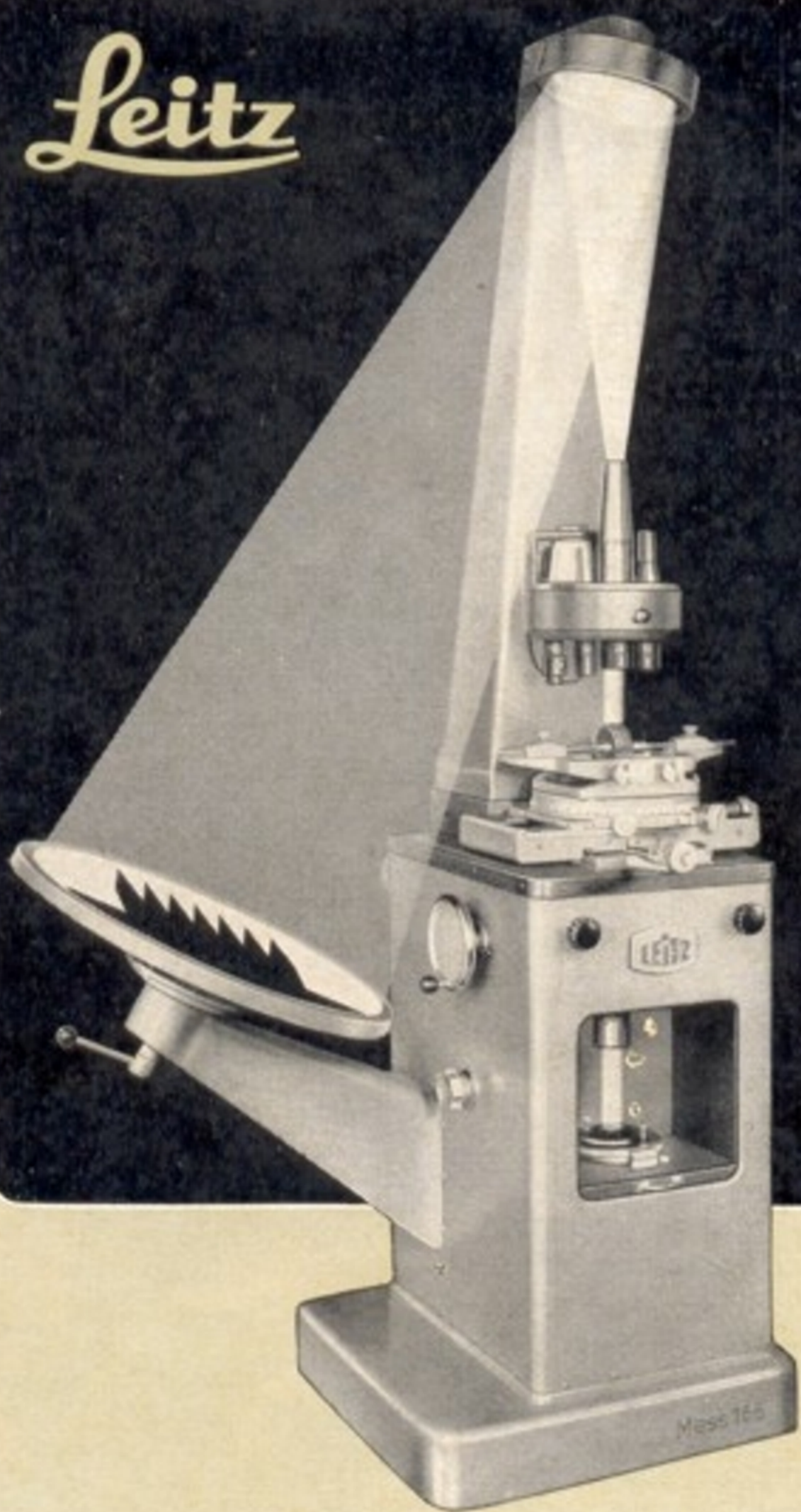


Leitz



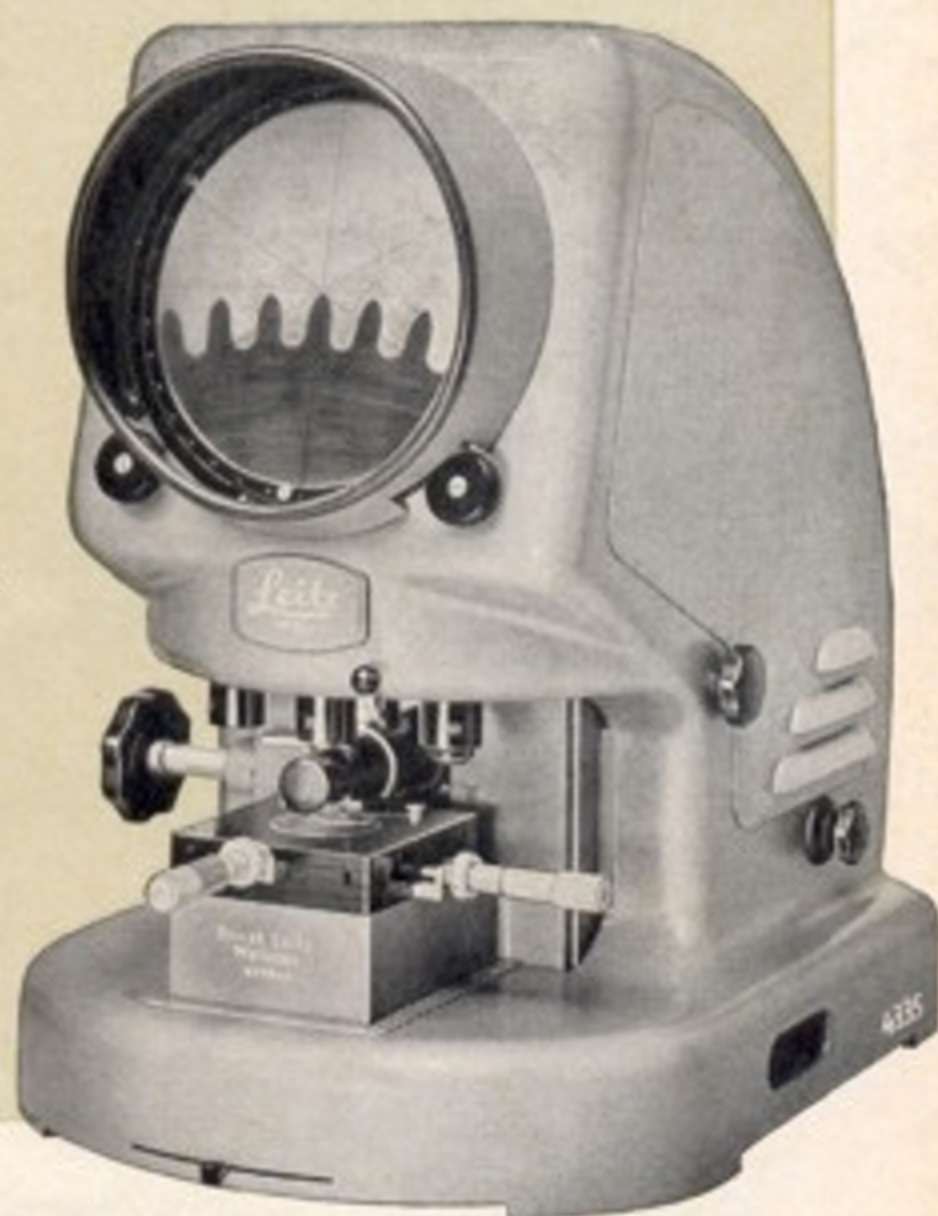
Optical Precision Measuring Instruments

E. LEITZ
WETZLAR

Leitz

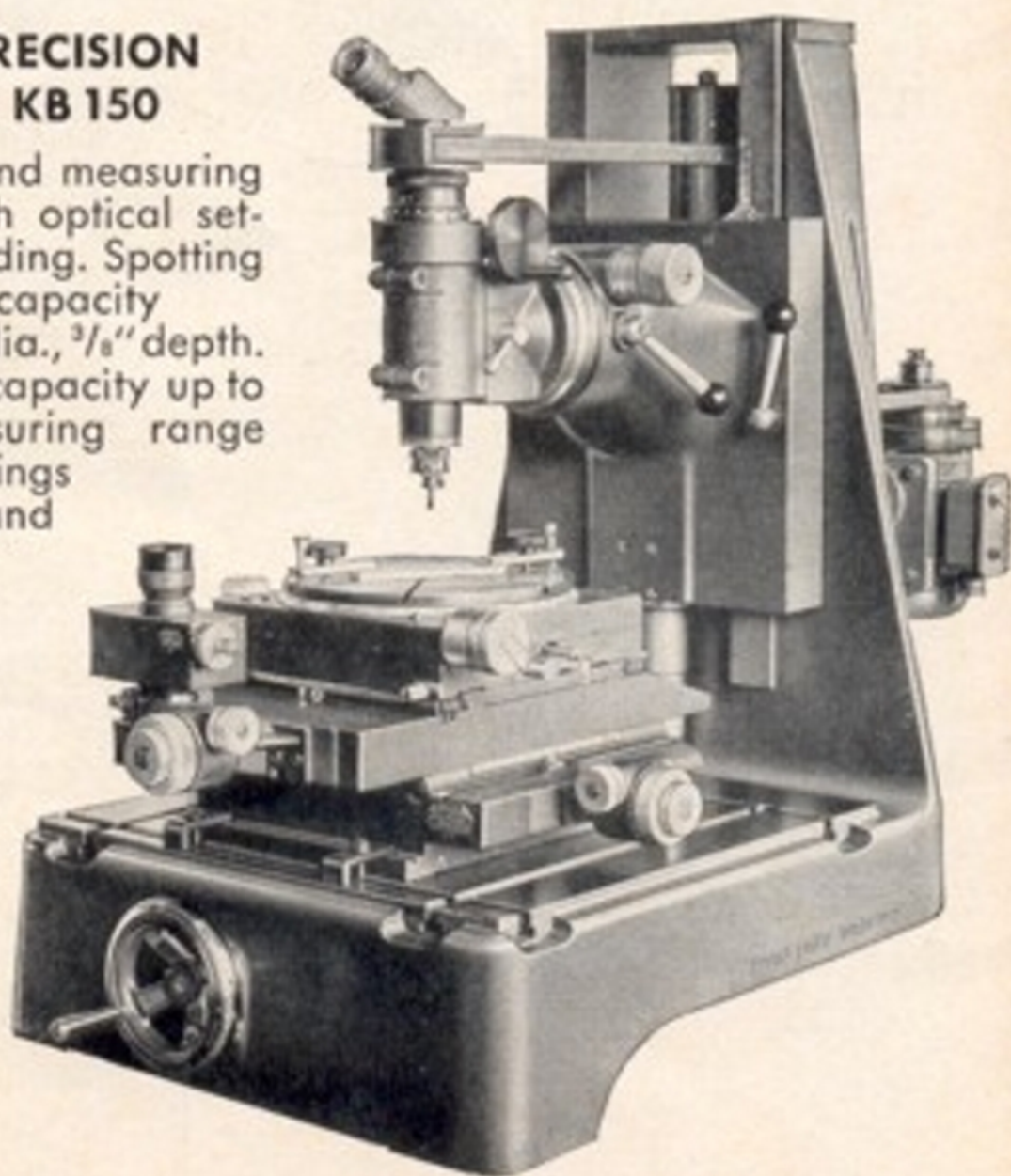
BENCH TYPE PROJECTOR TP 200

Projection screen
7⁷/₈" (200 mm)
diameter with
circular division.
Extremely bright
field of view.
3 objectives moun-
ted on a revolving
nosepiece for
magnifications
10x, 20x, and 50x.
Measuring stage,
centre cradle,
gear testing device
and other
accessories are
available.



OPTICAL PRECISION JIG BORER KB 150

Jig boring and measuring
machine with optical set-
ting and reading. Spotting
and drilling capacity
approx. 1¹/₈" dia., 3³/₈" depth.
Boring tool capacity up to
1⁵/₃₂". Measuring range
6" x 6", readings
in 0.00005" and
10 sec.



