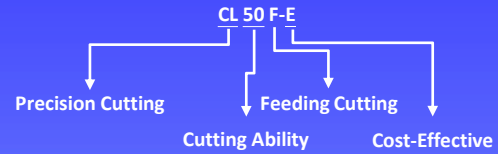


PRECISO-CL Series

Cost-Effective Cutting Machine

Feeding Cutting



CL50F-E

- Feeding cutting is stable and smooth
- The safety sensor on the top cover ensures operational safety
- The transparent acrylic top cover enhances viewing range
- The magnetic cleaning spray pipe improves cleaning convenience
- Equipped with an automatic rotating clamping vise set, capable of cutting samples up to \varnothing 80mm (option)

Perfect Surface. Always

Patent

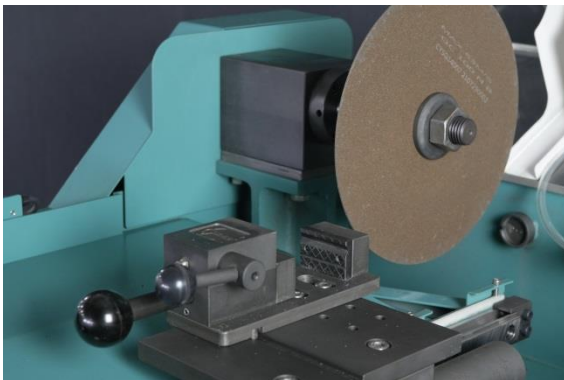
Introduction & Feature

Application: Aerospace Industry, Automotive Industry, Manufacturing Industry, Hand Tool Industry, and Research and Educational Institutions

Suitable for steel, iron, titanium, copper, aluminum, ceramics, spark plugs, sensors, gears, fasteners, hardware fittings, bearings, heat-treated samples, etc.

Feeding Cutting

Feeding cutting mode offers exceptional stability and smoothness throughout the cutting process, significantly enhancing cutting quality. It is widely applied in metallographic cutting of both hard and soft materials, ensuring the integrity and accuracy of samples.



Transparent Acrylic Top Cover

The transparent acrylic top cover not only provides excellent durability but also significantly enhances the user's field of view, making observation during operation more convenient. In addition, the acrylic material offers good impact resistance, ensuring safety and long-term stability during use.

Safety Sensor on the Top Cover

Equipped with intelligent detection functionality, the spindle will immediately stop rotating once the top cover is opened, effectively preventing accidents and ensuring operator safety. This design not only enhances equipment safety but also complies with various industrial safety standards. It is an important mechanism for safeguarding daily operations, reducing risks associated with human error.

Magnetic Cleaning Spray Pipe

The magnetic design significantly enhances the convenience and flexibility of cleaning process. With magnetic design, users can easily adjust and position the spray pipe, preventing interference with the cutting process. This design effectively reduces conflicts between cleaning and operation, improving the workflow and efficiency.



Introduction & Feature

Diverse Vise Applications

Users can flexibly select or customize the appropriate vise based on the size, shape, and cutting requirements of the sample, ensuring stable clamping and operational stability during the cutting process.

Emergency Stop

It allows users to stop the machine immediately in an emergency, effectively preventing accidents. The button is positioned noticeably and is easy to operate, ensuring that users can react quickly to reduce the risk of incidents.



Ammeter

Effectively monitors current changes during the cutting process, providing instant feedback to the operator to ensure stability and safety. Significant current variations indicate increased cutting resistance or abnormal situations, suggesting to slow down the cutting speed to avoid overloading, which could damage the equipment or affect cutting quality.

External Cooling Circulation Tank

Provides continuous coolant supply during the cutting process, effectively reducing the temperature of both the sample and the blade, ensuring stable cutting quality. Additionally, the use of coolant prevents deformation or damage caused by overheating and avoids rusting of machine castings from prolonged water exposure.



