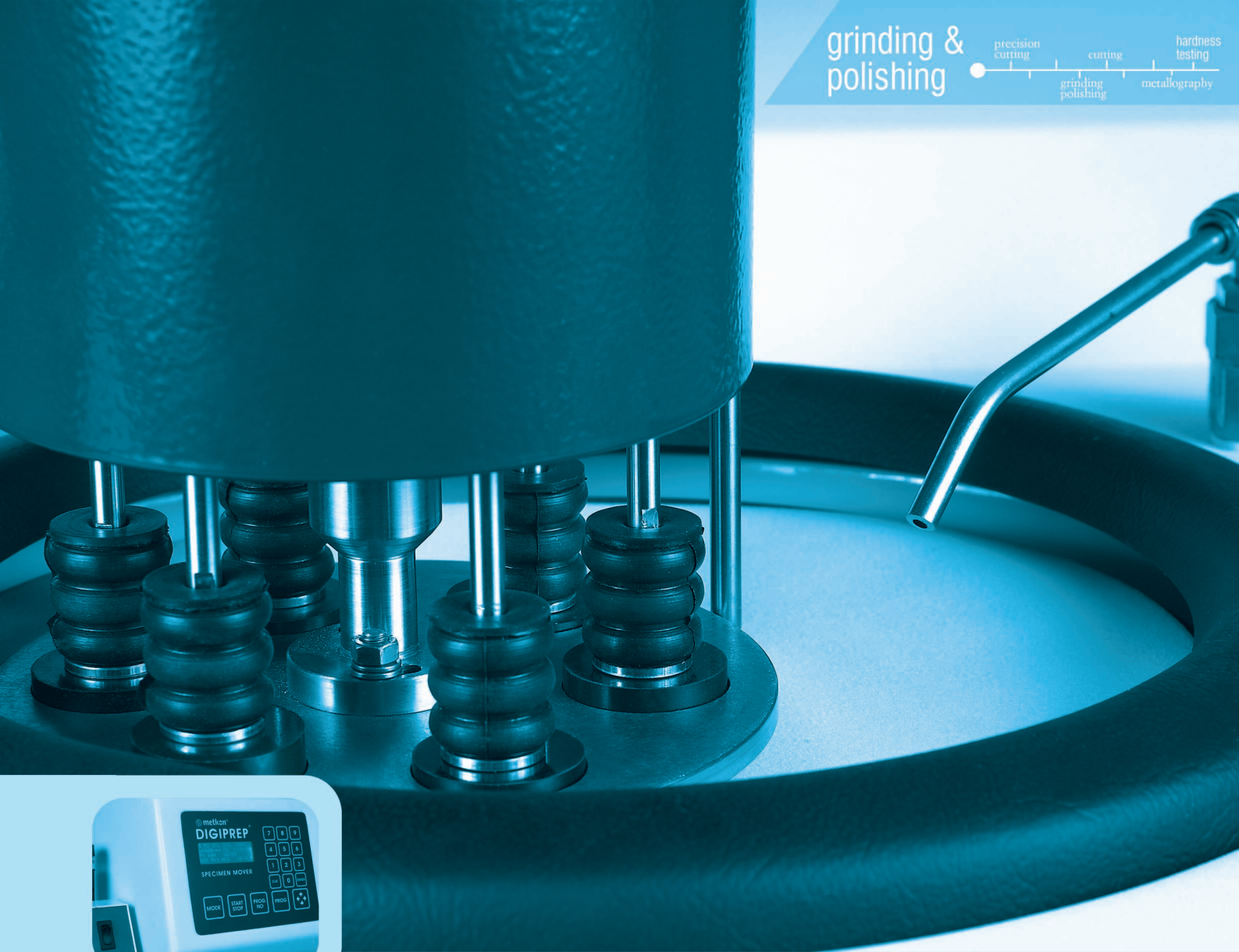


grinding & polishing



# DIGIPREP DIGIPREP



**mettlen**  
METALLOGRAPHY

# DIGIPREP®

250 / 300

DIGIPREP preparation systems are designed for fully automated materiallographic sample preparation for consistent and reproducible specimen quality. DIGIPREP's Automatic Head controls the force applied precisely and specimens are prepared exactly the same way everytime, independent of operator skills. With the ability to store and recall preparation programs on the LCD screen, same consistent results are obtained. Metkon offers you MICROLOGUE, on-line access to many preparation methods for different materials on its website. High level of automation improves the efficiency and gives the operator free time for other tasks in the laboratory. Efficiency is further increased by adding DOSIMAT Peristaltic Dispensing Unit for automation and control of consumable consumption.