Leitz

E. LEITZ
WETZLAR

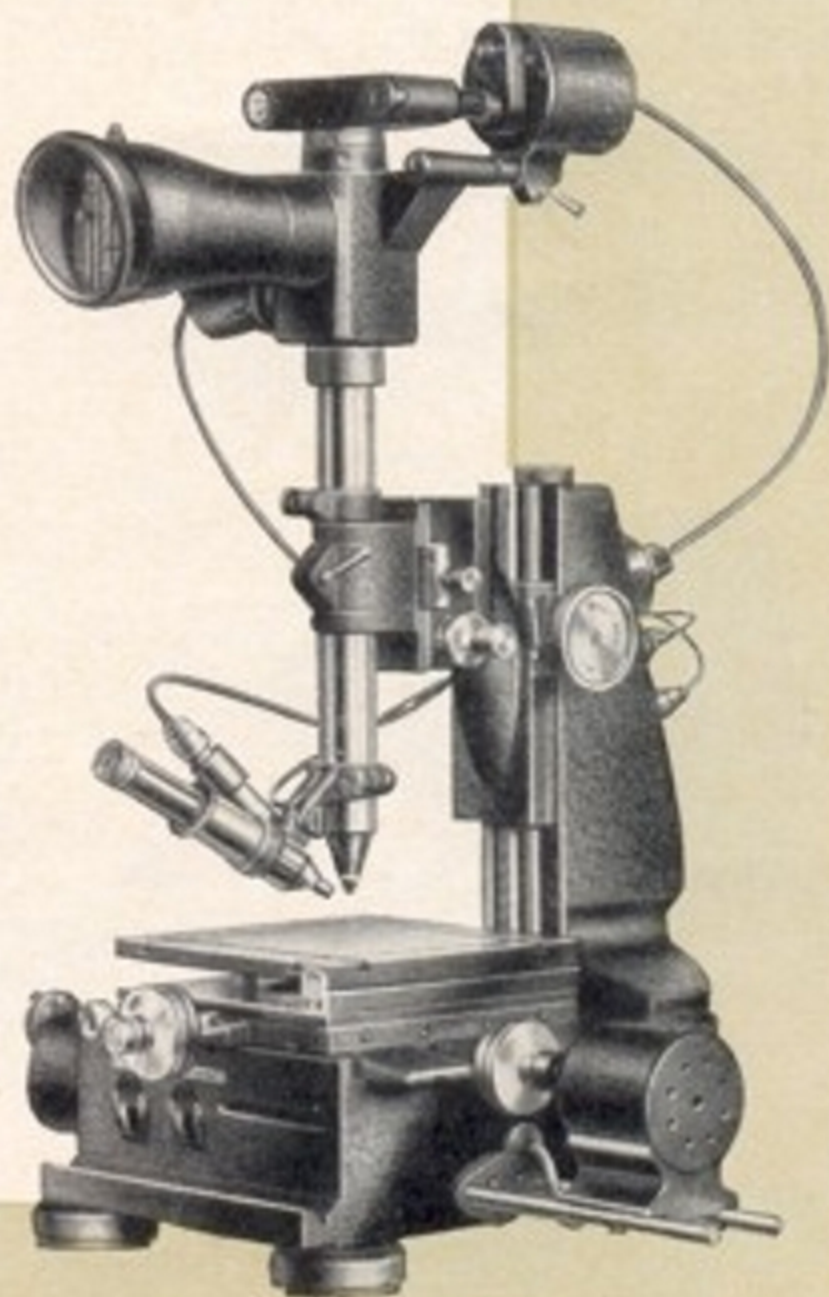
LEITZ-FORSTER SURFACE MEASURING INSTRUMENT

Differential surface testing outfit employing an electro-optical indicator with LEICA recording camera allows of inspecting and measuring the roughness of surfaces through a range of 4", the object being moved past a vibrating micro-stylus.

Working surface of measuring table 8" x 8". Number of impulses of stylus 3000 or 6000 P.M. Measuring pressure < 1 g. Measurable vertical differentials with Tube V=1000:1 max. 0.001", with Tube V=200:1 max. 0.005".



Turned steel. Surface profile section as recorded with the LEITZ-FORSTER outfit.



Leitz

SURFACE ROUGHNESS TESTER

for shop use, giving readings in micron. Stepped measuring range up to 1 micron, 10 microns and 50 microns of average surface roughness.



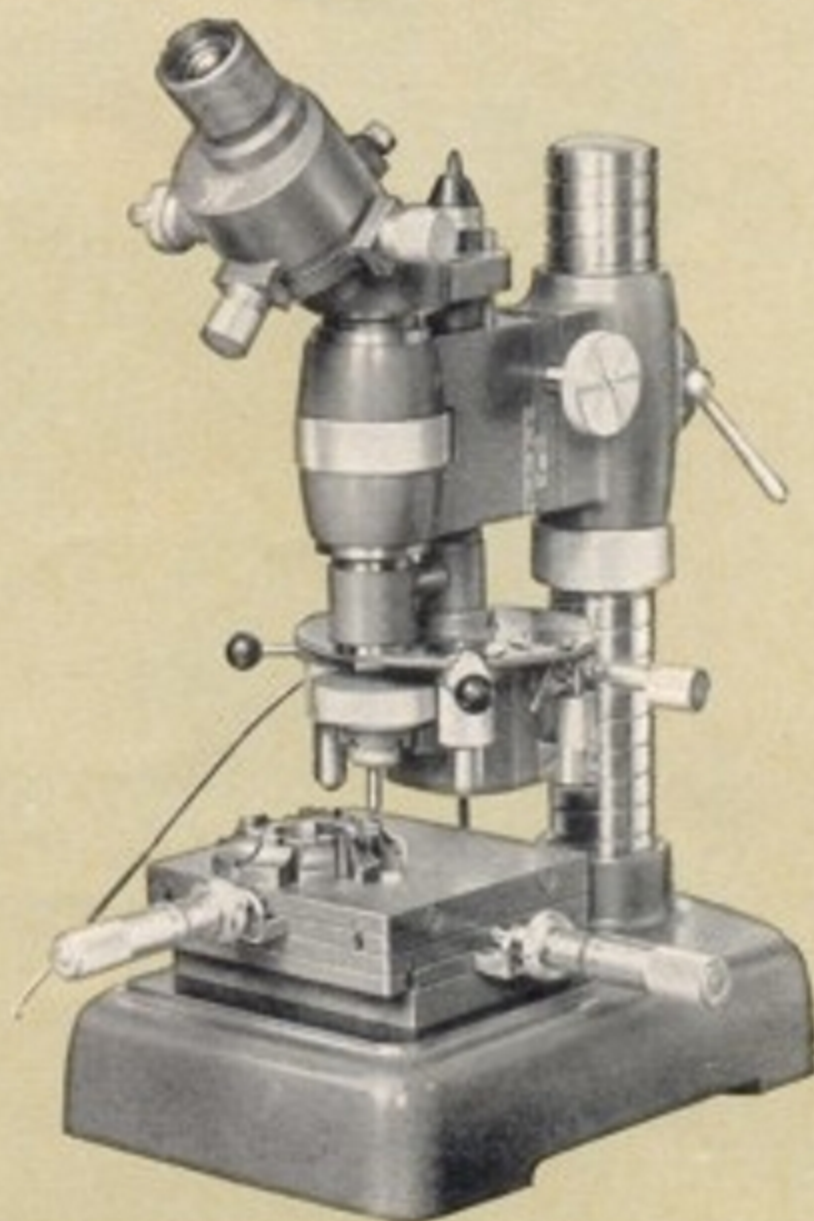
Leitz

MINILOAD HARDNESS TESTER

For measuring indentations in the Vickers and scratch hardness test, especially on small and minute parts, also thin materials and films. High precision, dependable.

Loads variable between 15 and 500 g.

Optical readings with magnifications 100x and 400x to 0.0005 mm.