Introduction & Feature

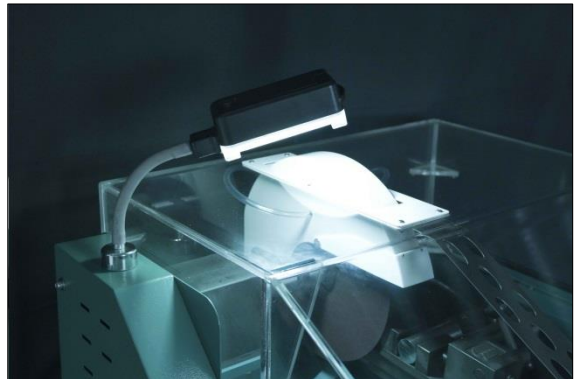
Electromagnetic Lock Acrylic Safety Cover (Option)

Automatically locks the top cover during the cutting process to ensure operational safety. This design prevents accidental opening of the top cover during cutting, avoiding operator contact with the high-speed cut-off wheel and effectively reducing risks in the workspace. The electromagnetic lock mechanism only releases automatically after the cutting process is completed, further enhancing safety.



Magnetic Rechargeable LED Light (Option)

The magnetic LED light can be easily attached to the machine, providing auxiliary lighting to help users clearly observe the cutting process, enhancing operational accuracy and safety. The light angle can be flexibly adjusted to meet different samples and environmental requirements. The machine has a reserved socket hole for charging at any time, ensuring long-term stable use.



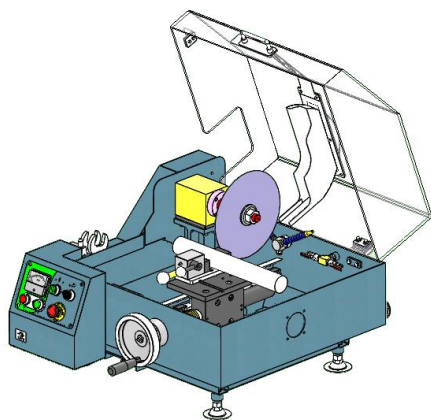
Automatic rotating clamping vise set (option)

Equipped with its independent charging module, eliminating the interference of power cables and wires, making the workspace cleaner. Combined with a feeding cutting platform, it supports a maximum cutting diameter of $\varnothing 80\text{mm}$, suitable for various cutting requirements.

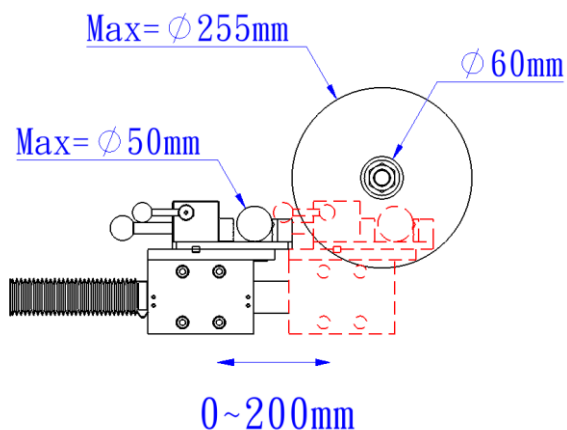


Specification

Model	CL50F-E
Travel Distance (mm)	200 ↙ ↗
Motor Power (W)	1500
Cutting Capacity	Max Ø50mm (CLM50A12J-B Quick Clamping Vise)
	Max Ø80mm (Option) (CL6508G-A Automatic Rotating Clamping Vise Set)
Cut-off Wheel (mm)	Ø255 (10")
Arbor Diameter (mm)	Ø31.75mm, special arbor diameter can be customized
Flange (mm)	Ø60
Rotational Speed (rpm)	3000(60Hz) / 2500(50Hz)
Cooling Pump	1/8HP 3Ø
Coolant Tank Capacity (L)	50
Coolant Tank Dimension WxDxH (mm)	370 x 550 x 600
Coolant Tank Weight (kg)	40
Machine Dimension WxDxH (mm)	700 x 838 x 525
Machine Weight (kg)	127
Power Supply	AC220V/ 380V 3Ø (Special voltage can be customized)
Accessories	Wrench 2 pcs, Cut-off Wheel 2 pcs, Cutting Coolant 3L
Damage or malfunction caused by not using the original manufacturer's cutting coolant will not be covered under the warranty.	



