

シムナイフ SYM Knife®

Diamond knives for ultramicrotome



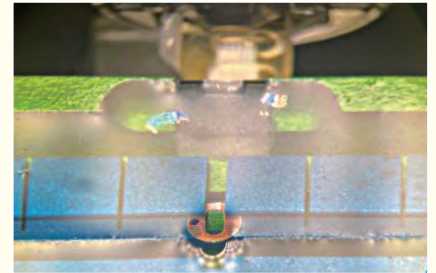
Ahead of your research by uniqueness



Our Unique Products



Grid Holding Plate / Stress-free collecting sections



This product is technical aid, because it will make easier to collect ultra-thin sections for TEM observation.

- ◆ Grid can be placed and one hand is free.
- ◆ Can be used by adjusting the height wherever you want.
- ◆ Ergonomically designed the groove angle to insert and remove grids. Sections without wrinkles and tearing will be put on center of grids. You will reduce your fatigue and stress with this unique plate.

Patent pending (PATPEND)



Movie is here

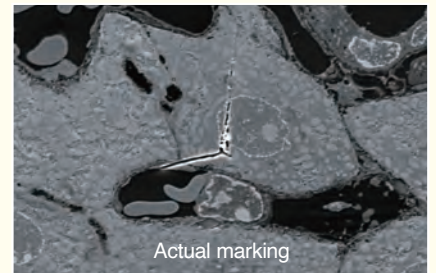
GHP / Grid Holding Plate

Item No.

GHP01A

Marking Needle for serial sections

- Capable to distinguish positions or turns of sections -



Actual marking

This special needle is developed for serial sections collecting (array tomography). When you get many sections at the same time sometimes it is difficult to collect sections in the order. Once ribbons are broken by accident, sections are separated into different directions. Once you use this needle you will never get lost. You can construct the appearance of the sample itself by those marks.

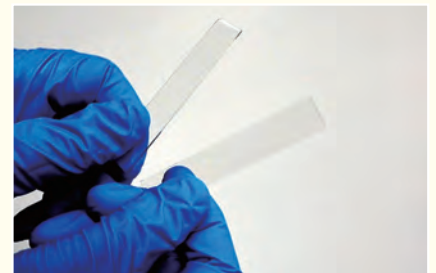
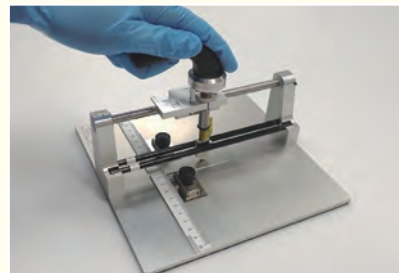
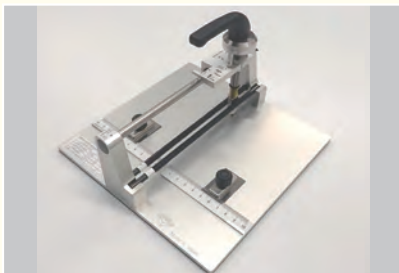
Marking Needle

Item No.

SYM NT1

KARATE Groover

Great repeatability possible to cut plates same size any number



Cut your plates on your favorite size again and again.

- ◆ Simply adjust the pressure on the glass and the height of the blade.
 - ◆ Able to cut any number of glass, sapphire, silicon, etc. in the same size
 - ◆ Anyone from beginners to experts can easily cut with reproducibility
- A magnet for fixing the position is included, so the sample will not shift.



Movie is here

KARATE GROOVER

Item No.

OPT MH1

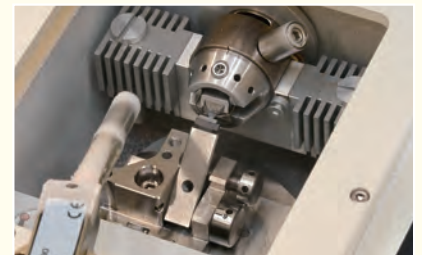
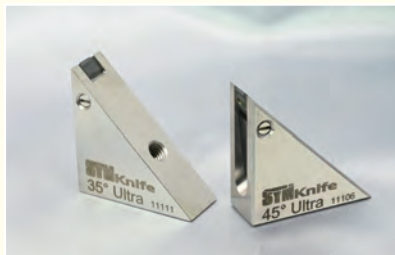
Features of our knives

- 1 100% Japan made Diamond Knives
- 2 Many unique products not found in other manufacturers, improving your cutting performance
- 3 Available in different colors to distinguish different knives' body colors
- 4 Adopts stable product grade (artificial) diamonds ideal for sectioning that combines superior quality
- 5 Solvent-resistant epoxy sealing material is used (excluding several knives)
- 6 Hydrophilic treatment from the beginning (except Dry type and Trimming Knives)

"We craft all our knives are based on customers feedback or requests, so your desire may become new type of knife"



Cryo Knife



A diamond knife for cryosection preparation used under frozen conditions.