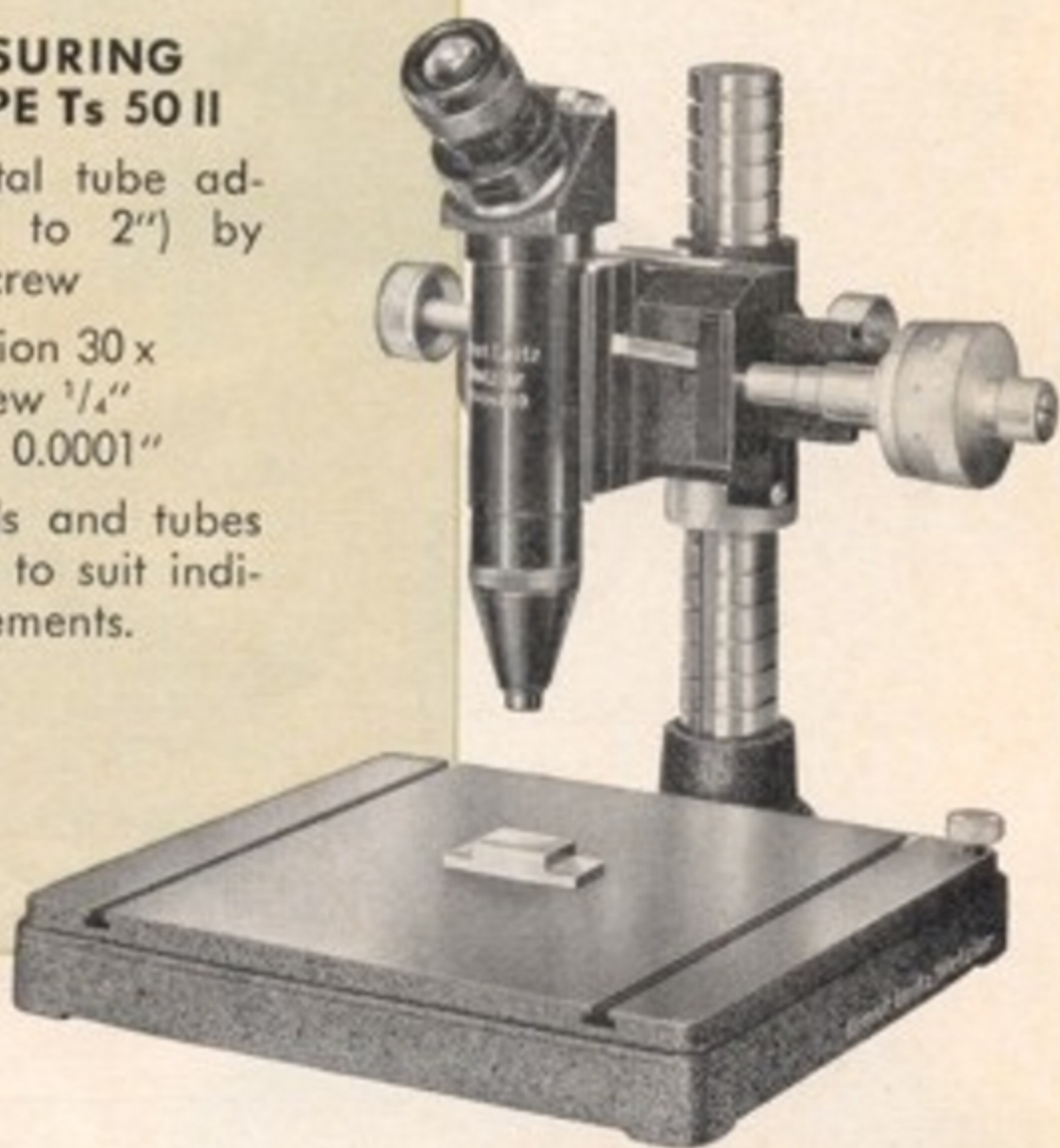
Leitz

**SHOP MEASURING
MICROSCOPE Ts 50 II**

with horizontal tube adjustment (up to 2") by micrometer screw

- Magnification 30 x
- Field of view $\frac{1}{4}$ "
- Reading in 0.0001"

Several stands and tubes are available to suit individual requirements.



