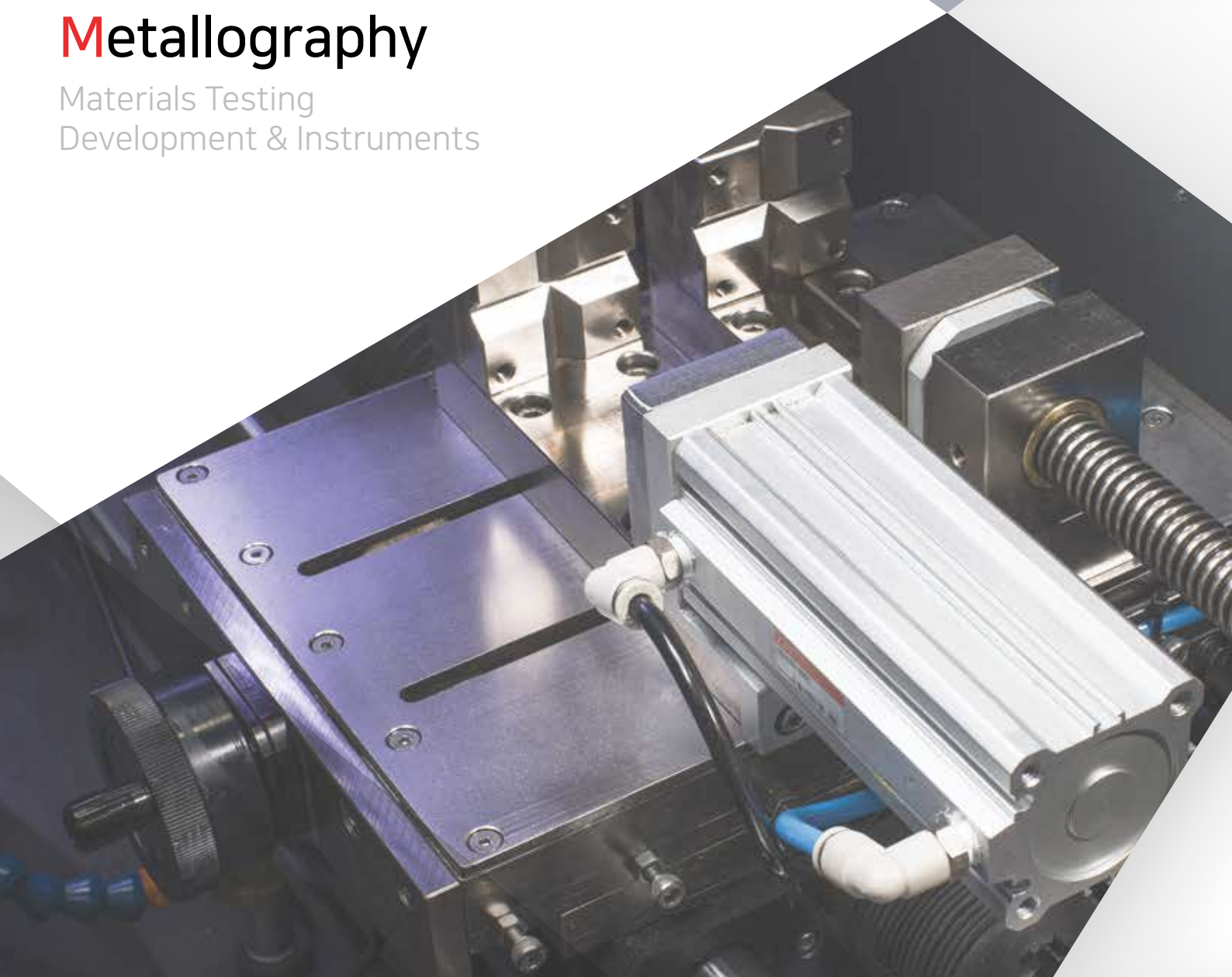




Metallography

Materials Testing
Development & Instruments





INNOVATIVE RELIABILITY TESTING SYSTEMS

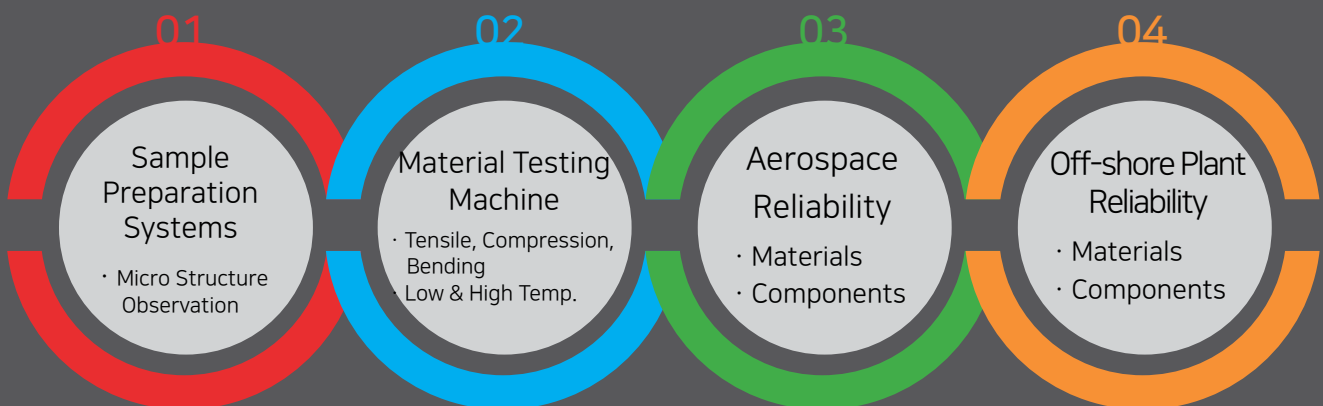
MTDI Inc.