Feeding Cutting



Vise Application



Feeding Cutting

Suitable for small and thin samples, such as screws, plastic, aluminum, and copper.

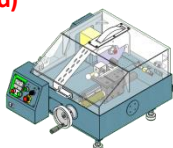
☐ Mode Configuration (Standard)

Feeding cutting

Specification

Blade size : 10" (Ø255mm)

Travel distance : 0~200 (mm)

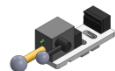


☐ Quick clamping vise (Standard)

CLM50A12J-B Quick clamping vise

Max. sample : Ø50mm

Max. sample length: 470mm



☐ Automatic rotating clamping vise set (Option)

CL6508G Screws clamping

CL6508G-A Three-jaw clamping

Max. blade size : 10" (Ø254 mm)

Max sample: Ø80mm



Other Accessories

☐ Electromagnetic lock acrylic safety cover (Option)

CL6512B Electromagnetic lock acrylic safety cover

Voltage: DC24V

Suction force: 500N



☐ Magnetic rechargeable LED light (Option)

CL6512A Magnetic rechargeable LED light

Voltage: DC5V

Watt: 30W

Accessories: Rechargeable battery 2pcs,

USB charging cable 1pc



Adapter and Other Clamping Vise Kits (Option)

☐ Adapter (Option)

CLM50A17-C Adapter set

(Includes tear-drop clamping vise kits A & B)

- Tear-drop clamping vise kit A

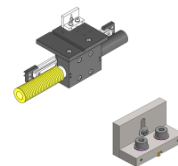
Sample: Ø5~40mm

Max. length: 470mm

- Tear-drop clamping vise kit B

Sample: Ø15~50mm

Max. length: 470mm



☐ CZ23 Screw fastening vises (Option)

Additional purchase of CLM50A17-C adapter set required.

CZ23A Mechanical screw jig

CZ23B Pipe fitting jig

CZ23C Self-tapping screw jig

Please refer to attachment 1 for detailed specification

☐ All clamping vise for CL40 、CL50 series (Option)

Additional purchase of CLM50A17-C adapter set required.

