

# MIDLAND METROLOGY LIMITED

## uCut-40

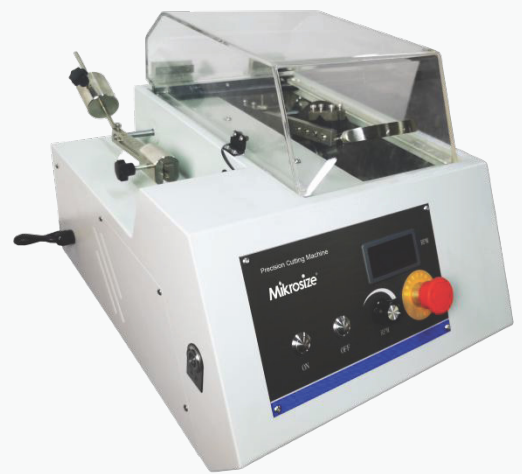
Metallographic Precision Cutter (Low Speed)



# Product Feature & Application

## Product Feature

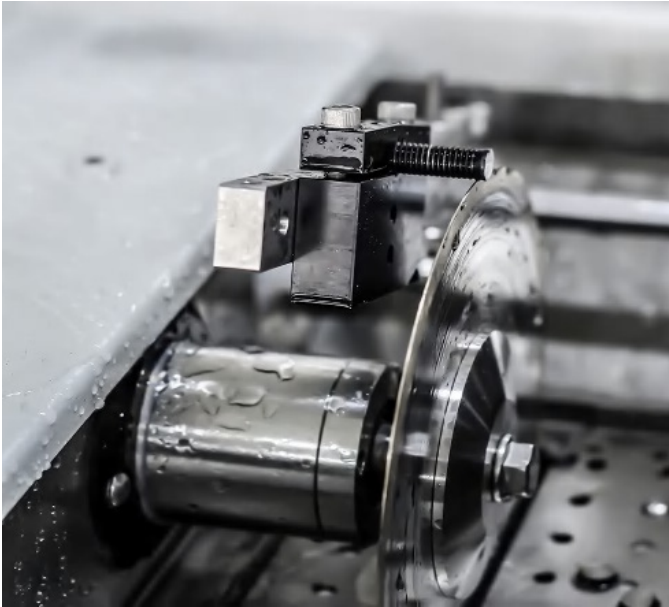
- Workpieces up to 40 x 50 mm. High-precision table top machine
- Low speed protects against heat deformation. Accuracy of +0.01 mm. 100-175mm (4-7") CBN and diamond cut-off wheels.
- low-speed, automatic precision cutting machine for sectioning small and delicate materialographic workpieces that can't tolerate the heat generated by high-speed cutting.
- uCut-40 is designed with speed and efficiency in mind. The simple design means it only takes a few minutes to set up a cut, and the machine can be set to stop automatically once the cut is done. Unguarded processing can be ensured to give more time to work on other tasks.
- The gravity feed design allows for sectioning of various material types, with high accuracy and reproduction. Easy to operate and the feeding speed of cutting sample is fine tuned to minimize sample damage.
- Simple and intuitive operation menu.
- Closed transparent protective cover and safety switch provide protection for operators and easy to observe.
- Closed loop control cutting to prevent overloading to burn motor, circuit, etc.
- Ultra-thin cut-off wheel, such as 0.4mm thick diamond cut-off wheel, using the micrometer screw. With accuracy of 0.01mm, to achieve precision cutting making it ideal for small pieces that require high precision.
- Pieces of different sample fixtures to meet the cutting requirements of different samples.
- Large size circuit board table cutting device, Convenient for wafer material, circuit board, glass and other large size sample cutting.
- Sintered diamond cut-off wheel , for precise cutting for glass, circuit, board rock, and other solid materials.



## Product Application

uCut-40 Cutting Machine can be used to cut material, electronic element, crystals, hard alloy, rock sample, core sample, concrete, organic materials, biological materials (teeth, bones), etc. Precision cutting without deformation. It is an ideal precision cutting machine for industrial and mining enterprises, scientific research institutes to prepare high quality samples.