Leitz

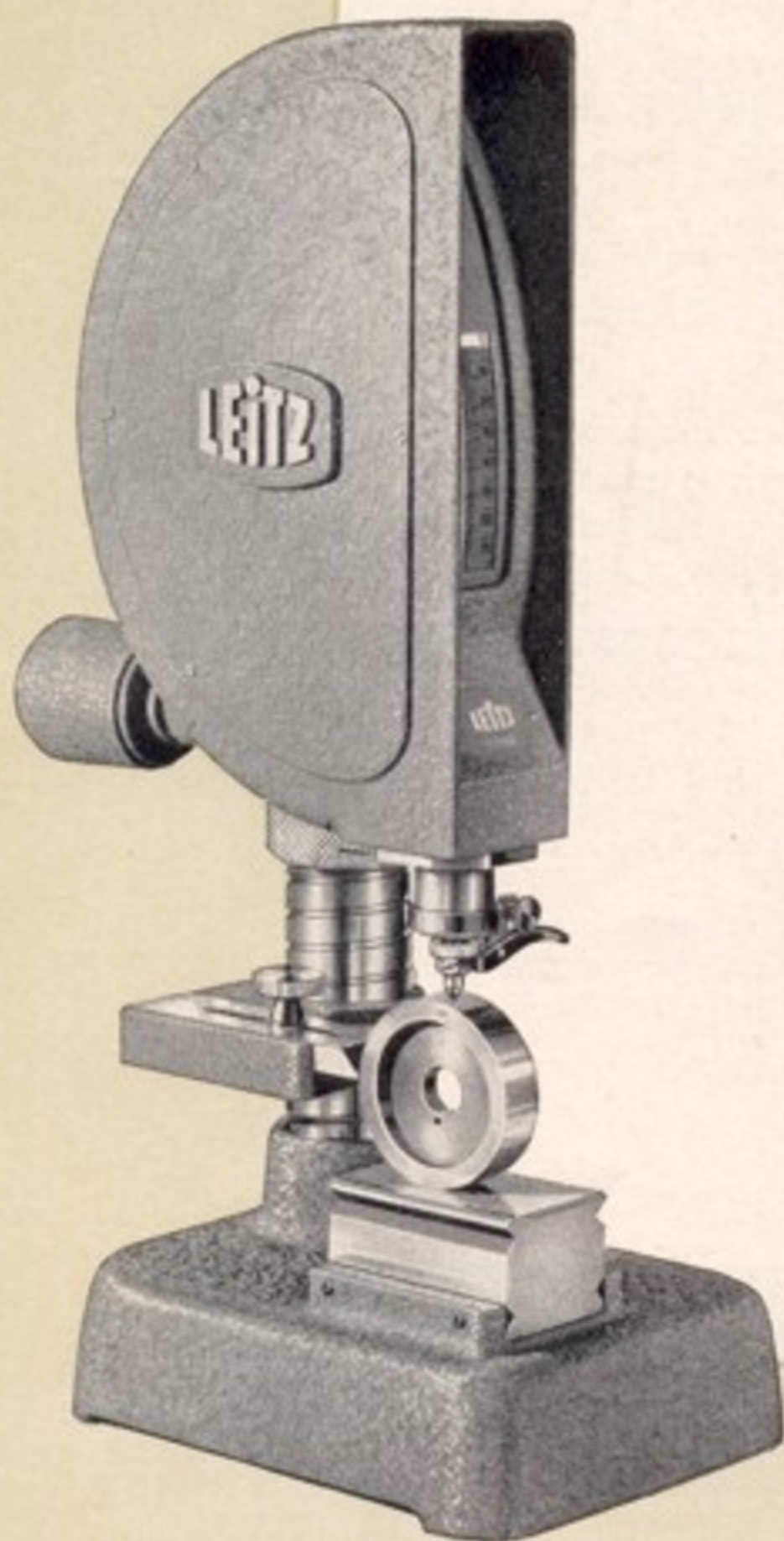
**CO-ORDINATE
MEASURING
MICROSCOPE**

with built-in rotary stage

- Measuring range 2" x 2"
- Reading in 0.0001"
- Magnifications 10 x, 20 x, 30 x

Interchangeable eyepieces with thread form graticules, protractor and co-ordinate micrometer eyepieces.



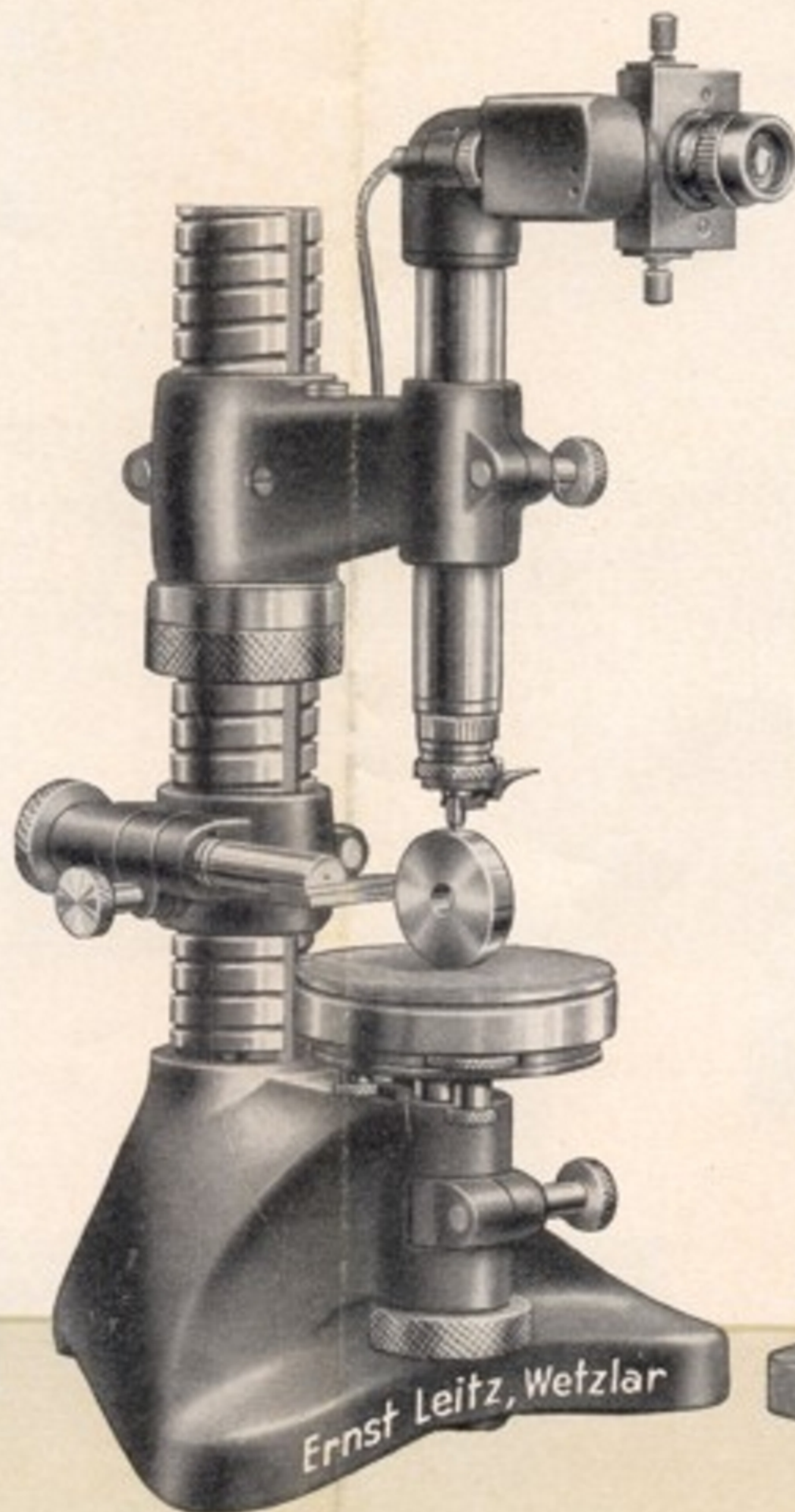


Leitz

**"Tolerator"
COMPARATOR GAUGE**

Semi-optical shop instrument for gauging outside diameters or lengths with the aid of gauge blocks or masters. Readings on ground glass screen with coloured tolerance masks. The inexpensive aid for quantity inspection of parts.

Reading in 0.00005"
Measuring range ± 0.005 "