CL40044A Single clamping vise kit

CL400051A Irregular shape vise kit

CL40052-L Single clamping vise kit

CL400053 Round and elliptic vise kit

CL400054A Fragile vise kit

CL40070-D Double clamping vise kit

CL500505A Irregular shape vise kit

CL500506 Round and elliptic vise kit

CL500507 Fragile vise kit

CL500509 Double clamping vise kit

CL50051001A Round vise kit

CL50051002A Round vise kit

CL50051101 Tear drop vise kit

CL50051102A Tear drop vise kit

CL500512 Biological medicine vise kit

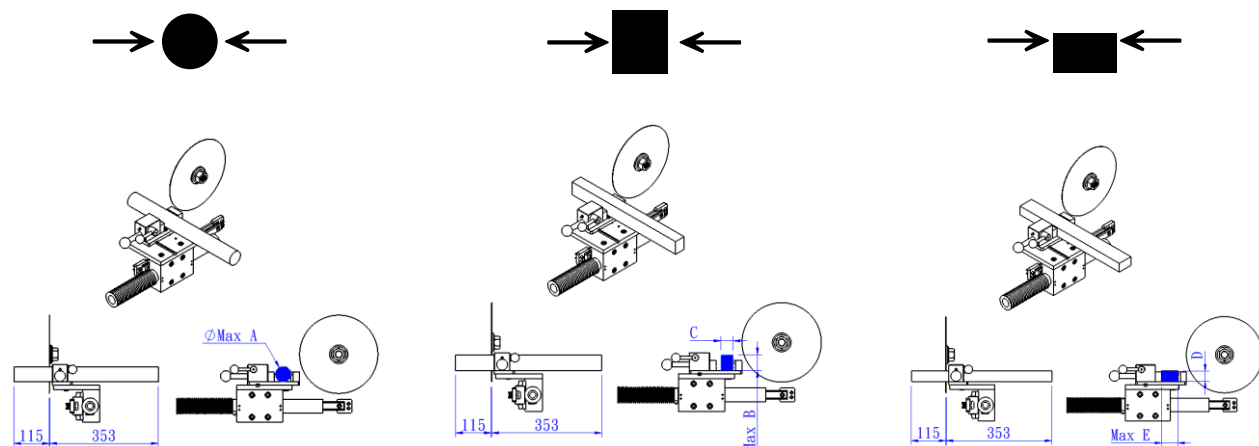
CL500513 Screws vise kit




CL500514 Double clamping vise kit (Slice in half)

CL500303A Long type single clamping vise kit

Please refer to attachment 2 for detailed specification

Quick Clamping Vise



Model						
	A(mm)	A cutting area (mm ²)	B(mm)	B*C	E(mm)	E*D
CL50R-E	Ø50	1962.5	50	50*39.3	55	55*35.7

Square area surface calculation method:

The maximum height is B, the maximum width is E. $B \times C$ or $E \times D \leq A$ surface area.

Material application: Alloy tool steel SKS, SKD, SKT, SUP as heat treatment mechanical metal components, ordinary carbon steel, mechanical structure steel S-C series, tool steel SK series, and soft steel SS series.

Surface area can be cut in according to its degree of heat treatment

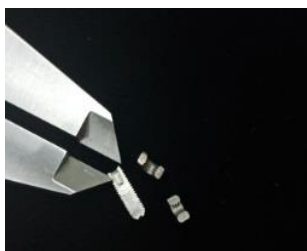
When the hardness after heat treatment is over HRC60 with a depth of over 3mm, only 75% of area A can be cut.



Attachment 1- Mechanical Screw Jig

Option

Model	CZ23A					
Specification	Four pieces per set (two pcs metric, two pcs imperial)					
Fastening Method	1. Vise kit adaptor for screw fastening (CLM50A17-C)					
	2. Screw fastening					
	3. Vise clamping					
Thread Angle	Metric (M): 60 degrees					
	Imperial (W): 55 degrees (Whitworth thread)					
Specification						
Metric Coarse Thread (Outer Diameter x Pitch)	CZ23A01A	M3x0.5	M4x0.7	M5x0.8	M6x1.0	M8x1.25
	CZ23A01B	M10x1.5	M12x1.75	M14x2.0	M16x2.0	



Imperial Coarse Thread (Outer Diameter - Threads per Inch)	CZ23A02A	W1/8"-40	W5/32"-32	W3/16"-24	W1/4"-20	W5/16"-18
	CZ23A02B	W3/8"-16	W1/2"-12	W9/16"-12	W5/8"-11	



Other Screws	CAP Screw	Hexagon	Truss Head	Round Head	Flat Head
	Set Screw	Wing Both	Eye Bolt	Nut	



Attachment 1- Pipe Fitting Jig

Option

Model	CZ23B			
Specification	Four pieces per set (two pcs straight pipes , two pcs taper pipes)			
Fastening Method	1. Vise kit adaptor for screw fastening (CLM50A17-C)			
	2. Screw fastening			
	3. Vise clamping			
Thread Angle	Straight pipe (PS): 55 degrees, PF and G threads are interchangeable.			
	Tapered pipe (PT): 55 degrees, Taper 1:12			
Specification				
Pipe Fitting (PT) (Outer Diameter - Threads per Inch)	CZ23B01A	PT 1/16"-28	PT 1/8"-28	PT 1/4"-19
	CZ23B01B	PT 3/8"-19	PT 1/2"-14	



Pipe Fitting (PS) (Outer Diameter - Threads per Inch)	CZ23B02A	PS 1/16"-28	PS 1/8"-28	PS 1/4"-19
	CZ23B02B	PS 3/8"-19	PS 1/2"-14	