# User Friendly



Cut-off Wheel



Constant Speed, Even at High Loads



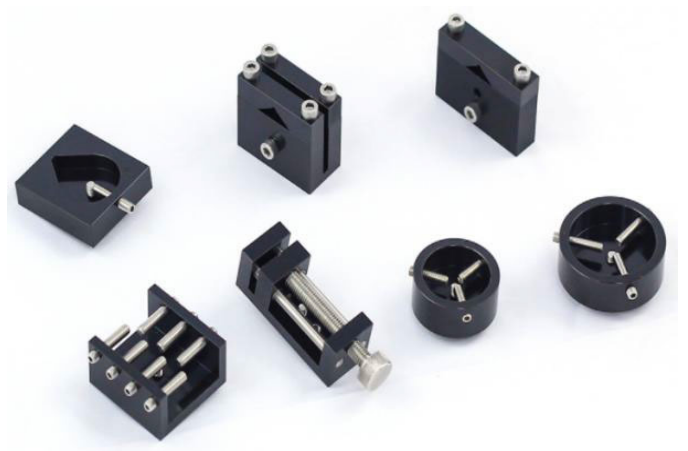
Transparent Protective Cover



Gravity Feed Design



Micrometer Fine Turning



7 pieces Sample Fixtures

# User Friendly



Cut-off Wheel Cooling Tank



Cutting Stop Setting



Water Circulation



Water Circulation

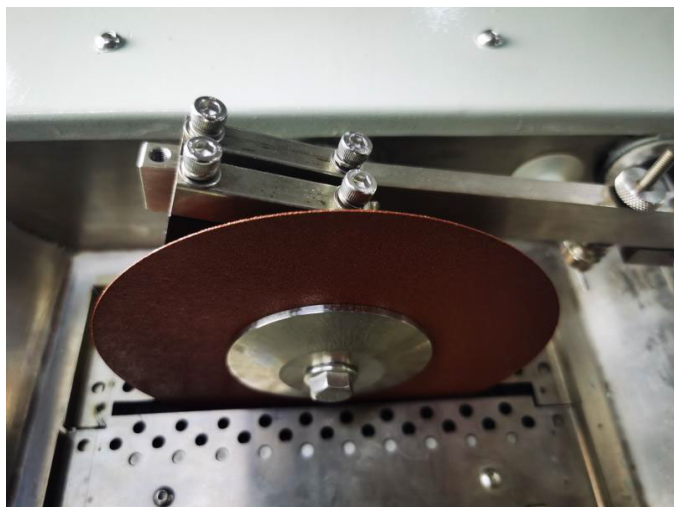


LED Display



LED Display

# User Friendly



Movable Specimen Holder Arm



Avoid Thermal Overload



Power On/Off



Turn Knob Control

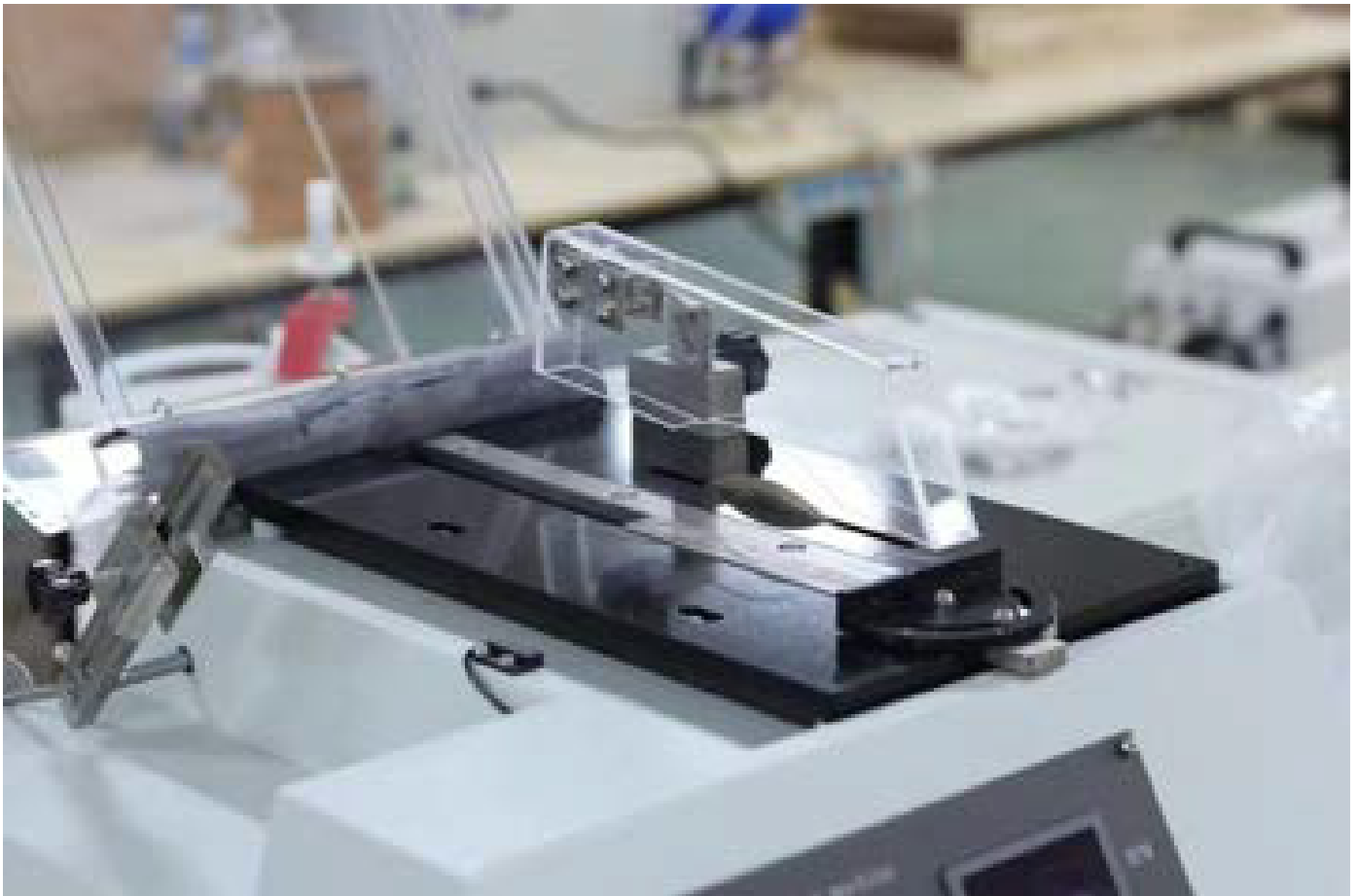
# Optional Table Cutting Device

Table Cutting Device is suitable for cutting thin sized sample, glass, electronic circuit board etc. With this device, user can section limitless length sample.

Table Dimension: 360X200X60mm

Cutting Capacity: 180\*160mm

Cutting Thickness: 20mm



# Technical Specification

|                              |   |
|------------------------------|---|
| Model                        | <b>uCut-40</b>  |
| Product Name                 | Metallographic Precision Cutting Machine  |
| Cutting Capacity             | 40x50mm/1.6"x2.0"   |
| Brushless DC Motor           | Power: 550W Speed: 0-1500rpm  |
| Control                      | Touch Pad & Turn Knob   |
| Recirculation Cooling Tank   | 800ml/0.22gallons   |
| Specimen Holder Arm          | Balance Weight:550g/ 20 ounces<br>Cutting Weight: 250g/9 ounces   |
| Surrounding Temperature      | 5-40°C/-13-131°F  |
| Humidity                     | Less than 95% RH non-condensing   |
| Cut-off wheel                | Standard diamond Cut-off wheel<br>150x12.7x0.43mm (6")  |
| Cutting Positioning Accuracy | 0.01 mm   |
| Built-in Cooling System      | Automatic circulating cooling of cutting fluid (cutting disc drives water circulating cooling of flume) |
| Display                      | LED digital display   |
| Emergency brake              | Emergency stop switch   |
