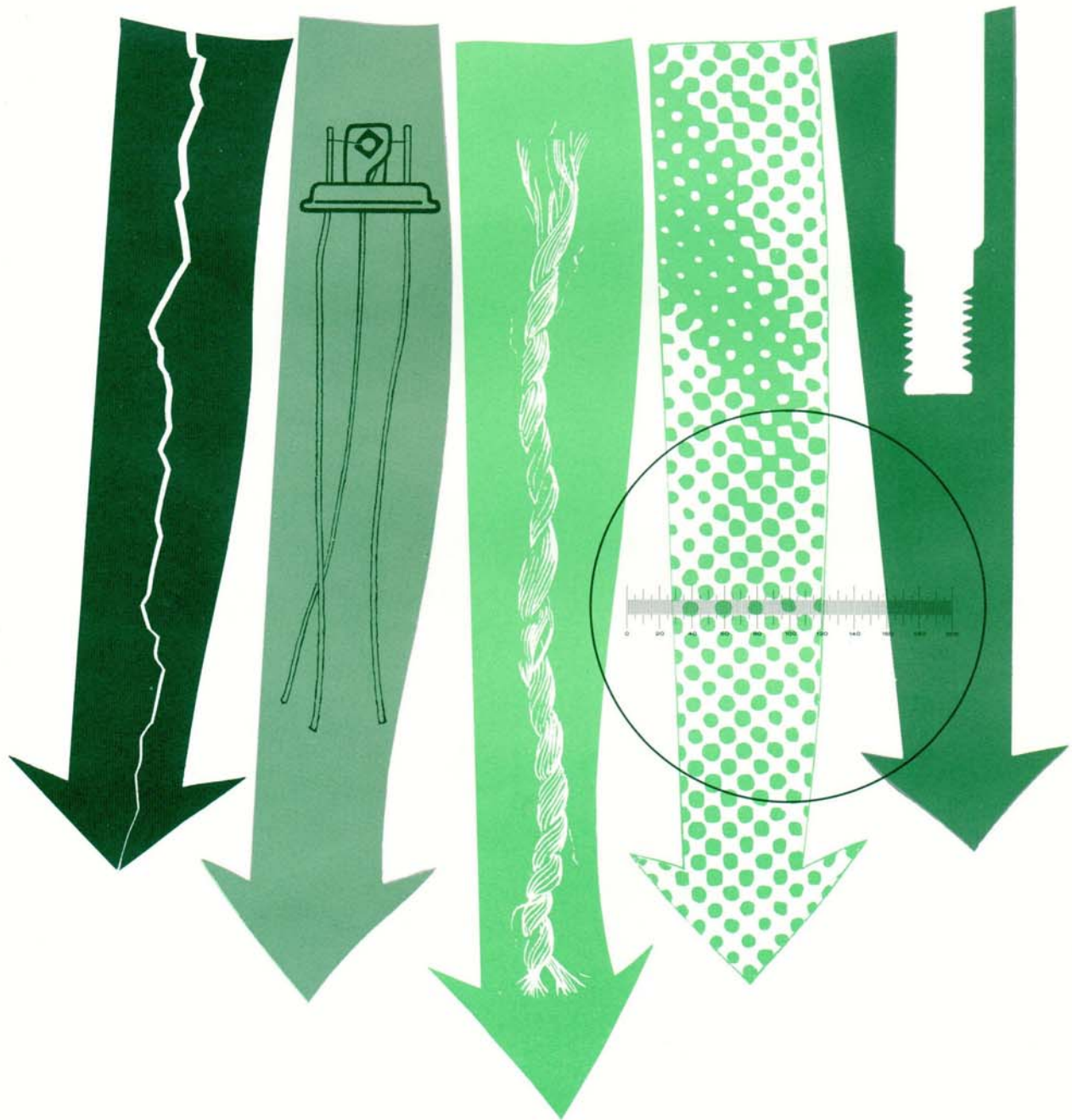


AO UTILITY MICROSCOPE



Unique Problem Solver for the Shop and Industrial Laboratory



K1360-A Body with
K1360-D Adapter
and Illuminator

AO's Utility Microscope is designed for shop, factory and laboratory use. It provides low-power magnification, an erect image, a wide field of view and a constant working distance . . . a unique combination of advantages that make it ideal for the observation, inspection and measurement of small objects or work. Measurements are more precise . . . there's no annoying image shift as with many other types of measuring microscopes.