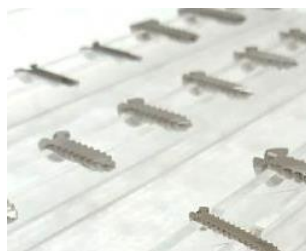
Other Pipe Fittings	Barb Connector	Quick Coupler	Adapter
	Elbow Connector	Bushing Fitting	T Joint



Attachment 1- Self Tapping Screw Jig

Option

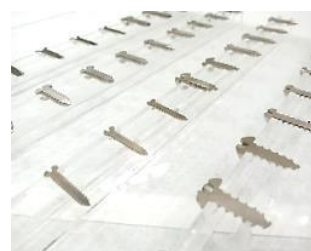
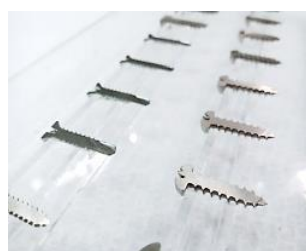
Model	CZ23C				
Specification	Two pieces per set (one pc self tapping and one pc self drilling)				
Fastening Method	1. Vise kit adaptor for screw fastening (CLM50A17-C)				
	2. Screw fastening				
	3. Vise clamping				
Specification					
Self Tapping	CZ23C01A	1/8"	5/32"	3/16"	1/4"



Self Drilling	CZ23C02A	6#	8#	10#	12#
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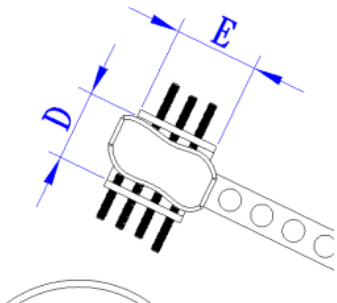
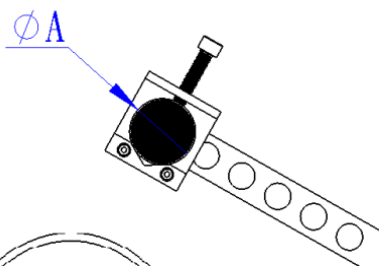
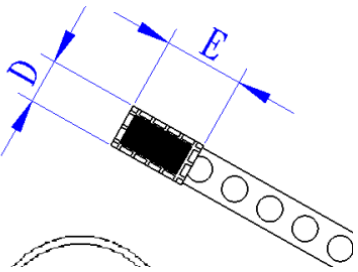






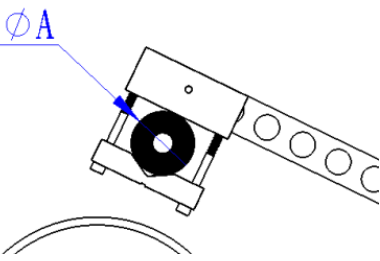
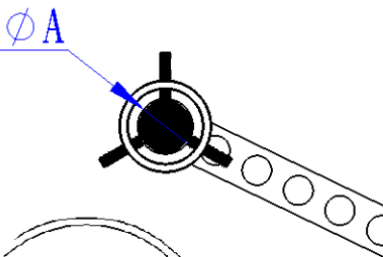


Other Self Tapping Screws	Truss Head	Round Head	Flat Head	Flange Head
	Thread cutting	Other Self Drilling	Wood Screw	



Attachment 2- Vise Kit

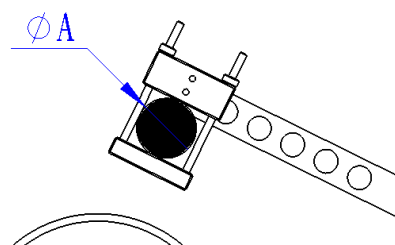
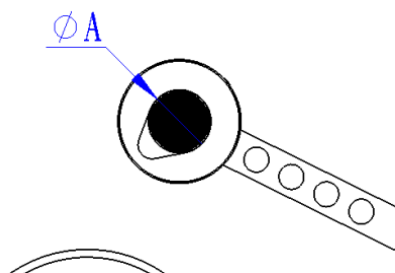
Option