Material Testing
Development & Instruments

Metallography

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MTDI-Business Area

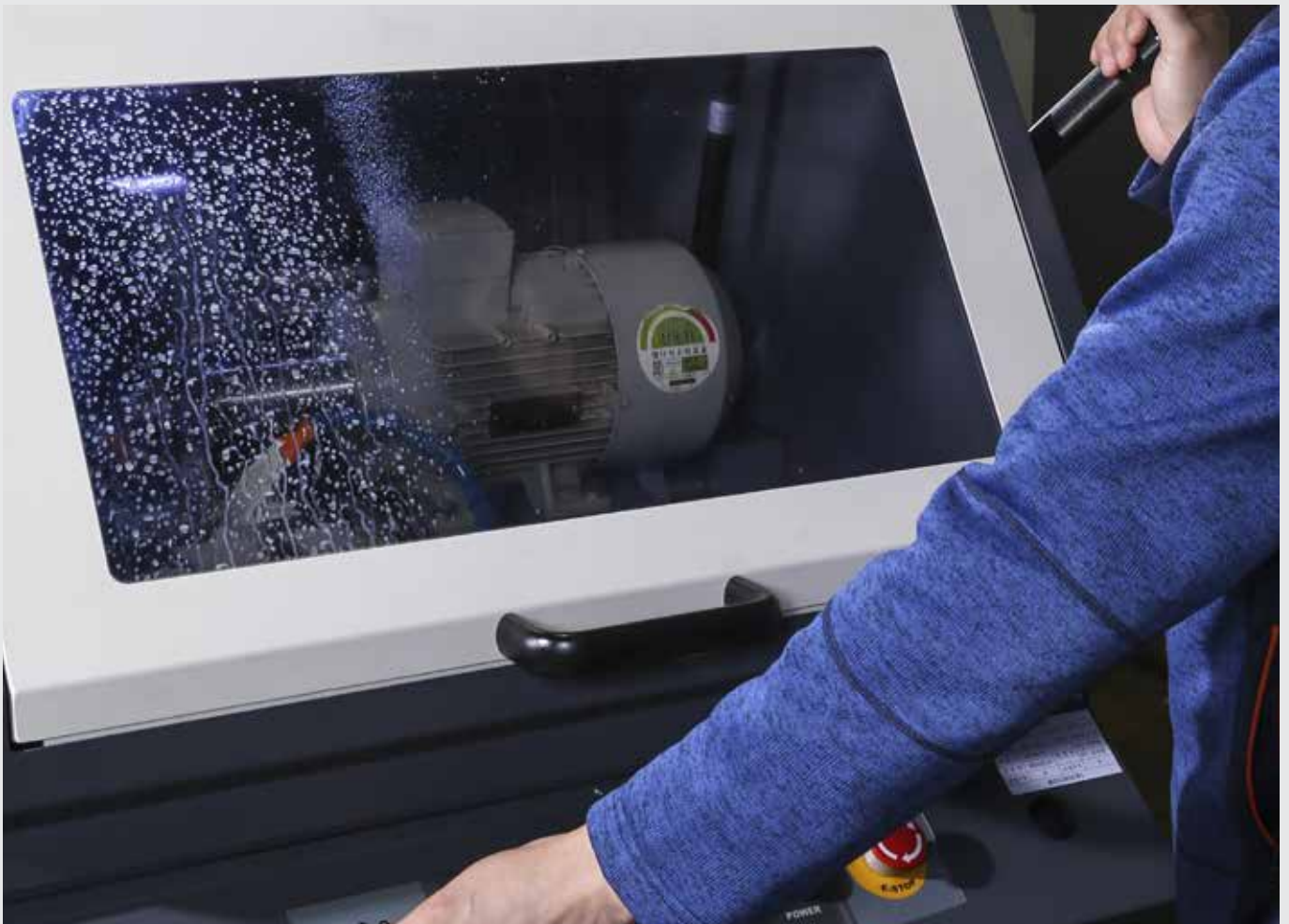


High Speed Abrasive Cutter KANTA Series

Kanta series (Abrasive Cut-off Machine) specialize on cut Bigger size Samples. For example, Metal, Plastic, Ceramic, Composites, etc.,

Coolant minimize Heat damage of sample and User's safety approved by Limit Sensor.

Wide Window and LED lamp make user can see inside of Cutting zone brightly.



KANTA - Series



KANTA-100E
Manual Abrasive Cutter



KANTA-100S
Semi-auto Abrasive Cutter



KANTA-100F
Automatic Abrasive Cutter

MTDI KANTA Models

Model	KANTA-100E	KANTA-100S	KANTA-100F
Type	Manual Abrasive Cutter (Lever Type)	Semi-auto Abrasive Cutter (Handle Spin)	Automatic Abrasive Cutter
Dimension	840mmW x 860mmD x 1,470mmH	900mmW x 950mmD x 1,490mmH	900mmW x 1,015mmD x 1,490mmH
Weight	215kg(Coolant Tank: 20kg)	385kg(Coolant Tank: 20kg)	378kg(Coolant Tank: 20kg)
Power	AC 220V, 3 Phase, 60Hz, 2.7kW	AC 220V, 3 Phase, 60Hz, 2.7kW	AC 220V, 3 Phase, 60Hz, 3.1kW
Motor	SIEMENS Waterproof Motor 2.2kW (3HP)		
Wheel Size	10", 12"		
RPM	500 ~ 3,500rpm		
Capacity	Flat : 80mmD x 60mmH, Round Stick : 80mm (for 12")		
Cooling	Independent 2-layer Filtered Pump, Coolant Capacity : 50 liter		
Controls	<ul style="list-style-type: none"> · POWER, START, STOP, · PUMP ON/OFF 	<ul style="list-style-type: none"> · Panel : 5.6" TFT LCD Touch Screen · Manual Push Switch: START, STOP, PUMP On/Off, Emergency stop · Setting Data Auto-save · Manual RPM set available · RPM: 4 Digits digital display · Data Base: 5 Memories · Sleep Mode (Shut-down, Display Logo) · Touch button: Start/Stop, Pump, LED 	<ul style="list-style-type: none"> · Panel: 7" TFT LCD Touch Screen · Data Base: 5 Memories · Input X, Y axis moving position (X axis option) · Joystick Movement speed set · Joystick Low/High Speed set · Manual Push Switch: START, STOP, PUMP On/Off, Emergency stop · Auto Stop : Cutting complete, Door Lock · Setting Data Auto-save · Touch Button: Start/Stop, Pump, LED · Set RPM and Cutting speed · Auto-continuous Cutting (if choose auto X-axis) · Feeding Rate Control · Automatic Load Control · RPM: 4 Digits digital display · Cut Position: Display until 0.005mm

