The FORCIPOL Series of grinding and polishing machines offer practical and economical solutions to your metallographic sample preparation needs...

FORCIMAT is a microprocessor controlled sample mover designed to be used with FORCIPOL grinder / polishers. It is ideal for medium size labs where consistent result are desired.

All materials testing laboratories in the industrial, research or educational field have a demand for sample preparation. Whether your requirements call for individual components or basic sample preparation, FORCIPOL family of instruments will meet your needs. FORCIPOL Series of instruments are available as Single wheel and Dual wheel Units (200/250/300 mm wheel size). Both single or double wheel versions are available with constant, dual or infinitely variable rotating speeds with digital display. This allows the setting of the optimum speed for each individual preparation process. The modern electronics provide a smooth speed variation.

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 quiet and vibration free operation. Water inlet and flexible water outlets with control valves for wet grinding are standard features. Motor on/off and water on/off buttons are mounted on the front panel. FORCIPOL instruments can be used for grinding, lapping and polishing with magnetic backed discs and cloths or by quick and simple exchange of wheels.

When the number of specimens to be prepared increases, FORCIPOL instruments can be fitted with FORCIMAT automatic head for automation. FORCIMAT automatic head provides high rate sample preparation and frees the operator from the grinding and polishing procedures.
The FORCIMAT Automatic Head is mounted on a rigid hardened post which is fixed to the base of the FORCIPOL grinder/polisher. It can be adapted to all FORCIPOL series grinder/polishers, and is easily and rapidly positioned by means of a quick-locking clamping mechanism. The sample holder can prepare 6 samples simultaneously and it is driven by a 60 Watt DC motor at 120 rpm. The pneumatically applied individual force is adjustable between 5 N (1.1 lb.) and 60 N (13.5 lb.) from the front panel and is displayed on a gauge. The housing is made of GRP with a touchpad front panel.

An adjustable and exchangeable drip lubricator is standard and the dosing level is done through and adjustable flow valve. A choice of easily exchangeable sample holders with set of rings from 25 to 50 mm and 1 " to 2 " diameter are available for use on the FORCIMAT. The samples (1 to 6) are placed in the sample holder and the dosing level of the drip lubricator is adjusted. Sample force is set on the front panel of the FORCIMAT. Cycle time, wheel speed and direction are set on the control panel of the FORCIPOL grinder/polisher. When the start button is depressed, both the FORCIMAT and FORCIPOL start operating simultaneously. Upon completion of the cycle, both instrument stop and an audio signal notifies the operator.

By using the FORCIMAT automatic head, the efficiency increases and same consistent sample quality is guaranteed.
## FORCIPOL Specifications

