



PORTABLE METALLOGRAPHY

# MOBIPREP MOBISCOPE



**metken**<sup>®</sup>  
Technology behind Specimen

**20**  
YEARS

# MOBIPREP® MOBISCOPE®



In-situ/Field metallography is widely used for microstructure analysis on large parts (samples) that cannot be easily carried or where destructive preparation is not permissible such as storage tanks, piping system, power plants, etc. In-situ Metallography allows for quick on-site evaluation of a component. There are numerous advantages in using in-situ/field metallography.

- Portable and can be used on-site.
- Can be used to monitor quality of purchased components.
- Nondestructive with Replica techniques.
- Replicas are ideal for both flat and curved surfaces.
- Ability to evaluate microstructural changes in a component during its lifetime.
- Wide range of application area.

## MOBIPREP

MOBIPREP is a battery powered portable Grinder / Polisher and etcher designed for metallographic sample preparation in field or in laboratory. MOBIPREP contains maintenance-free batteries to work without stationary mains, consists of a control unit and a precision hand-guided grinding-polishing device with high performance micro motor.

MOBIPREP's hand-guided device can be used with either 45° or 90° angle or straight grinding-polishing pieces. The switch for ON/OFF is on the hand-guide and provides a click sensation with a confirmation tone from the control unit when the switch is operated.

All accessories are supplied with a hardcase protection and carrying bag where you have sufficient space to place your consumables.

With the etching pen MOBIPREP may be used for electrolytic etching. Thus working in field with alloyed steels is possible which can be etched by weak electrolytes instead of strong acids.



MOBIPREP Grinder and Polisher



MOBIPREP With the Etching Pen for Electrolytic Etching



Hand-Guided Grinding-Polishing Device



Hardcase Protection and Carrying Bag

## MOBISCOPE

MOBISCOPE is ideal for examination of prepared surfaces on site. In case of detailed analysis in the laboratory, replica kit is recommended.

MOBISCOPE portable microscope provides up to 100x and 500x total magnification with 10x and 50x objectives which are supplied as standard. Optional 20x and 80x objectives are available. Rechargeable built in LED illumination with no need of electrical supply.

With the magnet stage, MOBISCOPE can be easily attached against the surface of any ferrous material at any angles on flat and curved surfaces.

Aluminum transport case with special foam inside customized for MOBISCOPE and the accessories for maximum protection during transportation.



MOBISCOPE Portable Microscope



Fine/Coarse Focusing



Magnetic Stage



Aluminum Transport Case

## Replication



Preparing a replica of the polished and etched surface is quite simple and an essential feature of in-situ/field metallography. Although the polished and etched surface can be examined directly with a portable microscope, replica foil will provide a permanent record of the microstructure. This replica can be taken back to the metallographic laboratory and enhanced. It can then be studied under the light microscope or scanning electron microscope (SEM).

## Specifications

### 90 01 MOBIPREP

Portable grinding/polishing & Electrolytic etching  
 Contains maintenance-free batteries to work without stationary mains,  
 consists of a control unit and a precision hand-guided grinding-polishing  
 device with high performance micro motor.  
 Output 36 V, adjustable in 5 steps  
 Hand-guided device: Motor NK 261 (26000 Umin-1 / 4,7 Ncm)  
 Included Accessories – Angle Piece 90° –  
 Grinding and polishing carriers (5 pieces)  
 Automatic Charger 12 V / 2,5 A  
 Optional Etching Pen  
 Dimensions: 205 x 70 x 180 mm, Weight 4 kg

#### Accessories for MOBIPREP

- 90 10 Etching-Pencil for electrolytic etching
- 90 11 Angle piece 90 °, with 3-mm collet on
- 90 12 Angle piece 45 °, with 3-mm collet on
- 90 13 Straight quick release piece of, with 3-mm collet on
- 90 14 Grinding and polishing carriers (5 pieces)
- 90 15 Shoulder bag for Mobiprep, synthetic leather

### 90 02 MOBISCOPE

Portable Metallurgical Microscope  
 Basic Magnification : 100x - 800x  
 Eyepieces : WF10X/FN18, Dia 23.2  
 Objectives : 10x/0.25 (W.D. 7,3 mm), 50x/0.65 (W.D. 0.5mm)  
 C-mount adapter (for connecting C-mount cameras)  
 Mechanical tube length 160 mm  
 Coaxial coarse/fine focus system, range:36mm  
 Polarizing Kits : Polarizer and Analyzer  
 Coaxial illumination, build-in LED rechargeable, brightness  
 adjustable  
 Including portable aluminium case.

#### Accessories for MOBISCOPE

- 90 30 Magnet Stage
- 90 31 Objective 20X
- 90 32 Objective 80X



MOBIPREP



MOBISCOPE

Order No	90 01
Voltages	36V or 100-240V / 50-60Hz
Speed	0-26.000 rpm
3 Led	To Indicate Battery Charge: full – normal – low P1 - Polishing-1 (12 V) P2 - Polishing-2 (24 V)
Output Voltage	G - Grinding (36 V) E1 - Etching-1 (6 V) E2 - Etching-2 (12 V)
Disc Diameter	30 mm.
Reduction Gear	4:1
Dimensions	
Width	205 mm
Height	70 mm
Depth	180 mm
Total weight	4 kgs.

Order No	90 02
Total Magnification	100-500x
Head	Monocular
Eyepiece	WF10X
LWD Plan Objective	PLL 10X/0.25 WD:7.3mm
(no cover glass)	PLL 50X/0.65 WD:0.5mm
Mechanical Tube Length	160mm
Focusing	Coaxial coarse/fine focus system, range:36mm
Light Source	Coaxial illumination
	build-in LED rechargeable
	brightness adjustable
Packing	Portable aluminium case

\* Other voltages and frequencies available upon request.  
 Please state when ordering.  
 All specifications are subject to change without notice.



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