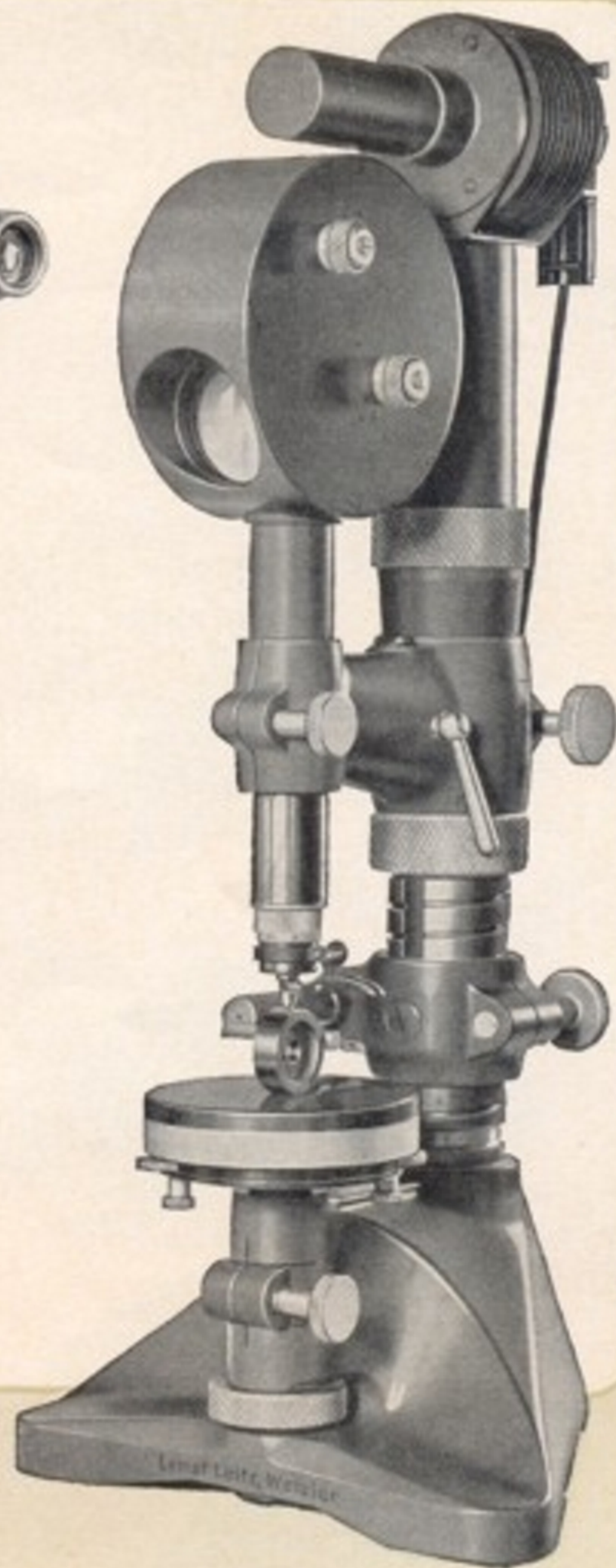


Leitz

**"Tolimeter"
COMPARATOR GAUGE**

Highest precision optical comparator gauge for checking work as to outside diameter and length through ocular reading with coloured tolerance masks. Variable measuring pressure.

Division of scale 0.00005"
Measuring range ± 0.005 "
Reading accuracy 0.000005"



Leitz

**"Projectometer"
COMPARATOR GAUGE**

Built on the principle of the Tolimeter but incorporating a projection device with easily and accurately readable ground glass screen scale with adjustable tolerance masks, ideal for quantity inspection work.

Division of scale 0.00005"
Measuring range ± 0.005 "
Reading accuracy 0.000005"

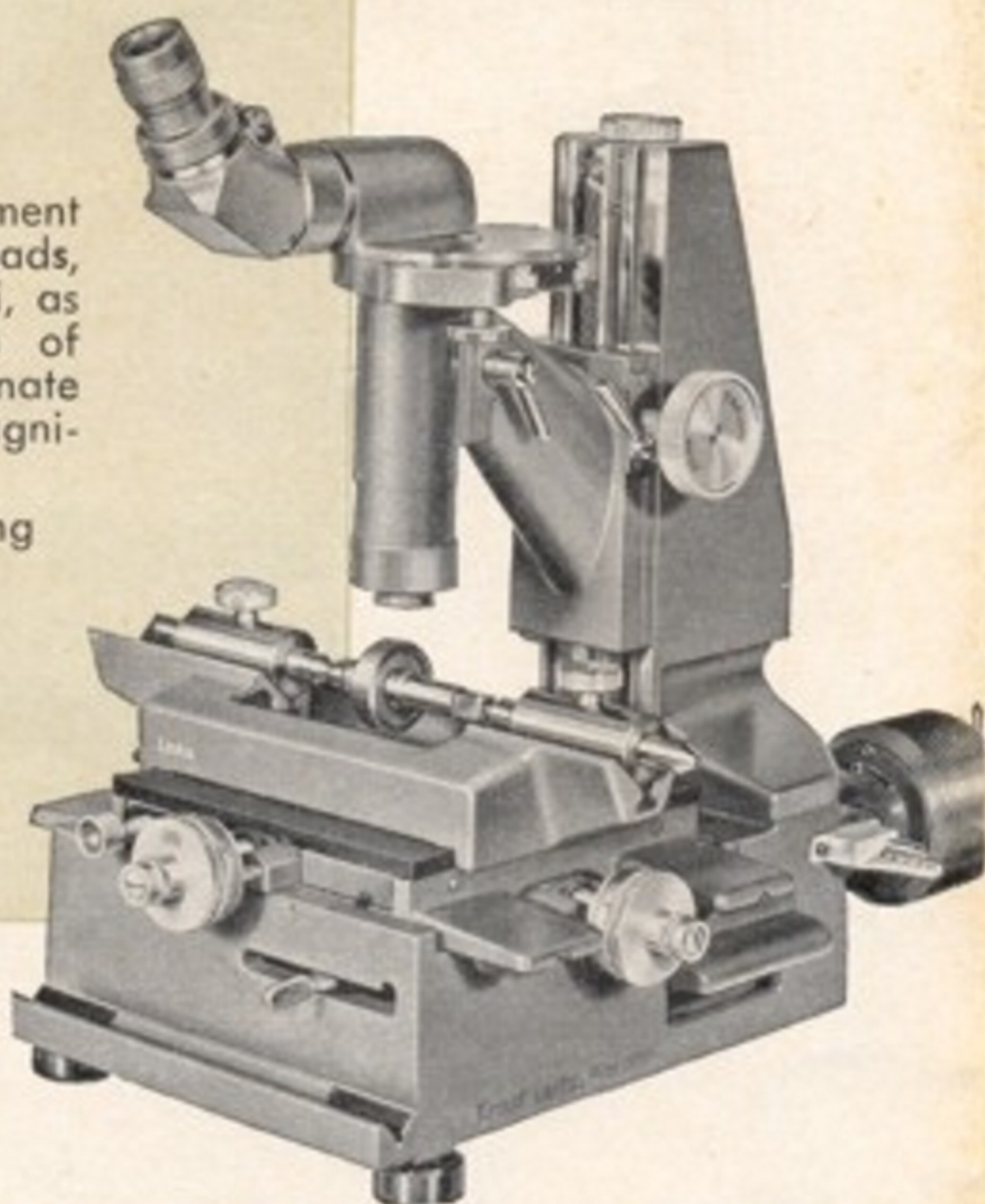
ULTRA-PROJECTOMETER
A special model for maximum accuracy

Leitz

TOOLMAKERS' MICROSCOPE

Versatile precision measuring instrument for checking threads, cutters, hobs, radii, as well as all kinds of angle and co-ordinate measurements. Magnifications 9.5 – 29 x.

Micrometers reading in 0.0001".