Manual Abrasive Cutter / KANTA-100E

KANTA-100E has economical price with reasonable performance. Cut various materials, for example, Metal, Plastic, Ceramics and Composite on this machine. User uses Lever to put force by themselves.



Features

- ♦ Stand-alone Main Frame
- ♦ Maximized Window with LED lamp for see Cutting Zone brightly and easy to control.
- ♦ Wheel speed control by Inverter
- ♦ Cleaning Nozzles help easy management inside of Cutting Zone

Specification

Model	KANTA-100E
Type	Manual Abrasive Cutter (Lever Type)
Dimension	840mmW x 860mmD x 1,470mmH
Power	AC 220V, 3 Phase, 60Hz, 2.7kW
Motor	SIEMENS Waterproof Motor 2.2kW (3HP)
Wheel Size	10", 12"
RPM	500 ~ 3,500rpm
Capacity	Flat : 80mmD x 60mmH, Round Stick : 80mm(for 12")
Controls	POWER, START, STOP, Coolant ON, OFF
Cooling	Independent 2-layer filtered Pump, Coolant Capacity : 50 liter, Caster on Coolant Tank
Options	Slurry Separator, Air Vice, Hydraulic Vice, Vertical Clamp, T-slot Stage, Air Gun



Metallography

Semi-auto Abrasive Cutter / KANTA-100S

KANTA-100S is Semi-automatic type. Cut various materials, for example, Metal, Plastic, Ceramics and Composite on this machine. User convenience improved by control Rotating Handle and cut with Screw type. It is available to change wheel height by user control.



Features

- Stand-alone Main Frame
- Maximized window with LED lamp for bright observation.
- Wheel spin speed control by Inverter
- Cleaning Nozzle for care inside clearly
- T-slop table movement (Forward, Backward) available (Option. Effective for High-strength materials)
- Wheel height control by Rotating Handle
- 5.6" TFT LCD Touch Screen for convenient control

Specification

Model	KANTA-100S	
Type	Semi-auto Abrasive Cutter (Spin Handle)	
Dimension	900mmW x 950mmD x 1,490mmH	
Power	AC 220V, 3 Phase, 60Hz, 2.7kW	
Motor	SIEMENS Waterproof Motor 2.2kW (3HP)	
Wheel Size	10" 12"	
RPM	500 ~ 3,500rpm	
Capacity	Flat : 80mmD x 60mmH, Round Stick : 80mm(for 12") (By change of Vice, capacity can be change)	
Languages	Korean, English, Chinese	
Controls	<ul style="list-style-type: none"> • Manual Push Switch: START, STOP, PUMP, Emergency Stop • Touch Button: Start/Stop, Pump, LED • Setting Data Auto-save 	<ul style="list-style-type: none"> • Manual Spin speed set • RPM : 4 Digit digital display • Data base: 5 memories • Sleep Mode (Shut-down, Display Logo)
Cooling	Independent 2-layer filtered Pump, Coolant Capacity : 50 liter, Caster on Coolant Tank	
Options	Metal Slurry Separator, Air Vice, Hydraulic Vice, Vertical Clamp, T-slot Stage, Stage Movement (Forward/Backward), Air Gun, Operating Light	



Automatic Abrasive Cutter / KANTA-100F

High-performance Automatic Abrasive KANTA-100F can cut various materials (Metal, Plastic, Ceramic, Composite, etc.,). User can cut their materials on more Safety and Convenience environment.



Features

- Automatic Vice grip sample more firmly for precise Cutting
- 7" TFT LCD Touch Screen for convenient control
- Cut speed, Set Acceleration/Deceleration time, Set Cut load (memory)
- Window on Top side helps to see inside more brightly.
- Cut speed control by measure load during the cut (Auto-cut)
- Digital Motor spin speed control
- Convenient Stage movement with Joystick

Specification

Model	KANTA-100F		
Type	Automatic Abrasive Cutter	Motor	SIEMENS Waterproof Motor 2.2kW(3HP)
Dimension	900mmW x 1,015mmD x1,490mmH	Wheel Size	10" 12"
Power	AC 220V, 3 Phase, 50~60Hz, 3.1kW	RPM	500 ~ 3,500rpm
Capacity	Flat : 80mmD x 60mmH, Round Stick : 80mm(for 12") (By change of Vice, capacity can be change)		
Controls	<ul style="list-style-type: none"> • X, Y axis moving position input (X-axis Option) • Joystick Low/High Speed Set • Setting Data Auto-save • Automatic Load Control • Feeding rate control • RPM and Cutting speed set • Data Base: Max 5 	<ul style="list-style-type: none"> • Auto Shut-down : Cutting complete, Door Lock • Cutting Position : until 0.005mm (Digital display) • Auto Continuous Cut (if choose Auto X-axis) • RPM: 4 Digit digital display • Manual Push Switch: START, STOP, PUMP, Emergency Stop • Touch Button: Start/Stop, Pump, LED 	
Specimen Fix Stage	<ul style="list-style-type: none"> • 4-way move available and applied fixation vice • T-slot Stage • Vice Head 4-way Rotation 	<ul style="list-style-type: none"> • Stage Y-axis Auto Control (Standard) • Y-Axis Speed Range: 0.005 ~ 5mm/sec(0.005 mm/step) • Y-Axis Stroke: 250mm 	
Cooling	Independent 2-layer filtered Pump, Coolant Capacity : 50 liter, Caster on Coolant Tank		
Options	Metal Slurry Separator, Air Vice, Hydraulic Vice, Vertical Clamp, T-slot Stage, Forward/Backward Stage Transfer, Air Gun, Operating Light Bar		



