

STAGE MICROMETERS / GRATICULES (RETICLES)

These stage gratitudes are intended for the routine calibration of eyepiece patterns, particularly when alternating between objectives on one microscope or when using the same graticule in different microscopes. Their robust construction makes them ideal for student use and for instructional purposes. The scale or grid is centred on a glass disc mounted in a black anodised aluminium slide 75mm x 24mm x 2mm thick. For applications requiring traceable standards turn to page 33.

Two types are available:

- For transmitted light.
- For reflected light, as used with metallurgical microscopes

SCALES AND MICROMETERS

FOR TRANSMITTED LIGHT

Standard and Crossed Patterns - S1, S2, S4, S8, S11, S12, S16, S22, S48

Pattern	Description	Order Code
S1	Micrometer scale 10mm in 0.1mm divisions.	02A00400
S2	Micrometer scale 5mm in 0.05mm divisions.	02A00401
S4	Micrometer scale 0.1inch in 0.001inch divisions.	02A00402
S8	Micrometer scale 1mm in 0.01mm divisions.	02A00404
S11	Micrometer scale 0.005inch in 0.0001inch divisions.	02A00407
S12	Micrometer scale 0.1mm in 0.002mm divisions.	02A00408
S16	Crossed micrometer scales 1mm in 0.01mm divisions.	02A00429
S22	Micrometer scale vertical 2mm in 0.01mm divisions	02A00411
S48	Micrometer scale 1mm in 0.01mm divisions, no coverglass.	02A00414

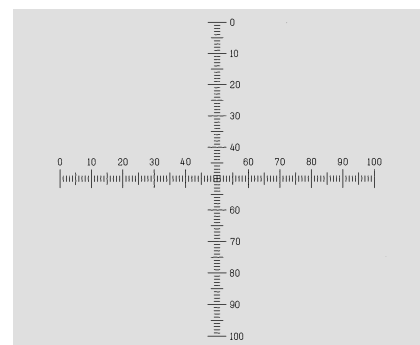
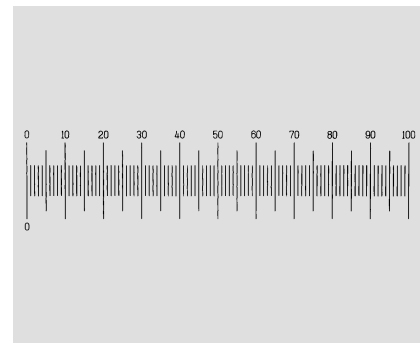


Table 1

Pattern	Line Width	Accuracy (overall)
S1 or PS1	0.005mm	Within 0.002mm
S2	0.005mm	Within 0.0015mm
S4 or PS4	0.002mm	Within 0.0001inch
S8 or PS8	0.002mm	Within 0.001mm
S11	0.001mm	Within 0.00005inch
S12 or PS12	0.001mm	Within 0.001mm
S16 or PS16	0.0015mm	Within 0.001mm
S22	0.0025mm	Within 0.0015mm
S48	0.0027mm	Within 0.001mm
S78 or PS78	0.003mm	Within 0.001mm

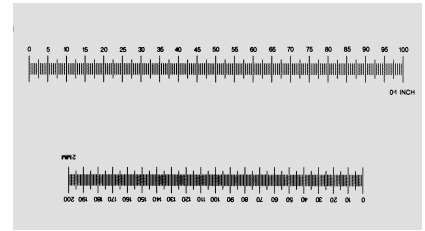
Table: Accuracy and Line Widths of Stage Micrometers

We manufacture components (encoder discs, gratitudes, metal foils, resolution standards) to custom design, if it is not in the catalogue please contact us for pricing information.

STAGE MICROMETERS / GRATICULES (RETICLES)

Combined Metric / Imperial Pattern – S20

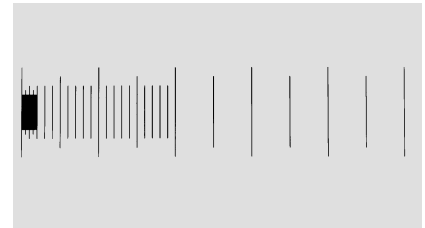
Pattern	Description	Order Code
S20	Double micrometer scale 2mm in 0.01mm divisions and 0.1inch in 0.005inch divisions.	02A00409



Grouped Graduation Pattern – S21

For speedy determination of a range of feature sizes within a given specimen.