AO UTILITY MICROSCOPE



K1360-A Body with K1360-F Stand and Illuminator

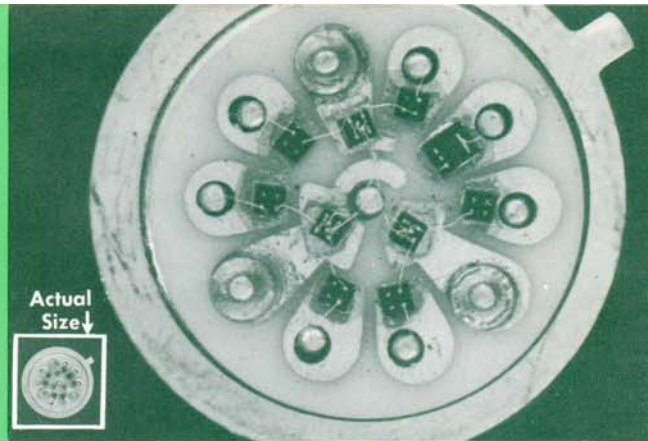
Versatile . . . Many Applications!

This unique instrument will find many applications in the production and inspection operations of such items, for example, as machined parts and castings . . . for observing and measuring gross surface characteristics, blow holes, cracks and flaws . . . for examining welds. It can be used in the quality control of electro plate finishes . . . to examine and measure blisters, deposits, and pitting and buffing characteristics. Printers can use it to observe, count and measure half-tone dots; to inspect inks, color process plates and paper textures. The textile industry will find it useful in the inspection and measurement of fibers, weave textures, and dye patterns.

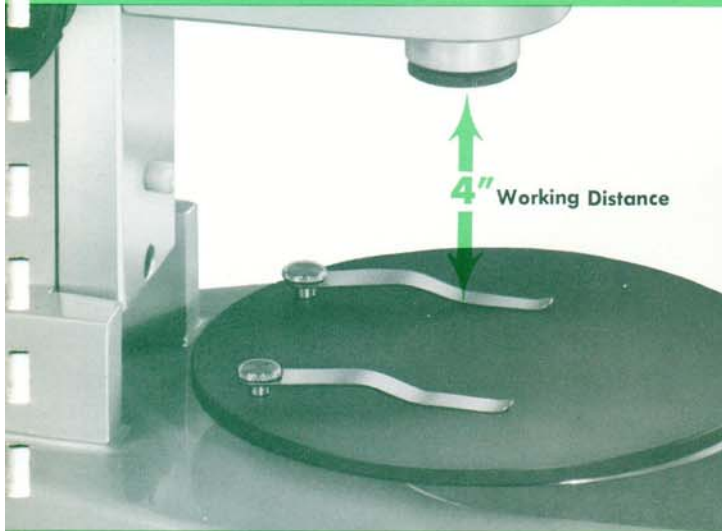
In short, the AO Utility Microscope can be attached to almost any machine, bench, jig or fixture for the convenient inspection, measurement and general observation of small parts where relatively low magnification is desirable.

Erect, Unreversed Image!

The AO Utility Microscope is essentially an erecting compound microscope with an inclined monocular eye tube, body tube, eyepiece and objective. Unlike standard compound microscopes, the magnified image is erect and unreversed . . . you see the image of the object exactly as you normally see it . . . eliminates the need for constant and bothersome visual orientation. Wide-field eyepiece and low initial magnification provides a larger field of view . . . this means you can see more of the area to be inspected or measured.