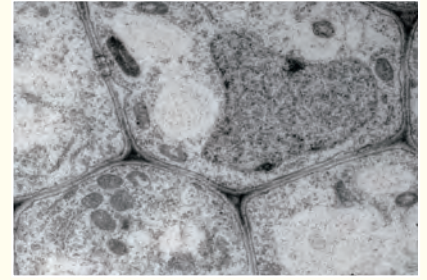
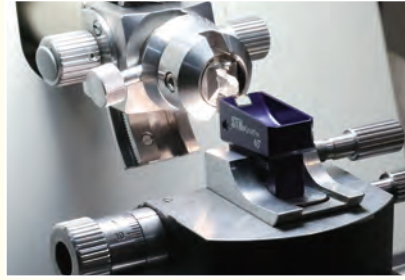
It is possible to cut samples that are difficult to cut at room temperature, such as hair, rubbers and fibers. Since the material body was selected to support thermal deformation due to temperature changes, it is designed to withstand sudden Tg (glas- transition temperature). You will use our cryo knives for a wide variety of samples' cutting. If you use the cryo dry knife, sometimes it may be difficult to collect sections depending on the sample.

Syntek has been developing a special holder for a knife that is placing sections on the grid. If it use this, it is expected that the stress at the time of collection will be greatly reduced.

Cryo Wet & Dry (Silver)

Item No.	Angle	Width
SYM2035W	35°	2.0mm
SYM2045W	45°	2.0mm
SYM2545W	45°	2.5mm
SYM3045W	45°	3.0mm
SYM2035D	35°	2.0mm
SYM2045D	45°	2.0mm
SYM2545D	45°	2.5mm
SYM3045D	45°	3.0mm

Ultra Knife / For ultra-thin sections 30nm to 200nm



This ultra knife for preparing ultra-thin specimens required for TEM observation not only biological samples but also materials.

This ultra has the quality to last long.

You will get enormous sections on a cutting point especially organic systems (cells, tissue, etc.) without changing the film thickness.

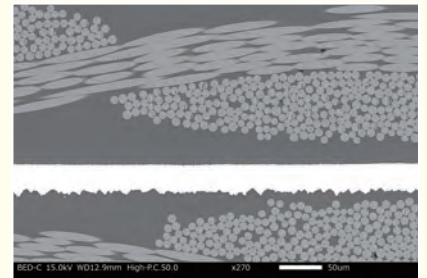
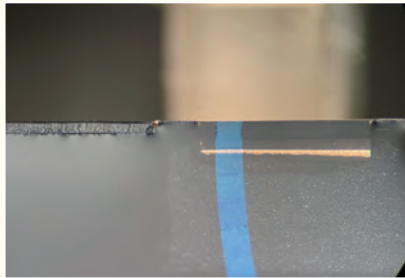
You use it longer than you expected.

Ultra Wet (indigo blue)

Item No.	Angle	Width
SYM2035	35°	2.0mm
SYM2045	45°	2.0mm
SYM2545	45°	2.5mm
SYM3045	45°	3.0mm

Histo Knife

For semi-thin sections 200nm to 2µm and cross-section surface



This Histo knife is suitable for cutting hard materials such as polymer, metals or meteoric stones.

We have normal 45° blade, however we dare to make the edge angle 5° wider as 50° and devising a finishing method, the durability capacity is improved a lot. The perfect knife for material science, especially hard samples.

This knife is also very useful when you would like to get clear surface of samples.

