



**Physical Test Solutions**

Innovative Solutions in Material Test Equipment

# Econoline Metallographic Equipment



METALLOGRAPHY  
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# Econoline Series Metallographic Test Equipment

Physical Test Solutions (PTS) introduces a new Econoline series of metallographic equipment. The new Econoline series is designed to meet the budget minded metallographic laboratories. Consistent with the PTS concept, the Econoline series offers *turn – key* solution packages that include vices and all basic accessories required to commence working. The Econoline series meets the needs of manufacturing facilities, quality laboratories, and universities that require material characterization but cannot afford to pay for expensive brand name products. PTS offers full line metallographic sample preparation equipment and consumables.

## Abrasive Cutters

The Econocut Series of abrasive cutters features stylish design to meet a variety of material cutting applications in capacities from 1.2" (30 mm) to 4" (100 mm).

### Q2 Abrasive Cutter

#### Technical Specifications

1. Maximum cutting diameter: 30 mm
2. Cut-off wheel specification: 250 x 2 x 32mm
3. Wheel rotating speed: 2800 rpm
4. Motor: 1.1 KW 220V, 60Hz.
5. Dimensions: 65 x 45 x 40 cm
6. Net weight: 60 Kg



### Q-3A Abrasive Cutter



#### Technical Specifications

1. Maximum cutting width: 60mm
2. Maximum cutting height: 80mm
3. Maximum cutting diameter: 50 mm
4. Cut-off wheel specification: 250 x 2.5 x 32mm
3. Wheel rotating speed: 2800 rpm
4. Motor: Y900L-2, 2.2 KW
5. Dimensions: 58 x 56 x 68 cm
6. Net weight: 150 Kg

### SQ-80 Abrasive Cutter

#### Technical Specifications

1. Rotating speed of main shaft: 2800 rpm
2. Maximum cutting diameter: 80 mm
3. Cut-off wheel specification: 250 x 1.2 x 32mm
4. Motor: Y2-1001-2, 3.0 KW



## Q-80Z Automatic Abrasive Cutter

### Technical Specifications

1. Cutting data can be displayed on backlight LCD screen.
2. Maximum cutting diameter: 80 mm
3. Maximum cutting volume: 80mm x 200mm
4. Manual and automatic cutting method can be switched at will
5. Non-burning chop type cutting method
6. Bidirectional feeding increases the length of deep cutting
7. Total 7 levels cutting speed setting
8. Cut-off wheel specification: 350 x 2.5 x 32mm
9. 60L cooling liquid water tank
10. T-slotted table



## Q-100B Automatic Abrasive Cutter

### Technical Specifications

1. Cutting data can be displayed on backlight LCD screen.
2. Maximum cutting diameter: 100 mm
3. Maximum cutting volume: 100mm x 200mm
4. Manual and automatic cutting methods can be selected.
5. Non-burning chop type cutting method
6. Bidirectional feeding increases cutting capacity
7. Total 7 levels cutting speed setting
8. Sand wheel specification: 350 x 2.5 x 32mm
9. 60L cooling liquid water tank
10. T-slotted table



## LSQ-100 Abrasive Cutter

### Technical Specifications

- Cut-off wheel: 350 x 2 x 32 mm
- Rotating speed: 2800 rpm
- Maximum cutting diameter: 100 mm
- Power supply: 380V or 220V, 50Hz
- Dimensions: 650 x 600 x 1400mm
- Motor: 3.0KW



## BC-L Auto Automatic Abrasive Cutting Machine.

Aluminum casting base with recirculating cooling system. FRP hood, large viewing window, convenient side opening for long components.

### Technical Specifications

- Maximum cutting diameter: 120mm
- T-slotted worktable.
- Double vice for large samples
- 12" or 14" wheels.
- Water-jet type cleaning function
- 2880 rpm
- Advanced safety switch
- Power supply: 380V or 220V, 50Hz
- Dimensions: 1015 x 780 x 1720mm
- Motor: 7.5 HP



## DTQ-5 Low Speed Precision Saw

Model DTQ-5 Low speed precision saw e specimen cutting machine is ideal for the precise cutting of various types of hard materials and electronic components. This machine uses a diamond wafering blade and with a complete set of vices and fixtures for diverse materials.



### Technical specifications

1. Movable stand travel: 25mm
2. Positioning accuracy: 0.01mm
3. Rotating speed of main shaft: 0-700 rpm.
4. Diameter of blade: 100mm - Ø150mm
5. Power supply: 220V/110V, 50Hz/60Hz
6. Dimensions: 35 x 35 x 20 cm
7. Weight: 18.5 Kg

## BM-P Pneumatic Specimen Mounting Press

High speed mold heater with built-in water cooling coils. Interchangeable mold. Suitable for high volume application.

### Technical specifications

1. Mold diameters: 1", 1 1/4" and 1 1/2".
2. Comes with 1 1/4" mold as Standard
3. Digital temperature indicator, control.
4. Timer and buzzer for heating and cooling cycles
5. Requires compressed air.