Actual
Size ↓

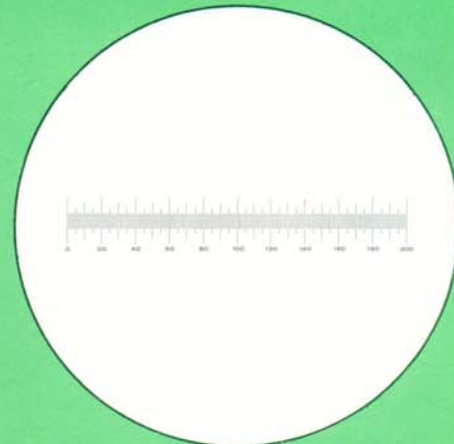
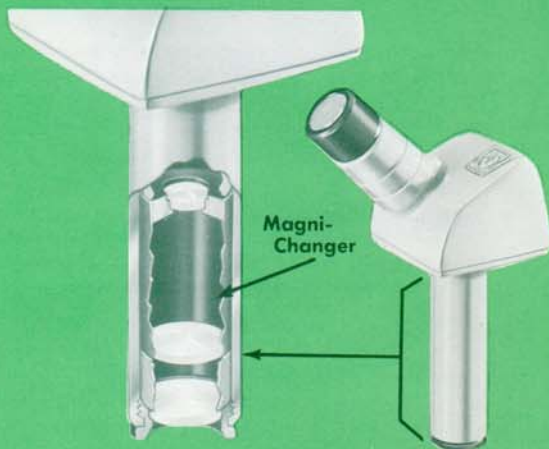


Fixed 4 inch Working Distance!

Working distance . . . the distance between the specimen and the nearest lens (objective) when the image is in sharp focus . . . is a constant 4 inches. Only the AO Utility Microscope offers this long working distance . . . and unlike other compound microscopes, the distance does *not* decrease as you increase the magnification from 10X to 40X. You always have ample room for inspection tools and for manufacturing and assembly operations.

Unique Magni-Changer!

AO Utility Microscope with standard eyepiece and objective combination provides 20X total magnification. Insertion of optionally available Magni-Changer gives two additional magnifications . . . simply remove objective, insert reversible Magni-Changer for your choice of additional 10X or 40X magnification.

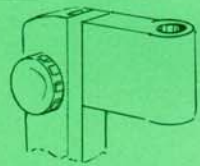
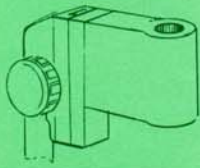


Reticles For Precise Measurements!

Standard reticle disc, AO #1412 is available for use with the Utility Microscope . . . fits readily into 15X wide field eyepiece. It's precalibrated for use at 20X total magnification . . . measurements can be read directly in one thousandth of an inch. Special reticles, in many cases, can be designed and produced to meet your measurement application . . . pre-calibrated to any one of the three magnifications, 10X, 20X or 40X. Send us full details . . . prices quoted on request.



K1360-A Body
fits K1360-F
Stand and
K1360-D Adapter



Machine Fixture

The Utility Microscope body can be attached to your own custom built fixture for machine or bench work as a fixed focus unit.



Special Adapter . . . With Rack-and-Pinion Focusing!

AO provides a special adapter for those permanent bench or machine set-ups where a range of focusing is required. This consists of a block to accept the body tube of the Utility Microscope, a sturdy rack and pinion slideway, dual focusing knobs and a convenient yoke and pillar. The adapter permits extreme flexibility . . . pillar allows you to make easy attachment set-ups on your machine, bench or fixture . . . yoke provides easy adjustment of the adapter and microscope over the work. Microscope can be rotated through complete 360° . . . or removed completely without disturbing adapter set-up.

Microscope Stand



The Utility Microscope body can be readily interchanged from any fixture to microscope stand. The microscope stand provides precise focusing and also allows the body to rotate 360°. The microscope body can be drawn upwards and locked in the sleeve of the stand to allow focus on large objects. Glide stage provides simple method for parts alignment . . . portable.

Accessory Illuminator



Cyclospot Illuminator can be attached to front of microscope stand and on special adapter at front or on either side.