Metallography

Option Parts

- **Metal Slurry Separator**
40 liter/min high-pressure discharge
Forced Circulation
Filter for Remove Slurry
Steep Scrap removing by permanent-magnet
Drain Line (inside of equipment)
- **Air Vice**
(Air supply should be prepared)
Max 2 Air Cylinders(STD 1ea)
2 Air Solenoid Valves(STD 1ea)
Air Switch
Max Force: 80kg
- **Hydraulic Vice**
(Hydraulic Unit should be prepared)
Max 2 Hydraulic Cylinders(STD 1ea)
2 Solenoid Valves(STD 1ea)
Air Hydraulic Booster
Lock/Unlock Switch
Max Force: 400kg
- **Auto Cleaning**
Cleaning By Water Splash
Cleaning Capacity : 40 liter/min
Cleaning Range : Horizontal : 360°,
Vertical : 240°
- **Stage X-axis Auto Control**
X-Axis Movement 50mm
X-Axis Speed Range:
0.005 ~ 500mm/min
Motor : 100W Servo motor
Control Display Accuracy: 0.005mm
Available Continuous Cutting Range:
Max 50mm without limitless count
- **Stage X-Axis Manual Control**
X-Axis Movement 50mm
Manual Handle Control
Control Display Accuracy:
1mm graduation imprinted
- **T-slot Stage**
Material : Stainless Steel
Slot lines: Left - 2 lines, Right: 2 lines
Front/Back Movement: 30mm or more
- **Stage Movement (Front/Back)**
Distance: 100mm
Control : Manual Handle
- **Operating Light**
Orange : Stand by
Green : Operating
Red : Error

Related Consumables



Abrasive Wheel
SiC type



Abrasive Wheel
Alumina type



Abrasive Wheel
Premium type



Abrasive Wheel
High Strength type



Cutting Oil

Precision Diamond Cutter DAIMO Series

DAIMO series is machine for precision specimen cutting with Diamond Wheel or Abrasive Wheel. Decrease heat during the cut for minimize heat-damage. It is available increase illumination of cut-surface.



DAIMO - Series



DAIMO-100E
Manual
Precision Diamond Cutter



DAIMO-100S
Standard
Precision Diamond Cutter



DAIMO-100F
Automatic
Precision Diamond Cutter

MTDI Models

Model	DAIMO-100E	DAIMO-100S	DAIMO-100F
Type	Manual Precision Diamond Cutter	Standard Precision Diamond Cutter	Automatic Precision Diamond Cutter
Dimension	450W x 550D x 400H	400W x 540D x 445H	560W x 760D x 330H
Weight	38kg	38kg	70kg
Power	AC 220V, Single Phase, 50~60Hz, 220W	AC 220V, Single Phase, 50~60Hz, 220W	AC 220V, Single Phase, 50~60Hz, 900W
Motor	180W AC Motor	200W BLDC Motor	750 W BLDC motor
RPM	0~860RPM	0~1,000RPM	300~5,000RPM
Cut Direction	CCW	CCW, CW	CCW
Wheel Size	4" ~ 7" Wheel	4" ~ 7" Wheel	4" ~ 7" Wheel
Capacity	30Φ(5" wheel), Max. 40Φ	30Φ(5" wheel), Max. 40Φ	30Φ(5" wheel), Max. 40Φ
Resolution		0.001mm step, Max.80mm	0.001mm step, Max.80mm
Oil Tank	1.8 liter	3 liter	4 liter
Controls	<ul style="list-style-type: none"> · POWER, START, STOP ON/OFF Switch · Auto-stop after cut completion · RPM control by Dial 	<ul style="list-style-type: none"> · 5.6" TFT LCD Touch Screen · POWER, START, STOP, ZERO Switch · 1μm unit cut position control · Auto Calibration (RPM) · Set Wheel spin direction · Zero Set position when starts Cutting · Auto-stop after cut completion · Sensing Door open · Setting Data Save/Load (Max 5) 	<ul style="list-style-type: none"> · 5.6" TFT LCD Touch Screen · START, STOP, WATER, SPEED Switch · Measure Wheel load during the cut · RPM change automatically by load · Stage Absolute/Relative position change · Current Stage position display · Cut position control in 1μm unit · Auto Calibration (RPM) · X/Y axis ZERO Set when cut starts · Continuous cut by Schedule · 4-way control by Joystick · Low/High speed mode of Joystick · Wheel thickness consider for cut · Sensing Door open · Setting Data Save/Load (Max 5) · Minimize Burr by Rotation (Option)

Manual Precision Cutter / DAIMO-100E

DAIMO-100E has reasonable price with low speed but can cut various materials (Metal, Plastic, Ceramic, Composite, etc.,)

Feature

- ◆ Power On/Off, Start, Stop Button Switch
- ◆ Auto-stop after cut completion
- ◆ Simple RPM control by Knob control
- ◆ Simple Cut-depth set by Micrometer



Specification

Model	DAIMO-100E
Type	Manual Precision Diamond Cutter
Dimension	450W x 550D x 400H
Power	AC 220V, Single Phase, 50~60Hz, 220W
Motor	180W AC Motor
RPM	0~860RPM
Spin Direction	CCW
Wheel Size	4" ~ 7" Wheel
Capacity	30Φ(5" Wheel), Max 40Φ(7" Wheel)
Oil Tank	1 liter



Metallography

Standard Precision Cutter / **DAIMO-100S**

DAIMO-100S has touch screen for control speed and input cutting condition and save. Rotating Handle helps control cut-depth in 1 μ m step.

