspection of plated-through holes in printed circuit boards, and other round apertures. The unique lens design shows the complete inside of the hole. When used over a light box, holes can be inspected for voids, burrs, obstructions or plating faults.

The instrument is supplied ready for use in a polished wooden case and is suitable for holes up to 3mm diameter and 3mm deep.

The microscope is only 220mm tall and has sealed optics to prevent dirt ingress. The serviceable design has a metal body and rubber grips on the optical slide and collar. A clear acrylic base allows extra ambient light to illuminate the hole.



Distance view of plated-through hole to aid centering (upper zoom position)



Typical close up view of plated-through hole. As you slide the zoom down the different levels come into focus.



- Sealed Optics prevent dirt ingress
- Metal Construction
- Slide Zoom Grip
- Hand Grip
- Clear Acrylic Base to allow light onto specimen surface

Cat. Ref: P875
Order Code: 50E02040

Depthscope

The P879 is a portable microscope for measuring depth/thickness and size of objects. The combination of a depth measuring vernier and calibrated eyepiece reticle makes this a versatile tool for the workshop, QC lab, or field. Operator training is minimal so the instrument can be used on-line, at-line or in the laboratory.

Built entirely of metal and with quality glass optics the microscope is robust and precision engineered to meet the rigours of continuous use in a variety of environments. A battery-powered light provides through the lens illumination of the specimen surface.

Applications are numerous and include; measurement of photographic film thickness, depth of coatings, pits and scratches, depth of blind cavities, cracks in materials, solder thickness, silk screen ink coating, machined surfaces, surface corrosion, indentations, paint thickness, etc.

Specification:

Magnification	200x
Vernier	Direct reading to 0.1 .mm (10 μ)
Vernier repeatability	Within 0.002mm (2 μ)
Estimations	To 0.005mm (5 μ) or better using interpretation of scale
Eyepiece scale	0.5mm in 0.005mm (5 μ) divisions
Batteries	2 x C type
Height	250mm
Supplied in wooden case	

How to use the P879:

The microscope is placed on the area of interest and focussed on one surface, the vernier datum mark is set to zero and locked in place. The focus is then adjusted to the second surface and the separation is read directly from the vernier scale.



Cat. Ref: P879

Order Code: 50E02045

Brinell Hardness Impression Microscope



The Inspecta P890 hardness impression measuring microscope has a special metal base plate to allow it to be placed directly on the test specimen and a simple battery powered illuminator to light the surface. The illuminator is on a ball joint arm to allow its angle to be adjusted to give the best possible edge lighting.

A calibrated reticle in the eyepiece provides direct measurements of the impression to 0.1mm, as standard. Other reticles may be fitted to give different measurements.

Specification:

Magnification	15x
Reticle calibration	6mm scale in 0.1mm divisions Other calibrations are available
Batteries	2 x AAA type

Cat. Ref: P890

Order Code: 50E02043

Cathode Ray Tube Inspector

The Inspecta screen inspector was originally designed for the inspection of the inside surface on cathode ray tubes but is suitable for many other screen and surface applications. The P860 and P861 differ from the standard portable microscope in that they have a shorter base and rubber feet to prevent marking surfaces. The simple battery powered illuminator is mounted on a ball joint arm to allow its angle to be adjusted to give the best possible surface lighting.

Specification:

Magnification	P860 is 20x, P861 is 40x
Reticle calibration	P860 4mm in 0.02mm (20 μ) divisions P861 2mm in 0.01mm (10 μ) divisions

Cat. Ref: P860 (20x)

Order Code: 50E02038

Cat. Ref: P861 (40x)

Order Code: 50E02039



Metallurgical Version



The Inspecta P878 microscope is designed specifically for metallurgical and similar applications where there is a need to inspect or measure dark or opaque surfaces.

Through-lens illumination is provided by a battery powered light making the whole unit fully portable. A calibrated reticle in the eyepiece provides direct measurements down to 10 μ .

Specification:

Magnification	100x
Reticle calibration	1mm scale in 0.01mm (10 μ) divisions Other calibrations are available
Batteries	2 x C type

Cat. Ref: **P878**
Order Code: **50E02046**

Specials

Reticles

Standard measuring scales are fitted in all of the microscopes. Pyser-SGI have a wide range of other patterns and have the capability to manufacture custom designs.

Special Reticles

There are many occasions where one of the standard reticles will not be satisfactory for your application. maybe you want a pattern that reflects your particular component, alignment or measurement in order to make inspection easier with less error. Pyser-SGI can work with you to create exactly the right pattern for your task.

Many people shy away from special reticles because of the perceived high cost. Pyser-SGI has a very cost-effective, custom reticle facility that is used to dealing with one-off designs and will produce a drawing of the pattern for you to approve or amend before manufacture.

Just send us full details of your requirements and we will be delighted to provide a quotation.

Microscopes

Special versions with magnifications up to x200 are available

Accessories

Torch Illumination

TR4 Torch accessory for illumination of specimen. Battery powered (2 off AAA/R03). Complete with cantilever arm for precise positioning, which attaches to the side of the microscope.

Cat. Ref: **TR4**
Order Code: **50C02065**

Wooden Cases

Polished wooden carrying case for all models.

Cat. Ref: **BX1**
Order Code: **50C02060**

CCTV Camera System

If you need to capture images of the specimens being viewed, Pyser have a wide range of solutions. We offer camera adaptors for connecting compact or SLR cameras to the microscope eyepiece, digital camera and imaging software packages, and cctv cameras with monitors. Let us know which is the best option for your application and we will be pleased to provide a quotation.

Other products

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Inspecta
 Modular Microscope Solutions and Components
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Inspecta
 MAG 6 and MAG 7 Magnifiers
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 8x and 4x

Please contact Pyser-SGI Limited