<table>
<thead>
<tr>
<th>Order No</th>
<th>Models</th>
<th>No. of stations</th>
<th>Motor (s)</th>
<th>RPM</th>
<th>Wheel Diameter</th>
<th>Dimensions (mm)</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 01</td>
<td>FORCIPOL 1</td>
<td>1</td>
<td>0.5 HP, 110V 50/60Hz., 1 pH</td>
<td>300</td>
<td>200/250 mm</td>
<td>380 x 690 x 340</td>
<td>29</td>
</tr>
<tr>
<td>36 02</td>
<td>FORCIPOL 1V</td>
<td>1</td>
<td>0.75 HP, 110V 50/60Hz., 1 pH</td>
<td>50-600 Var.</td>
<td>200/250 mm</td>
<td>380 x 690 x 340</td>
<td>30</td>
</tr>
<tr>
<td>36 03</td>
<td>FORCIPOL 1E</td>
<td>1</td>
<td>0.5 HP, 110V 50/60Hz., 1 pH</td>
<td>20-120 Var.</td>
<td>200/250 mm</td>
<td>380 x 690 x 340</td>
<td>30</td>
</tr>
<tr>
<td>36 04</td>
<td>FORCIPOL 1S</td>
<td>1</td>
<td>0.75 HP, 110V 50/60Hz., 1 pH</td>
<td>100-1200 Var.</td>
<td>200/250 mm</td>
<td>380 x 690 x 340</td>
<td>30</td>
</tr>
<tr>
<td>36 05</td>
<td>FORCIPOL 1W</td>
<td>1</td>
<td>0.75 HP, 110V 50/60Hz., 1 pH</td>
<td>150/300</td>
<td>200/250 mm</td>
<td>380 x 690 x 340</td>
<td>29</td>
</tr>
<tr>
<td>36 06</td>
<td>FORCIPOL 300-1V</td>
<td>1</td>
<td>1.0 HP, 110V 50/60Hz., 1 pH</td>
<td>50-600 Var.</td>
<td>300 mm</td>
<td>420 x 730 x 350</td>
<td>37</td>
</tr>
<tr>
<td>36 08</td>
<td>FORCIPOL 2</td>
<td>2</td>
<td>0.75 HP, 110V 50/60Hz., 1 pH</td>
<td>300</td>
<td>200/250 mm</td>
<td>700 x 690 x 340</td>
<td>39</td>
</tr>
<tr>
<td>36 09</td>
<td>FORCIPOL 2 V</td>
<td>2</td>
<td>0.75 HP, 110V 50/60Hz., 1 pH</td>
<td>50-600 Var</td>
<td>200/250 mm</td>
<td>700 x 690 x 340</td>
<td>40</td>
</tr>
</tbody>
</table>

Wheels, splash guards, paper ring and covers are extra. ( pls choose from list below )

### Accessories

#### 200 mm Application
- 31 01 PVC Wheel, 200 mm
- 31 02 Aluminium Wheel, 200 mm
- 31 03 Special Splash Guard, 200 mm
- 31 04 Paper Ring, 200 mm
- 31 06 Cover 200 mm
- 31 07 Bowl Liner 200 mm ( single wheel )
- 31 09 Bowl Liner 200 mm ( double wheel, right )
- 31 10 Bowl Liner 200 mm ( double wheel, left )

#### 250 mm Application
- 31 21 PVC Wheel, 250 mm
- 31 22 Aluminium Wheel, 250 mm
- 31 23 Special Splash Guard, 250 mm
- 31 24 Paper Ring, 250 mm
- 31 26 Cover 250 mm
- 31 27 Bowl Liner 250 mm ( single wheel )
- 31 29 Bowl Liner 250 mm ( double wheel, right )
- 31 30 Bowl Liner 250 mm ( double wheel, left )

#### 300 mm Application
- 31 31 PVC Wheel, 300 mm
- 31 32 Aluminium Wheel, 300 mm
- 31 33 Special Splash Guard, 300 mm
- 31 34 Paper Ring, 300 mm
- 31 36 Cover 300 mm
- 31 37 Bowl Liner 300 mm

**GR 0885 ENVIRO Recirculating Filtering System,**
Closed loop 1 micron filtering system with 20 lt. recirculating water tank, suitable to operate with line water on 80 micron filter as well. Requires 4 bar compressed air.
Ready for operation with all Metkon Grinder/Polishers

### FORCIMAT Specifications
FORCIMAT Automatic Head, microprocessor controlled, pneumatically adjustable individual force loading system, Up to 6 specimens, front panel with touch-pad controls, specimen holder rotating at 120 rpm, 60 Watt DC motor, quick-locking swing mounted design, audible warning signal, communication capability with all FORCIPOL instruments, steel mounting column and with one standart drip lubricator, complete and ready for operation.

**Order No: 30 09**
- 31 83 Special Splash Guard, 250 mm, for automatic heads.
- 31 93 Special Splash Guard, 300 mm, for automatic heads.

**Technical Data**
- Mains Voltage: 110V 50/60Hz., 1 pH
- Motor: 60 Watt, DG
- Rotational speed: 120 rpm
- Sample Capability: 1 to 6
- Force: Min 9N, max 60N
- Compressed air: 6 bar
- Dimensions: 230 x 430 x 250 mm
- Weight: 16 kg.

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