DIGIPREP 250 Preparation system



## Base Unit

DIGIPREP's variable speed base unit is available in two versions; DIGIPREP 250 with 250 mm diameter wheel and DIGIPREP 300 with 300 mm diameter wheel. The base unit is powered by a high torque 1,0 HP electric motor. The state of the art frequency converter allows smooth speed variation (50-600 rpm) with soft start and soft stop. The stylish and functional GRP housing is corrosion free and easy to clean. Molded wheel bowls and drains eliminate leaks and the build-up of residue is prevented by constant flushing of the bowl. The drive elements are fixed on heavy duty aluminium alloy casting. The wheels are mounted on ball bearings allowing the application of high pressures to prepare even large specimens. Ball bearings used provide quite and vibration free operation.



Individual Force Application



Central Force Application

## Automatic Head

DIGIPREP's programmable Automatic Head is microprocessor controlled and integrated with the Base Unit, thus creating automatic preparation system. It is used to prepare high volumes of metallographic, ceramic and mineralogical specimens with consistent reproducible quality. The Automatic Head can apply both "Central" and/or "Individual" forces. It can accommodate single samples as well as multi-sample holders thus offering a perfect solution for all levels of sample throughput requirements.



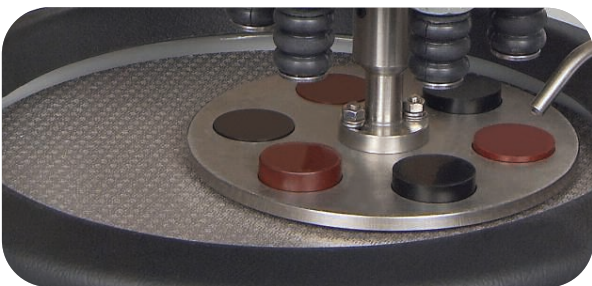
DIGIPREP 300 with DOSIMAT Peristaltic Dispenser (Top) Front Panel with LCD display (Above)

The Automatic Head is mounted to a hardened steel post which is affixed to the cast base of the grinder/polisher. The force on the specimen, "individual" or "central", is pneumatically controlled by a pressure transducer. The system is enclosed in a GRP housing with touch - pad front panel. The Automatic Head is rapidly positioned via a quick-locking clamping lever. The "soft start and stop" feature automatically starts the sequence with a low initial force which is then increased to the preset. Towards the end of the cycle the force is automatically reduced to 75% of the setting to prevent scratching. A variety of sample holders for individual or central force applications are available for different sample sizes. All preparation parameters can be stored in memory under a specific program number. Each program can be saved for a material specific name such as "Cast Iron, Bronze, Al-Si Alloy, etc." The parameters which can be saved are; Force, Cycle time, Wheel speed and direction, Mode of operation (individual or central pressure). Dispensing frequency and duration can also be saved when DOSIMAT peristaltic dispenser is available. These parameters are entered via the touch-pad keyboard, stored in memory and displayed on the LCD screen as preset values. All the operator needs to do is to select the mode of operation (individual or central pressure), call up a specific program and press the "Start" key. Upon completion of the cycle, an acoustic signal lets the operator know that the cycle is over and the samples are ready for the next step.

## Dosimat

DOSIMAT Peristaltic Dispenser is an optional accessory for the DIGIPREP systems. It is a microprocessor controlled automatic fluid dispensing instrument used in combination to obtain consistent specimens and to save time and consumables.

DOSIMAT can feed both diamond suspensions/lubricants and aluminium oxide suspensions. Dispensing parameters like; frequency, dispensing duration, fluid selection etc. are controlled through the programme memory of the Automatic Head. High quality peristaltic pumps guarantee exactly the same dosing every time. DOSIMAT has 3 peristaltic pumps for diamond suspensions/lubricant and 1 pump for aluminium oxide suspension. The liquid is dosed exactly to where the operator wants it on the polishing cloth. No vaporization or spray mist occurs.



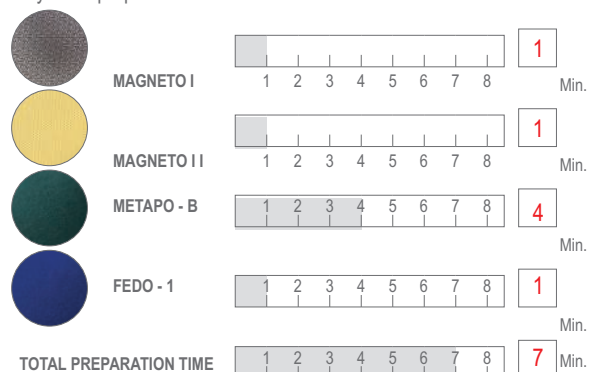
With MAGNETO discs, each grinding step is 1 minute. Total preparation time amounts to 7 minutes.