| Power supply                 | AC100-240V/ 50-60HZ   |
| Overall dimensions           | 520 x 430 x 390 mm (20.5x17x15")  |
| Weight                       | 33kg (72.6lbs)  |

# Standard Delivery

| Item                     | Quantity |
|--------------------------|----------|
| Diamond Cut-off Wheel    | 1 pc     |
| Single Saddle Fixture    | 1 pc     |
| Double Saddle Fixture    | 1 pc     |
| Irregular Fixture        | 1 pc     |
| Mounting Fixture (30mm)  | 1 pc     |
| Mounting Fixture (40mm)  | 1 pc     |
| Tear-shape Fixture       | 1 pc     |
| Counterweight Components | 1 set    |
| Flat Fixture             | 1 pc     |
| Cutting Fluid 200 ml     | 1 bottle |

| Item                   | Quantity |
|------------------------|----------|
| Wrench 13-15, 14-17    | Each 1pc |
| Micrometer             | 1 pc     |
| Hexagon Wrench (2.5mm) | 1 pc     |
| Hexagon Wrench (4.0mm) | 1 pc     |
| Hexagon Wrench (5.0mm) | 1 pc     |
| Hexagon Wrench (6.0mm) | 1 pc     |
| Power Cord             | 1 pc     |
| Instruction Manual     | 1 copy   |
| Product Certificate    | 1 copy   |



**Tear-shape fixture**



**Double Saddle Fixture**



**Single Saddle Fixture**



**Irregular Fixture**



**Flat Fixture**




**Mounting fixture  
(30MM)**



**Mounting fixture  
(40MM)**

# Optional Accessories

| Item                        | Description  |
|-----------------------------|--|
| <b>Cut-off Wheel</b>        | Suitable for hard materials and precision cutting<br>Specification:<br>100mm (4inch) 100x0.3x12.7mm<br>125mm (5inch) 125x0.38x12.7mm<br>175mm (7inch) 175x0.5x12.7mm                                 |
| <b>Cutting Fluid</b>        | Suitable for use with cut-off wheels to prevent the sample from overheating and burning.<br>Specifications: 1:20 Dilute with water<br>Packaging: 1L/ bottle  |
| <b>Table Cutting Device</b> | Suitable for cutting thin slice, glass, electronic circuit board, etc.<br>Cutting specifications: 180x160x20<br> |