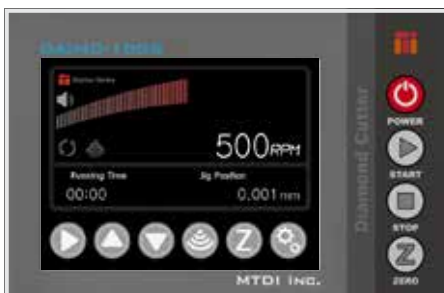
Feature

- ◆ 5.6" TFT LCD Touch Screen
- ◆ Power, Start, Stop, Zero Button Switch
- ◆ 1 μ m step Cut-depth Control
- ◆ Auto Calibration (RPM)
- ◆ Set Wheel Spin Direction
- ◆ Zero-set before starts Cut
- ◆ Auto-stop after Cut completion
- ◆ Setting Data Save/Load (Max 5)



Specification

Model	DAIMO-100S
Type	Standard Precision Diamond Cutter
Dimension	400W x 540D x 445H
Power	AC 220V, Single Phase, 50~60Hz, 220W
Motor	200W BLDC Motor
RPM	0~1,000RPM (Option : 0~3,000RPM)
Spin Direction	CCW, CW
Wheel Size	4" ~ 7" Wheel
Capacity	30 Φ (5" Wheel), Max 40 Φ (7" Wheel)
Reolution	0.001mm step, Max.80mm
Oil Tank	3 liter
Languages	Korean, English, Chinese



Automatic Precision Cutter / **DAIMO-100F**

DAIMO-100F can cut with 5,000 rpm and sensing load of wheel during the cut so control speed automatically. Continuous cut is available and user can set how many sample they need.

Feature

- ◆ 5.6" TFT LCD Touch Screen
- ◆ Wheel load sensing during Cutting
- ◆ Stage Absolute/Relative position move
- ◆ Display current Stage position
- ◆ 1 μ m step cut-depth control
- ◆ Auto Calibration (RPM)
- ◆ Zero Set available
- ◆ Continuous cut with Scheduling
- ◆ Convenient control by Joystick (Top/Bottom, Left/Right)
- ◆ Setting data Save/Load (Max 5)
- ◆ Input Wheel thickness for more precision cutting
- ◆ Minimize Burr after cut by add Rotation function



Specification

Model	DAIMO-100F
Type	Automatic Precision Diamond Cutter
Dimension	560W x 760D x 330H
Power	AC 220V, Single Phase, 50~60Hz, 900W
Motor	750 W BLDC motor
RPM	300~5,000RPM
Cut Direction	CCW, CW
Wheel Size	4" ~ 7" Wheel
Capacity	30 Φ (5" Wheel), Max 40 Φ (7" Wheel)
Resolution	0.001mm step, Max.80mm
Oil Tank	4 liter
Languages	Korean, English, Chinese



Metallography

Option Parts

● DAIMO-100S

- Plank Cutting Jig (PCB, Metal)

Fix specimen and Cutting size control
Aluminum Plate & Anodized surface

- Low capacity Weight(400g)

Material : S45C, Chrome Plating
Weight : 400g

- Various Grip (Holder)

Manufacture complex shape

- High capacity Weight (800g)

Material : S45C, Chrome Plating
Weight : 800g

● DAIMO-100F

- Y axis Rotation

Motor: Step Motor

Rotation Speed : 0.1 RPM ~ 100RPM

Input speed through Key pad



Plank Cutting Jig



Various Complex Grip



Weight(400g or 800g)

Related Consumables

Diamond Wheel

- High Concentration (HC) Recommend for General Metal or Materials
- Low Concentration (LC) Recommend for High Strength or Brittle Materials

CBN Wheel

- Recommend for High Strength Metal's High Speed cutting

Abrasive Wheel & Cutting Oil & Dressing Stick



CBN Wheel



Diamond Wheel



Abrasive Wheel



Cutting Oil



Dressing Stick

Auto Hot Mounting Press ETOS Series

ETOS Series uses on Mount the specimen to regulated size for Grinding/
Polishing's effective and safety process.
Mounting with Acrylic Resin, Phenolic Resin, Epoxy Resin on High-
temperature, High-pressure environment.



ETOS - Series



ETOS-100

1 Channel
Auto Hot Mounting Press



ETOS-200

2 Channels
Auto Hot Mounting Press



ETOS-300

4 ~ 6 Channels
Multi Channel Hot Mounting Press

MTDI Models

Models	ETOS-100	ETOS-200	ETOS-300
Type	1 Channel	2 Channels	3 or more Channels
Dimension	560mmW X 560mmD X 530mmH	560mmW X 560mmD X 530mmH	1410mmW X 800mmD X 1,550mmH
Weight	71kg	102kg	600kg
Power	AC 220V, Single Phase, 50~60Hz, 2.2kW	AC 220V, Single Phase, 50~60Hz, 3.5kW	AC 220V, Single Phase, 50~60Hz, 7.5~11kW Channels can be change by order
Controls	5.6" TFT LCD Touch Screen Start/Stop/Up/Down Button Switches	5.6" TFT LCD Touch Screen Start/Stop/Up/Down Button Switches	15" TFT LCD Touch Screen Start/Stop/Up/Down Button Switches
Mold Size	25~50mm Diameter, (Customer's Choice)		
Pressure Type	Auto Hydraulic type, Pump (Max 3,000psi/210Bar)		
Cooling	Auto cooling by Solenoid valve (Water)/Fan Cooling(Air)		
Temperature	Max 220°C		
Languages	Korean, English, Chinese		
Functions	<ul style="list-style-type: none"> · Set molding condition (Pressure/Temp./Heating Time/ Cooling Time/Preheat) · Check Molding status · Cylinder Manual Up/Down · Coolant & Cooling Fan Manual On/Off · Pressure and Temperature Limit · Setting data Save : 5 channels · Emergency Stop 	<ul style="list-style-type: none"> · 2 Channels separated Molding · Set molding condition (Pressure/Temp./Heating Time/ Cooling Time/Preheat) · Check Molding status · Cylinder Manual Up/Down · Coolant & Cooling Fan manual On/Off · Pressure and TemperatureLimit · Setting data Save : 5 channels · Emergency Stop 	<ul style="list-style-type: none"> · Cylinder Position Set (Insert, remove specimen, Molding Start) · Set molding condition (Pressure/Temp./Heating Time/ Cooling Time/Preheat) · Setting data Save : 30 channels · Voice Guidance · Emergency Stop
Options	Specimen Cradle	Specimen Cradle	

1 Ch. Hot Mounting Press / ETOS-100

ETOS-100 is Hot Mounting Press for sample make it more simpler shape if specimen has too small or irregular shape.