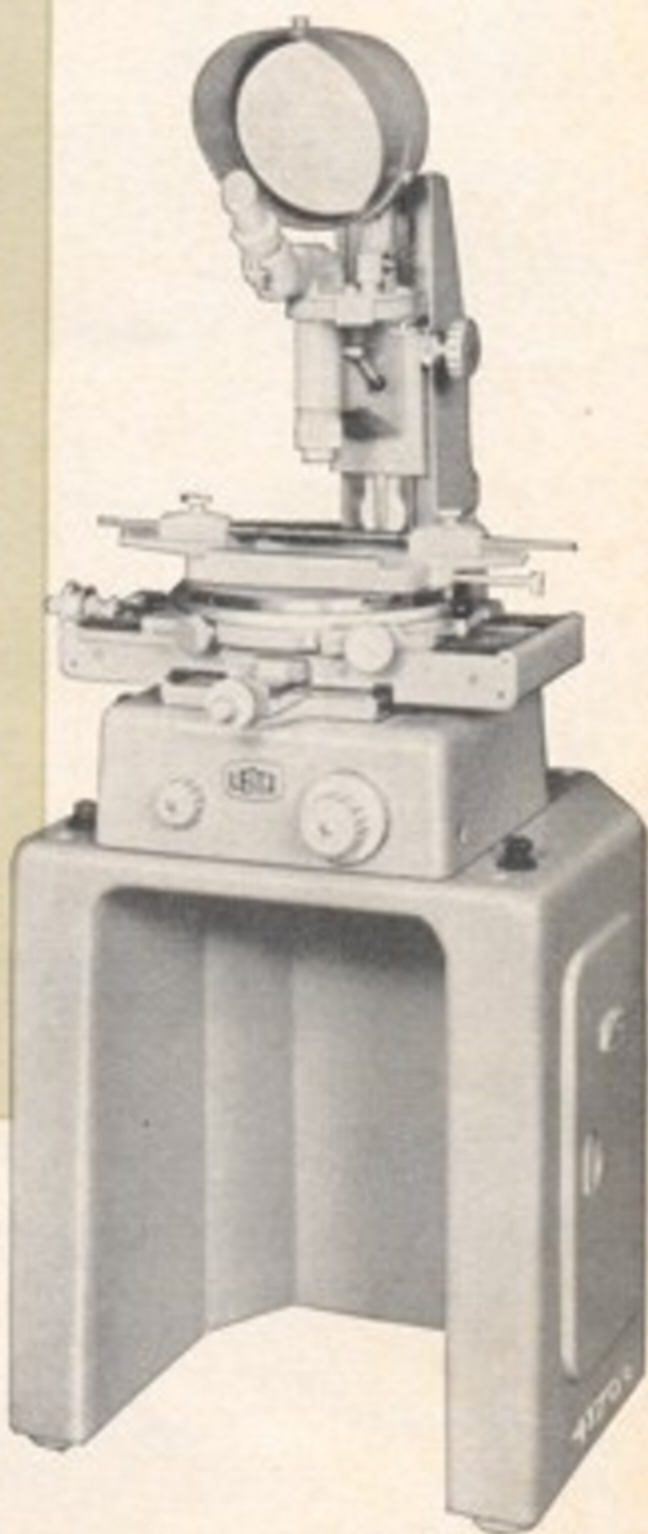
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LARGE TOOLMAKERS' MICROSCOPE MODEL UWM

for workshop and gauge room. Extremely large measuring range of 6 x 2 1/2" (150 – 60 mm). 3 objectives on revolving nose-piece for magnifications 10 x, 20 x and 30 x.

Measuring stage with built in rotating stage for rectangular and co-ordinate measuring.

Base of welded steel for accurate mounting of the instrument. Many accessories are available.



The illustrations cannot be considered as binding in every detail.

FURTHER INDUSTRIAL INSTRUMENTS OF THE *Leitz* MANUFACTURING PROGRAMME

Large universal measuring microscope · Optical universal bevel protractor · Machine tool microscope · Thread tool microscope · Simple contour projector EP · Brinell magnifiers · Shop microscope MZ · Alignment telescope · Reading telescope · Optical inclinable machine tool table · Optical flats · Dilatometer · Stereoscopic microscopes for surface inspection.