Yoke bracket permits you to position illuminator to achieve desired angle of light for maximum visibility. Illuminator includes two-element condenser system, fixed transformer . . . and 6.5V, 2.75 amp. bulb.

Catalog Number Description and Price

K 1360-A	Microscope body with inclined eyepiece tube, objective and 15X eyepiece, without stand or machine and bench adapter. (One power only, 20X)	\$112.00	
K 1360-B	Same as above but with "Reversible Magni-Changer" (Three powers 10X, 20X, 40X)	136.00	
K 1360-F	Stand with coarse-fine focus and "glide" stage	105.00	
K 1360-D	Machine and Bench adapter with coarse rack and pinion focusing and mounting post		\$ 61.00
K 1360-E	Reversible Magni-Changer		31.00
K 1360-L	Illuminator with attachable bracket and transformer		25.50
1412	Eyepiece reticle with 200 divisions. Each division equals .001" on work at 20X magnification		23.00

REGISTERED TRADE MARK AMERICAN OPTICAL COMPANY



AMERICAN OPTICAL COMPANY
INSTRUMENT DIVISION • BUFFALO, NEW YORK 14215



No. 71 Body Tube, with graduated adjustable eyepiece tube.



No. 81 Body Tube, with fixed eyepiece tube.

AO UTILITY MICROSCOPES

Nos. 71 & 81

USES

- *Can be easily attached to inspection equipment and machinery*
- *Gives high precision performance in fine counting operations*

THE No. 71 AO Spencer Utility Microscope consists of a tube provided with a diagonal rack-and-pinion focusing adjustment and adjustable graduated eyepiece tube. It can be attached to machinery or testing equipment and used for reading scales, counting or measuring. It is extremely versatile and adaptable with selected optics and reticules for many industrial needs.

The No. 81 is identical to the above except that it is equipped with a fixed rather than adjustable eyepiece tube.

The above microscopes will accommodate all standard eyepieces, eyepiece micrometer discs, nosepieces and objectives. They are recommended for shop use where required magnifications do not exceed approximately 500X. A wide range of optics is listed on the opposite page, from which a selection to suit individual needs can be made. When selecting optical equipment choose an objective which has sufficient working distance (distance between front lens element and object) and an eyepiece, which, together with the objective will provide the total magnification required (power of objective multiplied by power of eyepiece = total magnification).

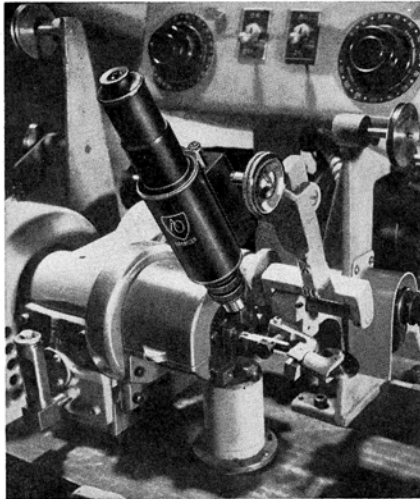
Filar Micrometer Eyepiece

The Nos. 424B, 424C English Scale and 426B, 426C Metric Scale Filar 10X Micrometer Eyepieces are very useful measuring accessories for either the No. 71 or 81.

Accuracy greatly exceeds that of a simple micrometer scale. This graduated micrometer drum has 100 increments or divisions. This drum moves the fiducial line precisely one reticle scale division for each revolution. Thus, the drum reads to 1/100 of the scale division.

Both AO Micrometer Eyepiece Models (English or Metric Scales) have a knurled thumbscrew to control the lateral position of the reticle scale. Such scale movement greatly expedites measuring speed as the scale zero setting, or the most adjacent scale division, can quickly be made to exactly coincide with one edge of the specimen.

Focusing onto the reticle scale is provided by a focusable eyepiece with a spiral collar. A knurled thumbscrew is used to affix the Micrometer Eyepiece to the microscope.