Recommended for Metal which has no any deformation on high temperature and high pressure.

Feature

- 5.6" TFT LCD Touch Screen
- Fast Mould by Contact-type of Cylinder and Heater
- Power, E-stop, Start, Stop, Up, Down Button Switches
- Mold cap cradle for prevent damage by fall
- Specimen cradle (Option) helps store specimen conveniently
- Emergency stop button shut-down the machine immediately
- Set limit of Temperature and Pressure
- Minimize Noise and increase resistance of Hydraulic Cylinder and Pump by Accumulator



Specification

Model	ETOS-100
Dimension	560mmW X 560mmD X 530mmH
Power	AC 220V, Single Phase, 50~60Hz, 2.2kW
Controls	5.6" TFT LCD Touch Screen (Start/Stop/Up/Down Button Switches)
Mold Size	25~50mm Dia. (Selectable)
Pressure Type	Auto-hydraulic, Pump (Max 3,000psi/210Bar)
Cooling	Auto cooling by Solenoid valve (Water) / Fan Cooling (Air)
Temperature	Max 220°C
Languages	Korean, English, Chinese
Function	<ul style="list-style-type: none"> · Set Molding condition (Pressure/Temp./Heating time/Cooling time /Preheat) · Check Molding status · Cylinder Manual Up/Down · Coolant and Cooling Fan manual On/Off · Pressure and Temperature Limit · Setting data Save : 5 channels · Emergency Stop
Options	Specimen Cradle



Metallography

2 Ch. Hot Mounting Press / ETOS-200

ETOS-200 is Hot Mounting Press for sample make it more simpler shape if specimen has too small or irregular shape. User can mold 2 specimen separately in one time.

Recommended for Metal which has no any deformation on high temperature and high pressure.

Feature

- ◆ 5.6" TFT LCD Touch screen
- ◆ Fast Mold by Contact-type of Cylinder and Heater
- ◆ Power, E-stop, Start, Stop, Up, Down Button Switches
- ◆ Mold cap cradle for prevent damage by fall
- ◆ Specimen cradle (Option) helps store specimen conveniently
- ◆ Emergency Stop button shut-down power immediately
- ◆ Set limit of Temperature and Pressure
- ◆ Minimize Noise and increase resistance of Hydraulic Cylinder and Pump by Accumulator



Specification

Model	ETOS-200
Dimension	560mmW X 560mmD X 530mmH
Power	AC 220V, Single Phase, 50~60Hz, 2.2kW
Controls	5.6" TFT LCD Touch Screen (Start/Stop/Up/Down Button Switches)
Mold Size	25~50mm Dia., Selectable
Pressure Type	Auto-hydraulic, Pump (Max 3,000psi/210Bar)
Cooling	Auto cooling by Solenoid valve (Water) / Fan cooling (Air)
Temperature	Max 220°C
Languages	Korean, English, Chinese
Functions	<ul style="list-style-type: none"> · 2 Ch. molding separately · Set Molding condition (Pressure/Temp./Heating time/Cooling time /Preheat)) · Check Molding status · Cylinder Manual Up/Down · Coolant and Cooling Fan manual On/Off · Pressure and Temperature Limit · Setting data Save : 5 channels · Emergency stop
Option	Specimen Cradle



Multi-channel Hot Mounting Press / ETOS-300

Many channels operate in one time.

Position sensor helps auto control of Cylinder position.

(Put specimen, Specimen remove, Mold start)

15" TFT LCD Touch Screen displays Status, Temperature, Pressure and can control through it.

Feature

- ♦ Fast Mould by Contact-type of Cylinder and Heater
- ♦ 15" LCD Touch Screen display Status of Molding
- ♦ Power, E-stop, Start, Stop, Up, Down Button Switches
- ♦ Mold cap cradle for prevent damage by fall
- ♦ Emergency stop shut-down power immediately
- ♦ Set limit of Temperature and Pressure
- ♦ Start altogether or control each mold separately
- ♦ 1 power pack for 2 molds improved effectiveness
- ♦ Cooling Circulation System(Air) minimize Cylinder surface temperature
- ♦ Voice Guidance
- ♦ Minimize Noise and increase resistance of Hydraulic Cylinder and Pump by Accumulator



Specification

Model	ETOS-300	
Dimension	1,410mmW X 800mmD X 1,550mmH	
Power	AC 220V, Single Phase, 50~60Hz, 7.5~11kW (more 3 Ch.), (Channael can be change by Order)	
Controls	15" TFT LCD Touch Screen (Start/Stop/Up/Down Button Switches)	
Mold Size	25~50mm Dia., Selectable	
Pressure Type	Auto-hydraulic, Pump (Max 3,000psi/210Bar)	
Cooling	Auto cooling by Solenoid valve (Water) / Fan Cooling (Air)	
Temperature	Max 220°C	
Languages	Korean, English, Chinese	
Function	<ul style="list-style-type: none"> · Cylinder Position Control (Specimen Input, remove, Molding start) · Set Molding condition and check (Pressure/Temp./Heating time/Cooling time/ Preheat) · Check Molding status 	<ul style="list-style-type: none"> · Cylinder Manual Up/Down · Coolant and Cooling Fan manual On/Off · Pressure and Temperature Limit · Setting data Save: 30 channels · Voice Guidance · Emergency Stop



Metallography

Related Consumables

Hot Mounting Resins

- Phenolic Resins : For General specimens. Black, Green , Red colors
- Conductive Resins : SEM or Electrolytic polishing specimens
- Transparent Acrylic Resin : Need to clarify which specimen in the Sample



Cold Mounting Resins

- Low percentage of contraction. Good adhesives with Material
- Acrylic Resin : Powder type and very fast curing time
- Polycoat : Cheap price and use when many mold required in short time



Grinder/Polisher FOBOS Series

Fobos Series is surface polisher of specimen for every material's structure observation and hardness measurement.



