



PLANAR GRINDING

# DIGIPREP

PLAN

# DIGIPREP®

## PLAN



DIGIPREP PLAN Planar Coarse Grinder is designed for first step initial planar grinding of very large specimens or a high volume of specimens in specimen holders. It is fast and efficient in providing high quality flat specimen surface thus saving time on the subsequent fine grinding and polishing steps. Specimen holders of 145 mm diameter having 6 specimens can be prepared in less than a minute with upto 7" (175 mm) stone cup which requires minimal dressing.

### Design

DIGIPREP PLAN is an automatic planar grinder for the first step plane grinding of metallographic specimens. It can easily provide enough specimens for two or three Digiprep polishing machines.

Heavy duty cast aluminium base with mechanical vertical drive provides accurate control. High-torque grinding motor rotating at 2800 rpm guarantees high material removal rate. By using different cup grinding stones ferrous as well as non-ferrous specimens can be prepared easily. DIGIPREP PLAN is equipped with automatic sample feed with fine speed control. Fast advance and reverse are available. All important parameters of the grinding process like feedrate and grinding depth are preset with digital display. Different jaw chucks to secure the specimen holder, T-slotted table and other clamping devices are offered as optional accessories.

A recirculating cooling unit is strongly recommended so that a rust inhibitor can be added and the grinding swarf can be collected. The entire working area is totally enclosed. Electronic brake is integrated to the system for a rapid stop of the grinding stone. The interlocking safety device does not allow the hood to be opened before the grinding motor is stopped.

### Automatic Operation

DIGIPREP PLAN has advanced techniques and software with programmable HMI touch screen controls increasing the productivity, sample consistency and operator comfort.

#### Controlled Material Removal

DIGIPREP PLAN allows you to preset the amount of material to be removed very accurately. The vertical movement of the grinding head is motorized with digital positioning and display on the touch screen LCD. The robust design of the column guarantees high reproducibility. The material to be removed from the specimen can be preset in increments of 10 microns



Ergonomic operation resulting in high quality planar surface, thus saving time on the next preparation steps



**Grinding Parameters:**

The preselection of the grinding feed rate is possible from the touch screen LCD. The feed rate is automatically adjusted, if needed reduced, resulting in perfect surfaces and eliminating sample and machine damage.

**Multi-pass Grinding**

DIGIPREP PLAN can be programmed to make multi-pass plane parallel grinding operations. It is possible to set the number of passes and the grinding depth of each pass which can be stored under a program number or name.

**Programmable Return Positions**

DIGIPREP PLAN has 3 different stop modes:  
 Auto stop: Stops when the specimen holder has been through.  
 Relative Stop: Stops when it has returned to its starting point.  
 Absolute Stop: Stops when the ultimate reset point in all axes has been reached.

**Database**

A library of 25 different grinding programs with related specimen name or number can be saved with all grinding parameters which can be recalled at anytime. Data with Metkon grinding cups is also listed for easy selection.



Programmable HMI touch screen controls



DIGIPREP 7 Grinding&Polishing Station

**DIGIPREP 7 Grinding & Polishing Station**

DIGIPREP PLAN can be combined with DIGIPREP 251/301 on a single cabinet to form the DIGIPREP 7 Grinding & Polishing Station. The recirculating coolant unit and the consumables can be stored and a wash basin is available that can be used between the preparation steps. A typical 3 or 4 stage complete grinding & polishing process of a 6-sample specimen holder can be performed in 7 minutes on a DIGIPREP 7 Station.



Easy and fast reference levelling

LEVOMAT specimen loading fixture

Recirculating coolant system

# Specifications

## 45 06 DIGIPREP PLAN

Planar Coarse Grinding Machine, for initial planar grinding of metallographic specimens in specimen holders, bench top compact design, Programmable with 3,8" HMI touch screen control, closed housing, max. safety provided with interlocking switch, large working space with halogen lighting, automatic sample feeding with adjustable fine speed, controlled material removal with digital setting of grinding depth with accuracy of 0.01 mm., high torque grinding motor, with 2800 rpm speed to obtain optimum surfaces on different materials, all parameters on LC display, ready for operation, without clamping devices.



DIGIPREP-PLAN

### Accessories for DIGIPREP PLAN

- YM 47 07** 3-jaw chuck(for 155 mm. Dia. Specimen holders)
- YM 47 08** 4-jaw chuck(for 130 mm. Dia. Specimen holders)
- GR 18 16** T-slotted table
- GR 13 94** Ricirculating coolant tank, stainless steel, 40 lt. capacity, with pump, level indicator, hoses etc.
- GR 18 02** Floor Cabinet DIGIPREP PLAN
- GR 09 26** Special Floor Cabinet DIGIPREP 7 System

### 45 60 LEVOMAT

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

#### Specimen Loading Plates

- 45 10** Specimen Loading Plate ø 130 mm
- 45 20** Specimen Loading Plate ø 145 mm
- 45 41** Specimen Loading Plate ø 155 mm

### Specimen Holders for DIGIPREP PLAN (Central Force Application)

- 45 11** Clamp type specimen holder, ø130mm, 6 specimens with ø25 mm.
- 45 12** Clamp type specimen holder, ø130mm, 6 specimens with ø30 mm.
- 45 13** Clamp type specimen holder, ø130mm, 4 specimens with ø40 mm.
- 45 14** Clamp type specimen holder, ø130mm, 6 specimens with ø1"
- 45 15** Clamp type specimen holder, ø130mm, 6 specimens with ø1 1/4"
- 45 16** Clamp type specimen holder, ø130mm, 4 specimens with ø1 1/2"
- 45 21** Clamp type specimen holder, ø155mm, 3 specimens with ø50 mm.
- 45 22** Clamp type specimen holder, ø155mm, 3 specimens with ø2"
- 45 23** Teardrop specimen holder, ø145 mm, 6 specimen x 10 - 32 mm. Stainless steel
- 45 24** Teardrop specimen holder, ø145 mm, 4 specimen x 10 - 42 mm. Stainless steel
- 45 25** Clamp type specimen holder, ø 145 mm for 6 rectangular specimen 25 X 32 mm, stainless steel
- 45 26** Clamp type specimen holder, ø 145 mm for 3 rectangular specimen 40 X 50 mm, stainless steel

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

### Order No

### 45 06

Grinding Motor Power, kW(S1)	2,2
Grinding Motor Power, kW(S3)	3
Grinding wheel Speed, (rpm)	2800
Cup wheel diameter, (mm)	ø175
Table Feedrate, (mm/s)	0,5-30
HMI Touch screen, (inch)	3,8"
Program Memory	25
Grinding Depth Accuracy, (μ)	10
Y-Axis Stroke, (mm)	160
Z-Axis Stroke, (mm)	80
Dimensions, WxDxH, (cm)	88 x 66 x 74
Dimensions, WxDxH, cm ( with cabinet )	88 x 66 x 155
Weight, (kg)	185
Mains	3-phase, 220V 50/60Hz.