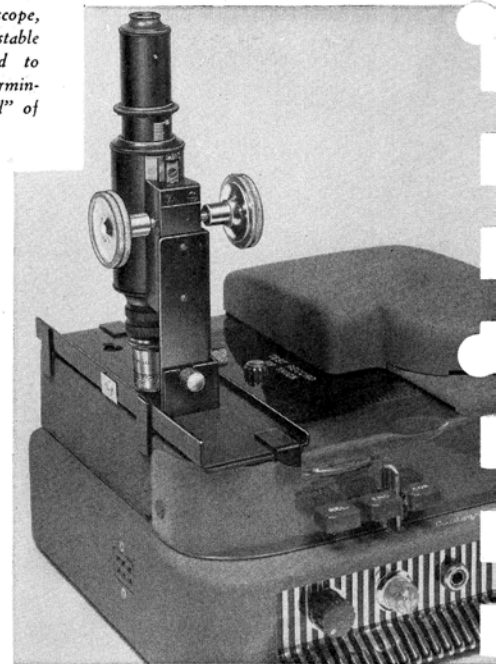


Courtesy Barth Stamping and Machine Works, Inc.

No. 81 Utility Microscope, with fixed eyepiece tube, mounted on Lamp Filament Winding Machine.

No. 71 Utility Microscope, with graduated adjustable eyepiece tube, affixed to Audograph for determining "groove and land" of Audograph disc.

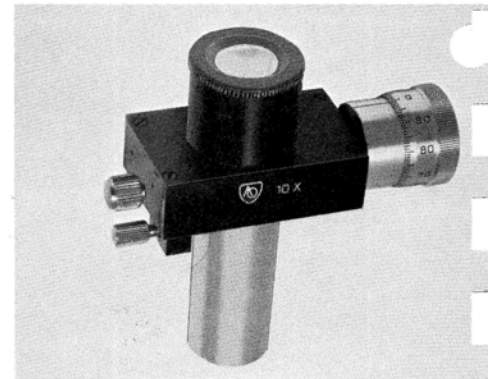
Courtesy Gray Manufacturing Company



No.	DESCRIPTION	Price
71	Body Tube with rack-and-pinion focusing adjustment. Graduated adjustable eyepiece tube. Finished in black enamel. Without optics. As illustrated	\$ 62.00
81	Body Tube with rack-and-pinion focusing adjustment. Fixed eyepiece tube. Without optics. Finished in black enamel. As illustrated	54.00
424B	10X Filar Micrometer Eyepiece, English Scale, with #429 Eyepiece Tube Adapter	128.00
424C	10X Filar Micrometer Eyepiece, English Scale, with #430 Magnification Compensator including spanner wrench	151.00
426B	10X Filar Micrometer Eyepiece, Metric Scale, with #429 Eyepiece Tube Adapter	128.00
426C	10X Filar Micrometer Eyepiece, Metric Scale, with #430 Magnification Compensator including spanner wrench	151.00
405	Micrometer Disc, 21.15mm in diameter. 5mm scale divided into 50 parts	9.00
410	Micrometer Disc, 21.15mm in diameter. 5mm scale divided into 100 parts	9.00

ACHROMATIC OBJECTIVES

Cat. No.	Initial Magnification	Equivalent Focus in mm	Numerical Aperture	Working Distance in mm	Price
C101	2X	48	0.08	52.5	\$18.50
C102	3X	40	0.08	35.2	18.50
C104	4X	32	0.10	21.0	19.50
C105	3.5X	30	0.09	25.4	30.50
C107	5X	25	0.14	16.7	30.50
C109	10X	16	0.25	6.8	30.50
C112	20X	8	0.50	1.3	44.50
C115	43X	4	0.66	0.73	49.00



No. 424C Filar Micrometer Eyepiece.

HUYGENIAN EYEPIECES

Cat. No.	Power	Price
C133	5X	\$11.00
C142	10X	11.00

All achromatic objectives and Huygenian eyepieces are now supplied as standard with essential optical surfaces coated (Americote) designated by prefix "C".



AMERICAN OPTICAL COMPANY
INSTRUMENT DIVISION • BUFFALO, N. Y. 14215

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