FOBOS - Series



FOBOS-100E
FOBOS-200E

Basic
Grinder/Polisher



FOBOS-100S+362S
FOBOS-200S

Standard
Grinder/Polisher



FOBOS-100F+362S
FOBOS-200F

Full-touch
Grinder/Polisher

MTDI Models

Model	FOBOS-E series	FOBOS-S series	FOBOS-F series
Dimension	1 Disc : 480mmW X 665mmD X 315mmH 2 Discs : 800mmW X 665mmD X 315mmH		1 Disc + Auto Head : 480mmW X 620mmD X 660mmH (Max.) 2 Discs + Auto Head : 800mmW X 620mmD X 660mmH (Max.)
Weight	1 Disc : 38kg 2 Discs : 68kg *Disc size 8" (Basic)		1 Disc + Auto Head : 69kg 2 Discs + Auto Head : 100kg *Disc size 12" (8" is not available with Auto Head)
Controls	Switich & Knob	3.1" LCD & Knob	5.6" Touch Screen
Motor	200W BLDC Motor	300W BLDC Motor	400W BLDC Motor
Disc Size	8"(200mm) Options (10" 12")	12"(305mm) Selectable (8" 10")	12"(305mm) Selectable (8" 10")
RPM	50 ~ 500 RPM		
Disc	3 points fixation. Hardened Anodizing Aluminum		
Function	<ul style="list-style-type: none"> · Rapid RPM control with Knob · Manual/Auto Water supply · Separate control of 2 discs and reverse spin direction · Specimen Storage 	<ul style="list-style-type: none"> · Input Spin speed and Up/Down graphical display · Buzzer · Auto Calibration (RPM) · Set Manual/Auto Water supply · Set time of Water supply On/Off · Set Polishing time (1 sec step) · Display accumulate time of use · FOBOS-300 Series (S,F) install available 	<ul style="list-style-type: none"> · Spin speed Display, Input, Up/Down · Spin direction change by button · Set auto Water supply · Set time of Water supply On/Off · Set Polishing time (1 sec step) · Display accumulate time of use · Setting data Save/Load · FOBOS-300 Series (S,F) install available

Grinder/Polisher / FOBOS-E Series

Fobos-E Series is Basic Grinder/Polisher for surface polishing of specimen for every material's structure observation and hardness measurement.

Feature

- ♦ Button type Switches (Power, Start/Stop, Water)
- ♦ DISC Spin Direction change
- ♦ Selectable Manual/Auto Water supply
- ♦ 3 points fixation. Hardened Anodizing Aluminum Disc
- ♦ 2 DISCs independent control
- ♦ Specimen Storage
- ♦ RPM control by Dial
- ♦ Valve for Water supply control
- ♦ Changeable Discs 8", 10", 12" (Basic 8")



Specification

Model	FOBOS-100E / 200E		
Type	Basic Grinder/Polisher	RPM	50 ~ 500 RPM (Analog)
Motor	200W BLDC Motor	Coolant	Solenoid Valve and Needle Valve
Power	AC 220V, Single Phase, 50~60Hz, 430W(1 Disc), 460W(2 Discs)		
Dimension	1 Disc : 480mmW X 620mmD X 220mmH 2 Discs: 800mmW X 620mmD X 220mmH		
Disc	8" (200mm) (Options 10", 12"), 3-point fixation, Hardened Anodizing Aluminum Disc		
Controls	Toggle Switches and Knob		
Functions	<ul style="list-style-type: none"> · Power, Direction, Coolant(On, Off, Auto), Start/Stop · Rapid speed control by Knob · Manual/Auto Water supply · Separate control of 2 Discs and reverse spin 		
Accessory	Coolant spread-prevention Ring, Sand Paper fixation Ring, Disc Cover		



Metallography

Grinder/Polisher / FOBOS-S Series

Fobos-S Series has digital controller for Motor's spin speed, spin direction change and coolant using. Larger disc helps user's convenient. FOBOS-300(Auto head) installation available and can connect Dosing System (TRITON).

Feature

- Touch Type Buttons (Power, Start/Stop, Water)
- Disc spin direction control and display on LCD
- Selectable Water and Dosing usage
- Auto Water Supply
- Connection available Dosing System (TRITON, FOBOS-300 installed)
- Simple speed control by Dial Knob
- Separate 2 Discs control
- Auto Calibration (RPM)
- Selectable 8", 10", 12" Discs
- Auto Head connection available



Specificalton

Model	FOBOS-100S / 200S		
Type	Standard Grinder/Polisher	RPM	50 ~ 500 RPM (Digital)
Motor	300W BLDC Motor	Cooling	Solenoid Valve and Needle Valve
Power	AC 220V, Single Phase, 50~60Hz, 430W(1 Disc), 460W(2 Disc)		
Dimension	1 Disc : 480mmW X 620mmD X 220mmH 2 Disc: 800mmW X 620mmD X 220mmH		
Disc	12" (300mm) (Selectable 8", 10"), 3-point fixation, Hardened Anodizing Aluminum Disc		
Controls	Digital Touch Switch Control, LCD Display		
Functions	<ul style="list-style-type: none"> • Spin speed number & graphic display, input available • Set Polishing time (1 sec step) • Display accumulate time of machine use 	<ul style="list-style-type: none"> • Set auto Water supply • Set Water auto supply On/Off time • Buzzer • Auto Calibratoin (RPM) 	
Accessory	Coolant Spread-prevention Ring, Sand paper Fixation Ring, Disc Cover		
Remark	Triton (Dosing System) connection, FOBOS-300 installation available		



Grinder/Polisher FOBOS-F Series

FOBOS-F Series used Touch Screen Control for improve convenience, visibility and control. Added Self Diagnostic Test, Speed Auto Calibration and Schedule functions.