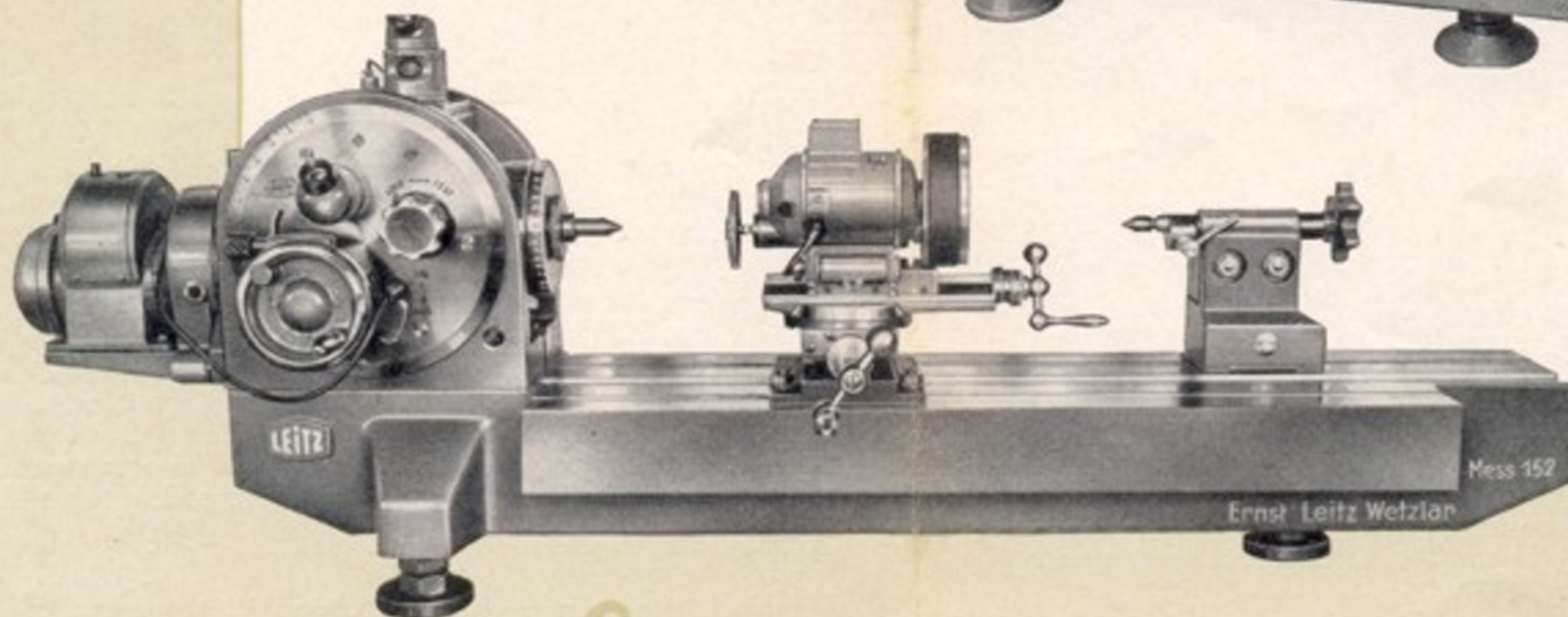
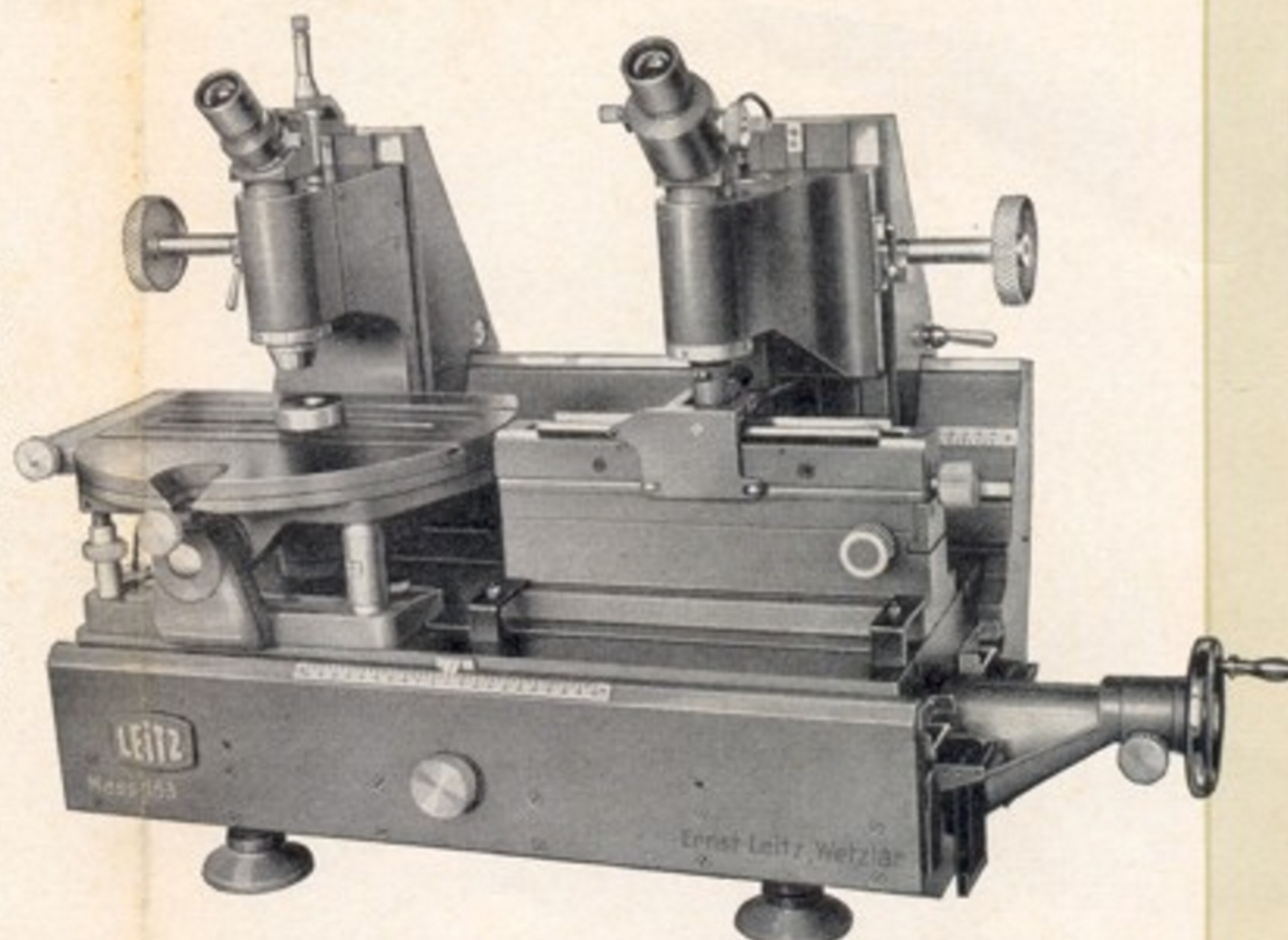
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**COMPARATOR
WITH PERFLECTOMETER**

A new design for maximum accuracy requirements. Suitable as Extensometer for determining changes in length by expansion etc., Length Comparator for direct measurements on scales etc., Internal Comparator with Perflectometer equipment for measuring snap gauges, ring gauges, bores etc.

Measuring range 8".

Perflectometer accuracy 0.000015". The measurement of external and internal surfaces is by entirely novel optical method.



Leitz

OPTICAL DIVIDING HEAD

This combines an angular measuring instrument of highest precision with a sturdy indexing device for machining operations. For producing and testing precision gears, index plates, camshafts, etc. and for mounting on boring and milling machines, as well as on grinding machines.

Range of circular division 0–360°, angle reading 5 seconds (2½ by estimate), working accuracy ±2 seconds.

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CONTOUR MEASURING PROJECTOR PP II

For inspecting and measuring gauges, tools and machined parts, especially in the fine-mechanical and watch industries.

Magnifications and fields of view

10x/2.17", 20x/1.08", 50x/0.43", 100x/0.22".

Objective slide and revolving condenser holder for rapid change of magnification and optimum utilization of illumination. Transmitted and reflected light. Range of measuring stage 2" x 2". Micrometers reading in 0.0001". Size of ground glass projection screen 20" x 20". Attachable fixtures to hold work.



Our Production Programme also includes:

Microscopes for all fields of application in metallurgy, mineralogy, ore examinations, coal petrography, chemistry, medicine and biology • Binocular prism magnifiers and stereoscopic microscopes • Photomicrographic apparatus
Microtomes

Micro-refractometer, compensation photometer, half-shadow polarimeter, monochromator, ultrared spectrograph

Prism Binoculars

Leica miniature camera with supplementary equipment for scientific and technological work, enlarging apparatus, lecture hall projectors, school and home projectors, microprojection outfits

LARGE CONTOUR MEASURING PROJECTOR

For use as an optical comparator for checking finished work, also threads, through large object field by means of templates, gratitudes or drawings. Linear measurements in two directions and angle measurements.

Magnifications and object fields:

10x/2.36", 20x/1.18", 50x/0.57", 100x/0.23".

Revolving objective holder for rapid change of magnification, range of measuring table 2.35" x 6", micrometers reading in 0.0001", vertical adjustment and built-in graduated rotary stage reading in 3 min., interchangeable fixtures to hold work, diameter of projection table 24".

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