## XQ-2B Specimen Mounting Press

### Technical specifications

1. Mold diameters: 22 mm, 30 mm and 45 mm
2. Heater: 650W, 220V
3. Temperature adjusting range: 100-180 °C
4. Power supply: 110 V, 60 Hz, 220V 50Hz.
5. Dimensions: 34 x 27 x 40 cm
6. Net weight: 33 Kg



## Econopol Polishers / Grinders

### BG Belt Grinder

For flat, course grinding prior to fine grinding. The specimens to be ground in 60, 80 or 120 grit after cutting operation or molding to remove surface imperfections. Useful step to remove light metallurgical damage in the specimen surface induced during cut-off operation.

- ½ HP single phase motor
- Easy belt change mechanism
- Dust receiver



The Econopol line of grinder, polishers combines modern design with versatility and economy.

**P-1** Single plate single speed polisher/grinder

**M-2** Double plate single speed polisher/grinder



## **MP-160** Single Plate, Dual Speed Grinder / Polisher

### **Specifications**

1. Rotating speed: 150/300 rpm
2. Plate diameter: 200mm or 250mm
3. Power supply: 380V three phases
4. Dimensions: 340x630x300mm (200mm)  
or 380x660x300mm (250mm)
5. Net weight: 45Kg



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## **MP-260** Double Plate Dual Speed Grinder / Polisher

### **Specifications**

1. Rotating speed: 150/300 rpm
2. Plate diameter: 200mm / 250mm
3. Power supply: 380V three phases
4. Dimensions: 630x630x300mm (200mm) or  
730x660x300mm (250mm)
5. Net weight: 45Kg



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## **MP-1B** Single Plate Variable Speed Grinder / Polisher

### **Technical specifications**

1. Digital display of rotating speed.
2. Accommodates 230 mm wheel with variable speed of 50-1180 rpm
3. Accommodates 200 mm wheel with variable speed of 50-1280 rpm
4. Motor: YC7127 550W
5. Dimensions: 65 x 37 x 31 cm
6. Net weight: 30 Kg
7. Voltage: 110V, 60 Hz, 220V, 50Hz



## MP-2B Double Plate Variable Speed Grinder / Polisher



### Technical specifications

1. Digital display of rotating speed.
2. Accommodates 230 mm wheel with variable speed of 50-1180 rpm
3. Accommodates 200 mm wheel with variable speed of 50-1280 rpm
4. Motor: YC7127 550W
5. Dimensions: 70 × 67 × 32 cm
6. Net weight: 58 Kg
7. Voltage: 110V, 60 Hz, 220V, 50Hz

**MP 1000** Automatic Specimen Grinding and Polishing System. The system is capable of moving 6 samples at a time. The unit has digital display of speed with adjustable central pressure loading. The system includes grinding and polishing disks as well as the multi specimen holder.

### Technical specifications

1. Grinding & polishing disks rotating speed: 0-600rpm variable speed changing, or 150/300 rpm (two-level constant speed)
2. Loading range: 1-200N
3. Specimen preparing time: 0-999 seconds
4. Maximum diameter of specimen: Ø30mm
5. Diameter of grinding & polishing disks: Ø250mm
6. Power supply: 220V/50Hz
7. Dimensions: 660 × 380 × 640 mm
8. Net weight: 45 Kg



## Portable Field Metallography

### XJB-200 Portable Metallographic System

Certain metallographic requirements demand that sample preparation and analysis be conducted; “on sight” where the material is located and with sample that cannot be sectioned and taken to the laboratory.

For those applications PTS introduces the XJB-200 system that includes an electrolytic polisher, a mechanical polisher and a microscope.



## EP-302 Portable Electrolytic Polisher

The system is used for electrolytic polishing and etching.

### Technical specifications

- ⇒ Voltage: 2.5 - 30V
- ⇒ Polishing Amperage: 0.4A-1A
- ⇒ Etching Amperage: 0.1A-0.2A
- ⇒ Digital display of voltage and amperage
- ⇒ Sample diameter: Above 2mm
- ⇒ Polisher dimensions: 155x126x195mm

### Standard Equipment

- ✓ Main unit Power supply
- ✓ Probe (electrolytic pen)
- ✓ Anode clip
- ✓ Polishing cell
- ✓ Absorbent cotton
- ✓ Absorbent paper



## PP-202 Portable Mechanical Grinder

The portable polisher includes grinding wheels and polishing cloths for portable polishing applications.

## SM-500 Portable Microscope

SM 500 is a self-contained portable metallurgical microscope for microstructural analysis of metals in laboratory or in-situ. With a unique magnetic stand, SM 500 can be attracted directly against the surface of ferrous metal at any angles for non-destructive examination on flatness, curvature as well as other complicated surface. SM 500 also can be used with digital camera or CCD image process system to download metallurgical image on to a computer for data transfer, analysis, storage and printout.

### Features:

- Handheld design makes inspecting Metallography easy in-situ.
- Magnetic stand can be attracted against ferrous metals at any angles.
- X,Y slide way move makes inspection friendly
- Convenient use for photography
- Non destructively examination



### Main Body:

- Microscope main: 100-500x (extendable 1500x)
- Eyepiece (wide view): 10x,12.5x (extendable to15x)
- Objective: 10x, 40x (extendable 100x)
- Photo Eyepiece: 15x
- Sideway: X-direction 15mm, Y-direction12mm
- Illuminator (halogen): 6V 15W
- Power supply: 230Vac 50/60Hz
- Stand: On-off magnetic stand
- Size: 210x160x 95mm
- Weight: 2.5kg

# Sales Offices

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