CL500505A Irregular shape vise kit		CL500506 Round and elliptic vise kit		CL500507 Fragile vise kit	
 ↙	 ↙	 ↙	 ↙	 ↙	 ↙
A (mm)	E x D (mm)	A (mm)	E x D (mm)	A (mm)	E x D (mm)
-	60x50	Max.40	50x35	-	50x28
					
CL500509 Double clamping vise kit		CL50051001A Round vise kit (Ø32)		CL50051002A Round vise kit (Ø40)	
 ↙	 ↙	 ↙	 ↙	 ↙	 ↙
A (mm)	E x D (mm)	A (mm)	E x D (mm)	A (mm)	E x D (mm)
Max.50	50x35	Max.32	-	Max.40	-
					

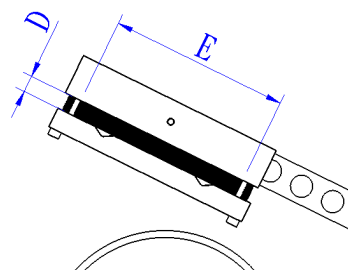
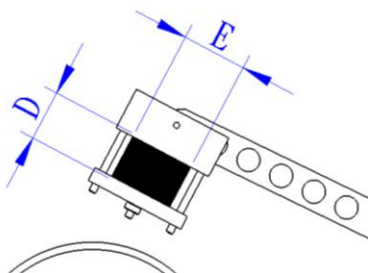
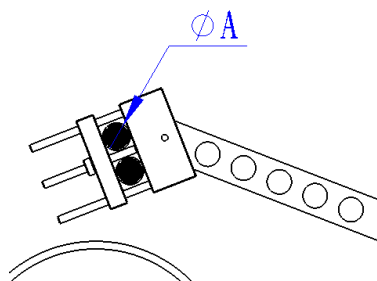
Attachment 2- Vise Kit

Option

CL50051101A Tear drop vise kit		CL50051102A Tear drop vise kit		CL500512 Biological medicine vise kit	
● ↙	■ ↙	● ↙	■ ↙	● ↙	■ ↙
A (mm)	E x D (mm)	A (mm)	E x D (mm)	A (mm)	E x D (mm)
5~20	-	18~40	-	Max.40	40x30







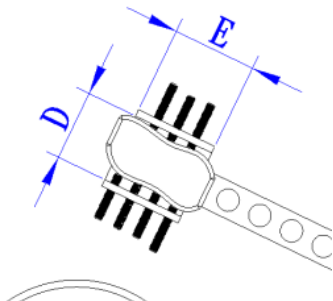
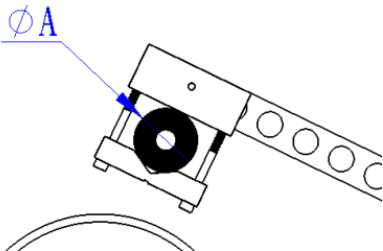
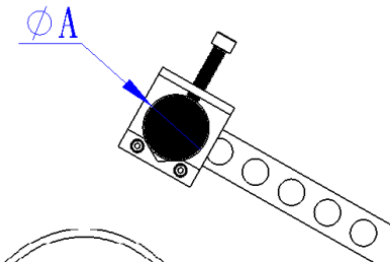






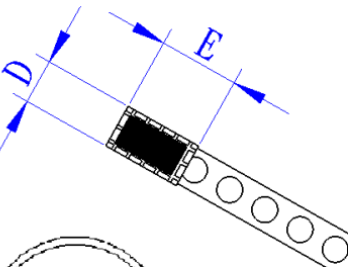
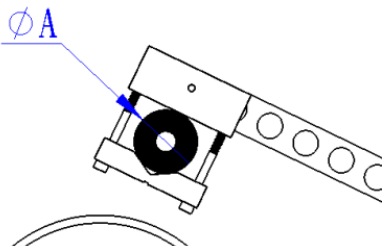
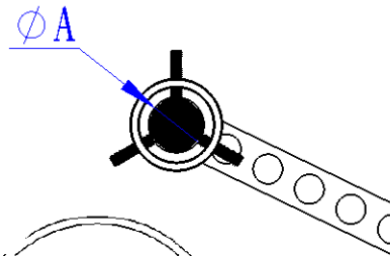