Feature

- ♦ Self Test - Check Motor and Solenoid Valve status
- ♦ Schedule - Polishing time, RPM, Water or Dosing usage time
- ♦ Power, Start/Stop, Water Button Switches
- ♦ LCD screen On/Off, Sleep mode, MTDI Logo display mode
- ♦ Auto Calibration (RPM)
- ♦ Separate 2 Discs control
- ♦ Connection Dosing System (TRITON, FOBOS-300 installed)
- ♦ Selectable Water and Dosing usage
- ♦ Set Water and Dosing usage time (1 sec. step)
- ♦ Set operation time (1 sec. step)
- ♦ Display accumulate time of use
- ♦ Set tubg data Save/Load (Max 5)



Specification

Model	FOBOS-100F / 200F		
Type	Full-touch Grinder/Polisher	RPM	50 ~ 500 RPM (Digital)
Motor	400W BLDC Motor	Cooling	Solenoid Valve and Needle Valve
Power	AC 220V, Single Phase, 50~60Hz, 430W(1 Disc), 460W(2 Disc)		
Dimension	1 Disc : 480mmW X 620mmD X 220mmH 2 Disc: 800mmW X 620mmD X 220mmH		
Disc	12" (300mm) (Selectable 8", 10"), 3-point fixation, Hardened Anodizing Aluminum Disc		
Controls	5.6" TFT LCD Full Touch Screen Digital Controller		
Functions	<ul style="list-style-type: none"> · Spin speed number and graphic display · Spin direction change button · Set Polishing time (1 sec step) · Display accumulate time of use · Set auto Water supply · Set Water auto supply On/Off time · Setting data Save/Load (Max 5) · Schedule availalbe 		
Accessory	Coolant Spread-prevention Ring, Sand paper Fixation Ring, Disc Cover		
Remark	Triton (Dosing System) connection, FOBOS-300 installation available		



Metallography

Auto Head System / FOBOS-300

Grind or Polishing conduct by Auto head system.

There are 2 kinds of FOBOS-300 Series. 1st type used Pneumatic Cylinder to put load separately on each specimen (Individual type) and 2nd type put the force on the center of holder to put same load on every specimen (Center Force)

Feature

- Specimen Size (25 ~ 50mm_For 12" Disc)
- Put pressure by Air Cylinder and Proportional Control Valve
- Changeable Spin Direction (CW/CCW)
- Connection available with Dosing system (TRITON)
- Polishing time and speed set available for each step
- Auto move of Top and Bottom (Easy set specimen)
- Slow Start to protect specimen and machine
- Program available for Spin time, Load, Spin speed and direction

Auto Head Variation

Auto Module	
FOBOS-330F	Individual and Center Force (3Hole)
FOBOS-360F	Individual and Center Force (6Hole)
FOBOS-331S	Center Force (3Hole)
FOBOS-332S	Individual (3Hole)
FOBOS-361S	Center Force (6Hole)
FOBOS-362S	Individual (6Hole)

Specification

Model	FOBOS-300
Motor	80W BLDC Motor
Specimen Qty	3 ~ 6 ea (Selectable)
Holder size	25 ~ 38mm Selectable (40~50mm Option)
Load	Individual Force(0.3~4.5kgf) / Center Force(3~20kgf)
RPM	20 ~ 200 RPM (10 RPM step)
Set Polishing Time	0 ~ 99999 sec (1 sec step)
Controls	<ul style="list-style-type: none"> · Separate use for 1 or 2 channels · One-touch holder replacement type · Individual, Center Force selectable (only F model) · Put load by Pneumatic Cylinder



Dosing System / TRITON

Auto supplier for Diamond Suspension, Alumina Suspension, Lubricant.
Use and connect with FOBOS-300 available.

Total 4 channels separate control available and each channel's spray quantity controls by Speed valve.

Feature

- ◆ Store Suspension and Lubricant (Max 6)
- ◆ Each slurry supply together (Max 4)
- ◆ Set time of supply and rest
- ◆ Air compression for strong supply
- ◆ Spray quantity control
- ◆ Operate Polisher together (FOBOS-300 installed)
- ◆ High convenience for user



Specification

Model	TRITON
Dimension	390mmW X 630mmD X 230mmH
Weight	17kg
Power	AC 220V, Single Phase, 50~60Hz
Control	5.6" TFT LCD Full Touch Screen Digital Controller
Holes	80mm X 6Hole
Channels	4 Channels
Operation	Pneumatic, Solenoid Valve



Metallography

Option Parts



Specimen Mounting Fixture
(For Center Force Type)

- ◆ 1 specimen fixation / 2 specimens fixation
- ◆ One-touch fixation with Handle type
- ◆ Push bar control by specimen position
- ◆ Base size changeable by Holder size
- ◆ Self Alignment



Center Force Type Holder



Individual Type Holder

Related Consumables



SiC Paper
Plain-backed



SiC Paper
Adhesive-backed



Polishing Cloth
Adhesive-backed



Polishing Cloth
Metal-backed



Diamond Disc



Diamond Lapping Film



Alumina Powder



Alumina Suspension



Diamond Suspension
Water-based



Diamond Suspension
Oil-based



Diamond Compound



Diamond Spray



Lubricant



Colloidal Silica



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