## Magneto Preparation

### MAGNETO Fast Grinding Discs (Total Grinding Time 2 Minutes!)

MAGNETO I Diamond Grinding Disc for Planar Grinding and MAGNETO II Diamond Grinding Disc for fine grinding offer wonderful advantages:

- \*Only water is needed (No additional diamond suspensions or lubricant)
- \*The same disc can be used for grinding hard as well as soft materials
- \*Very clean working environment
- \*Very high edge sharpness and scratchfree surface
- \*Very short preparation time



# Specifications

## DIGIPREP® 250

Base Unit with 0,75HP Motor, Variable wheel speed 50-600 rpm, Quite belt drive, Complementary or Contra rotational direction, Soft Start and Stop, With 250 mm. dia. working kit consisting of "Aluminium Wheel, Splash Guard, Special Magnetic Foil and 4 pcs. Thin Metal Plates", With water supply and drain tubes. Automatic Head; microprocessor controlled, programmable sample preparation parameters, central and/or individual force application, LCD screen, steel mounting column, specimen holder rotating at 150 rpm, 90 Watt DC motor, quick-locking swing mounted design, audible warning signal, with holding chuck, Lubomat integrated lubricant dispenser with gravity feed and flow adjustment valve, Air supply tubes, Air filtering and Lubricating unit.

Complete and ready for operation.

Without Specimen Holders.

220 V, 1-phase, 50 Hz.

Order No: 45 01

## DIGIPREP® 300

The same as above 45 01, but with 1,0 HP motor and with 300 mm. Working kit.  
Order No: 45 02

## Technical Data

**Main Voltage:** 220 V, 50 Hz, 1 Phase

**Base Motor:** 0,75 HP for DIGIPREP 250  
1,0 HP for DIGIPREP 300

**Base speed:** 50-600 rpm

**Head Motor:** 60 Watt, DC

**Head speed:** 150 rpm

**Sample Capacity :** Individual force mode: 1 to 6 samples  
Central force mode: Up to 10 samples

**Sample Force :** Individual force: 5 to 60 N per sample  
Central force mode: 20 to 360 N total

**Base Dimensions:** 380 x 690 x 340 mm for DIGIPREP 250  
420 x 730 x 350 mm for DIGIPREP 300

**Head Dimensions:** 220 x 450 x 380 mm

**Compressed air:** 6 bar



Levomat Specimen Loading Fixture to level specimens for central force specimen holders.

## DOSIMAT Peristaltic Fluid Dispenser

Fluid Dispenser, microprocessor controlled, with 4 peristaltic pumps(3 for diamond suspensions/lubricant and 1 for alumina suspensions), with interface to be connected to DIGIPREP's Automatic Head.

Order No: 40 04

## Specimen Holders

LEVOMAT Specimen Loading Fixture, to level the specimens within the central force specimen holders, without specimen loading plate.

Order No: 45 60

Specimen Loading Plates

Specimen Loading Plate 130 mm. Dia. Order No:45 10

Specimen Loading Plate 145 mm. Dia. Order No:45 20

Specimen Loading Plate 170 mm. Dia. Order No:45 30

## Specimen Holders

### For Central Force

Order No	No. of Specimen x Size	Outer Dia.	For use on
45 11	6 x • 25 mm	130 mm	DIGIPREP 250 & 300
45 12	6 x • 30 mm	130 mm	DIGIPREP 250 & 300
45 13	4 x • 40 mm	130 mm	DIGIPREP 250 & 300
45 14	6 x • 1 inch	130 mm	DIGIPREP 250 & 300
45 15	6 x • 11/4 inch	130 mm	DIGIPREP 250 & 300
45 16	4 x • 11/2 inch	130 mm	DIGIPREP 250 & 300
45 31	10 x • 25 mm	170 mm	DIGIPREP 300
45 32	8 x • 30 mm	170 mm	DIGIPREP 300
45 33	6 x • 40 mm	170 mm	DIGIPREP 300
45 34	4 x • 50 mm	170 mm	DIGIPREP 300
45 35	10 x • 1 inch	170 mm	DIGIPREP 300
45 36	8 x • 11/4 inch	170 mm	DIGIPREP 300
45 37	6 x • 11/2 inch	170 mm	DIGIPREP 300
45 38	4 x • 2 inch	170 mm	DIGIPREP 300

### For Individual Force

45 51	6 x • 25 mm	145 mm	DIGIPREP 250 & 300
45 52	6 x • 30 mm	145 mm	DIGIPREP 250 & 300
45 53	4 x • 40 mm	145 mm	DIGIPREP 250 & 300
45 57	3 x • 50 mm	145 mm	DIGIPREP 250 & 300
45 54	6 x • 1 inch	145 mm	DIGIPREP 250 & 300
45 55	6 x • 11/4 inch	145 mm	DIGIPREP 250 & 300
45 56	4 x • 11/2 inch	145 mm	DIGIPREP 250 & 300
45 58	3 x • 2 inch	145 mm	DIGIPREP 250 & 300
45 59	BLANK	145 mm	DIGIPREP 250 & 300

Distributor:



Metkon Instruments Ltd.

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