CL500513 Screws vise kit		CL500514 Double clamping vise kit (Slice in half)		CL500303A Long type single clamping vise kit	
● ↙	■ ↙	● ↙	■ ↙	● ↙	■ ↙
A (mm)	E x D (mm)	A (mm)	E x D (mm)	A (mm)	E x D (mm)
Max.18	-	-	45x35x3T	-	130*12



Attachment 2- Vise Kit

Option

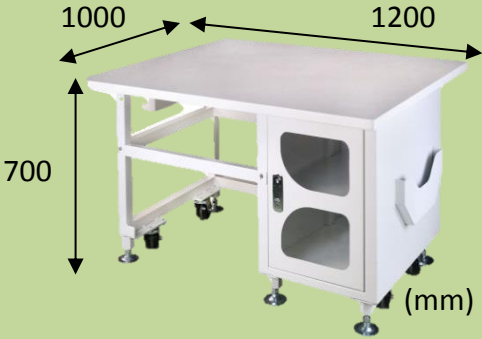
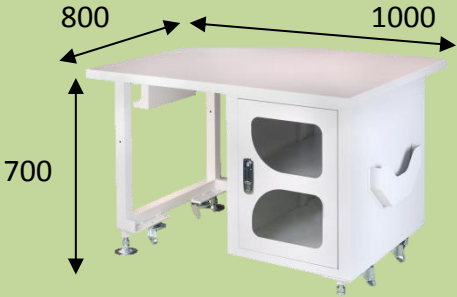
CL400051A Irregular shape vise kit		CL400052-L Single clamping vise kit ($\varnothing 20$)		CL400053 Round and elliptic vise kit	
					
A (mm)	E x D (mm)	A (mm)	E x D (mm)	A (mm)	E x D (mm)
-	38x25	Max. 20	20x30	Max. 14	38x10
					
CL400054A Fragile vise kit		CL400070-D Double clamping vise kit		CL50051001A Round vise kit	
					
A (mm)	E x D (mm)	A (mm)	E x D (mm)	A (mm)	E x D (mm)
-	50x28	Max. 20	20x30	Max. 32	-
					

Metallographic Workbench (Option)



Model	TF01	TF02
Dimension (W*D*H)	1000*800*700 mm	1200*1000*700 mm

Picture



Consumables

Cut-off Wheel

The most common used cut-off wheel in the metallographic industry. Significantly affect the cutting efficiency and wear rate based on the material, grain size, grain density, bonding method, and etc.

For heat treated steel-alloy tool steel

SKS, SKD, SKT, SK3, SUP, S45C, SCM415, SNCM439

HV495~710 (HRC50~60)

Order No.	Size	Dia. x Arbor x T(mm)	Packing
S02A0202	10"	Ø254xØ31.75x1.2	10



For hard heat treated steel

Special Alloy Steel, SKD, SKH, SKS3, SCM415, SACM, SNCM439

HV670 ~ 780 (HRC58 ~ 64)

Order No.	Size	Dia. x Arbor x T(mm)	Packing
S02C0202	10"	Ø254xØ31.75x1.2	10

For bakelite, plastic, resin, mounting specimen, sapphire, tungsten steel, aluminum, copper, glass, and ceramics (aluminum oxide ceramics, zirconium oxide ceramics)

Order No.	Size	Dia. x Arbor x T(mm)	Packing
S02F0202	10"	Ø254xØ31.75x1.2	10

(Customization cut-off wheel is available.)

Cutting Coolant



Order No.	Cutting Coolant	Packing(1L/BTL)
S01001	Oil-based – emulsion (Blue cap)	20
S01002	Oil-based – emulsion (Blue cap)	1

Top Tech distributors



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Agent

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