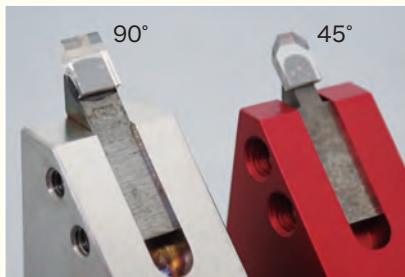
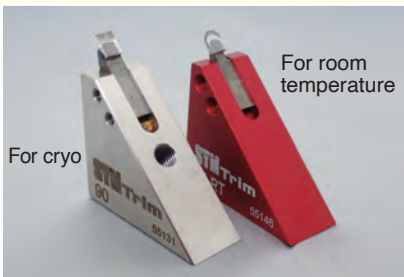
Histo Wet (ebony)

Item No.	Angle	Width
SYM3045H	45°	3.0mm
SYM3050H	50°	3.0mm
SYM6045H	45°	6.0mm
SYM6050H	50°	6.0mm

Histo Dry (silver)

SYM3045HD	45°	3.0mm
SYM3050HD	50°	3.0mm
SYM6045HD	45°	6.0mm
SYM6050HD	50°	6.0mm

Trimming Knife



Diamond knife for finish trimming of blocks. In order to make better sections (especially ribbons) the block needs to be nicely finished.

With this trim, even inexperienced users can create beautiful blocks.

As a result of applying our own special processing to the edge of the blade, the blade itself is strong and can be used not only for trimming, but also for creating a beautiful cross-section both soft and hard samples.

Room temperature type (crimson)

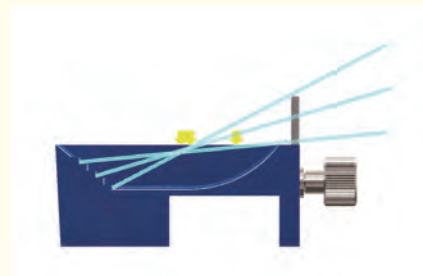
Item No.	Angle	Width
SYM2545TM	45°	2.5mm
SYM2590TM	90°	

Cryo type (silver)

SYM2545TMC	45°	2.5mm
SYM2590TMC	90°	

SYM JUMBO Ultra and Histo

Hold your plate securely and arrange its angle



Our Jumbo has steps, height-adjust and deeper boat.

- ◆ With a staircase mechanism not found in other companies
- ◆ The water surface is less likely to sway, improving stability
- ◆ It is possible to hold the slide glass etc. at the desired angle

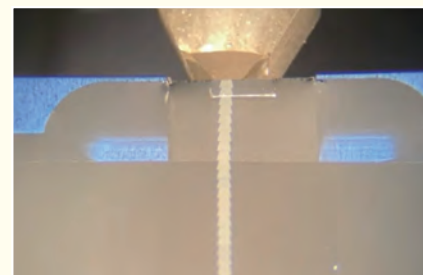
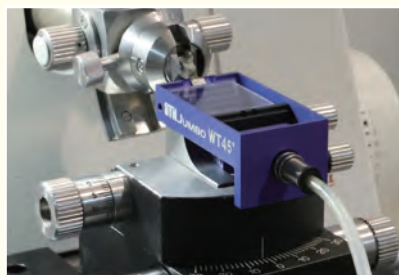
Using wafers also allows you to collect more sections at once.

You can set your plate as preferred angles and it doesn't move anymore.

Design right No. 1644158

SYM JUMBO WT Ultra and Histo

Water removal knife for 3D constructions



In addition to the features of SYM JUMBO, this product has enhanced functions for collecting serial sections and for array tomography.

You will collect serial sections beautifully by this WT.

- ◆ Can be mounted on all ultramicrotome with drainage mechanism
- ◆ Drainage can be done at any speed as you like
- ◆ No need to draw water with a syringe anymore

This is an ideal knife for serial sectioning you have ever seen.

Design right No. 1678139 / Patent No. 7015077



Movie is here

Jumbo / Ultra wet (azure)

Item No.	Angle	Width
SYM2035J	35°	2.0mm
SYM2045J	45°	2.0mm
SYM3045J	45°	3.0mm

Jumbo / Histo wet (ebony)

SYM3045HJ	45°	3.0mm
SYM3050HJ	50°	3.0mm
SYM6045HJ	45°	6.0mm
SYM6050HJ	50°	6.0mm

Jumbo WT / Ultra wet (azure)

Item No.	Angle	Width
SYM2035WT	35°	2.0mm
SYM2045WT	45°	2.0mm
SYM3045WT	45°	3.0mm

Jumbo WT / Histo wet (evony)

SYM3045HWT	45°	3.0mm
SYM3050HWT	50°	3.0mm
SYM6045HWT	45°	6.0mm
SYM6050HWT	50°	6.0mm

MGH (Multi Grid Holder) / Set your grids in a boat from the beginning



Equipped with 4 grooves where grids can be installed on the boat.

- ◆ Can be operated with only one hand
- ◆ Achieves wrinkle-free and unbreakable recovery work
- ◆ Easy to collect by scoop-up method

The direction of the mesh type mesh and the section can be easily matched, excellent reproducibility of collecting sections.