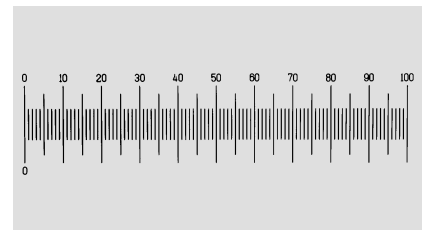
Pattern	Description	Order Code
S21	Micrometer scale 5mm in 0.5mm divisions, 2mm in 0.1mm divisions, and 0.2mm in 0.01mm divisions	02A00410



FOR REFLECTED LIGHT - S78

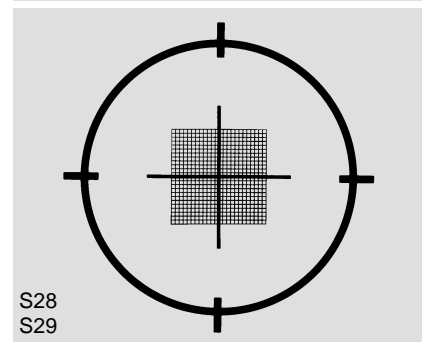
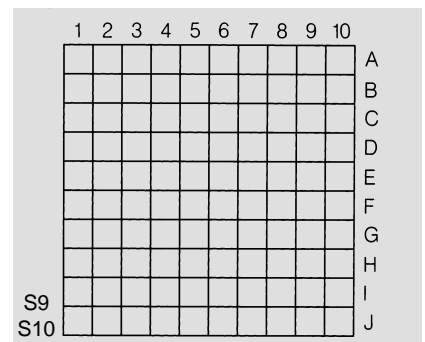
This scale is etched through highly reflective vacuum coated metal. When viewed under vertical illumination, as with a metallurgical microscope, the scale appears black against a bright background.

Pattern	Description	Order Code
S78	Micrometer scale 1mm in 0.01mm divisions.	02B00421



Grids – S9, S10, S28, S29

Pattern	Description	Order Code
S9	Counting slide 0.1mm squares.	02A00405
S10	Counting slide 0.05mm squares.	02A00406
S28	0.01mm grid / 0.2 x 0.2mm overall.	02B00428
S29	0.01mm grid / 1.5 x 1.5mm overall.	02B00429



STAGE MICROMETERS / GRATICULES (RETICLES)

Diamond Ruled Stage Micrometer – S91

Stage micrometers with very fine well defined lines are available from Graticules. These reference scales offer substantial improvements in definition over the standard types when used under the highest magnification. This is made possible by the use of diamond cutting tools and a special ruling engine.

The S91 has clear lines ruled through a semi-opaque metal film which, with transmitted light, appear as bright lines on a dark background.

The micrometer is made on a glass substrate 76mm x 26mm x 1.2mm thick. The lines are 1 micron wide or less and 3.5mm long. The metric rulings provide a scale of 1mm divided into 0.1mm parts, with one part being sub-divided into 0.01mm parts.

Pattern	Description	Order Code
S91	Diamond ruled stage micrometer	02D00481

STAGE CALIBRATION STANDARDS

These stage micrometers differ from the standard stage micrometers being available with a certificate giving precise details about their accuracy.

These calibrated standards provide traceability for the precise calibration and confirmation of accuracy of optical measuring instruments which is necessary under ISO provisions.

Pyser-SGI Limited Graticules Division can arrange for the calibration of its scales and grids to be carried out by the most appropriate laboratory to suit the customer requirements – the choice of laboratory is normally dependent on the nature of the calibration and the accuracy required.

a) Calibration by NPL

The National Physical Laboratory carries out measurements at selected points on the scales and grids and issues a certificate of calibration.

b) Calibration by UKAS Accredited Laboratory

A UKAS accredited laboratory carries out measurements at selected points on the scales and grids and issues a calibration certificate.

c) Measurement by Graticules

For applications which do not require the accuracy provided by calibrations carried out by NPL or a UKAS accredited laboratory, Graticules can provide a Certificate of Comparison. The scale or grid is compared with NPL calibrated in-house standards and a statement is provided on the accuracy of the item with respect to these standards.

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