Patent No. 7103884

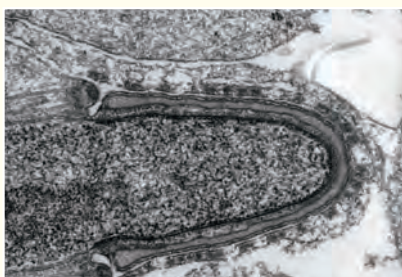


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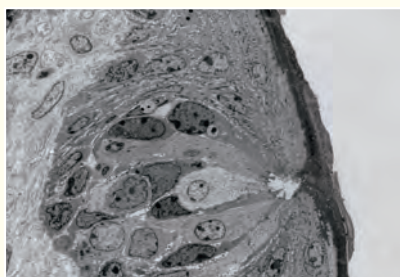
MGH / Ultra wet (ultramarine)

Item No.	Angle	Width
MGH2035	35°	2.0mm
MGH2045	45°	2.0mm
MGH2545	45°	2.5mm
MGH3045	45°	3.0mm

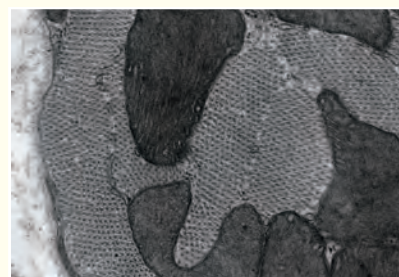
TEM · SEM Observation photo collection



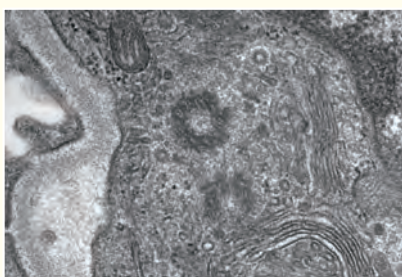
Testis of mouse x 1K
Photo by NCGM



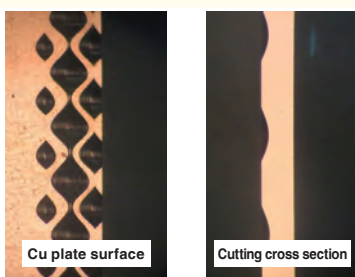
Tongue of mouse x 1K
Photo by NCGM



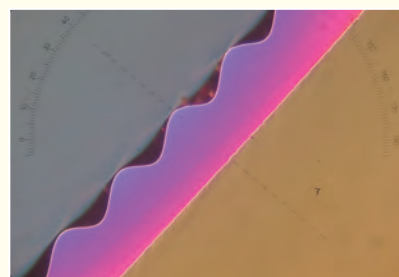
Myocardium of mouse
Photo by NCGM



Kidney of mouse x 40K
Photo by NCGM



Material system of LM image
Copper plate by Histo



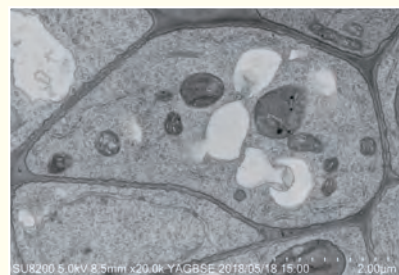
Material system image
Chrom plating by SEM

*The appearance and specifications may be partially changed for improvement.

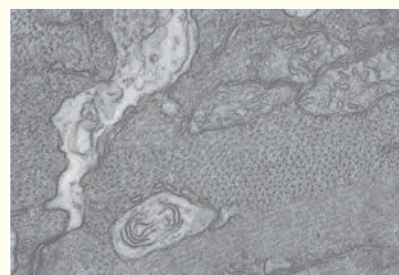


Access

From Tokyo railway station: 45 minutes by train. 30 minutes by car. / Approximately 26 km (16 miles)
 From Tokyo Haneda airport: 30 minutes by train. 15 minutes by car. / Approximately 12 km (7.5 miles)
 From Tokyo Narita airport: 2 hours by train. 80 minutes by car. / Approximately 90 km (56 miles)



Arabidopsis root x 20K
by SEM



Zebrafish (Danio rerio)
by TEM



SYNTEK CO., LTD.

Leading Venture Plaza 2-403 75-1 ONOCHO, TSURUMI-KU,
 YOKOHAMA-SHI, 230-0046 JAPAN
 PHONE +81-(0)45-500-6603
<https://www.syntek.co.jp/en/>

