



slee solutions
for
pathology

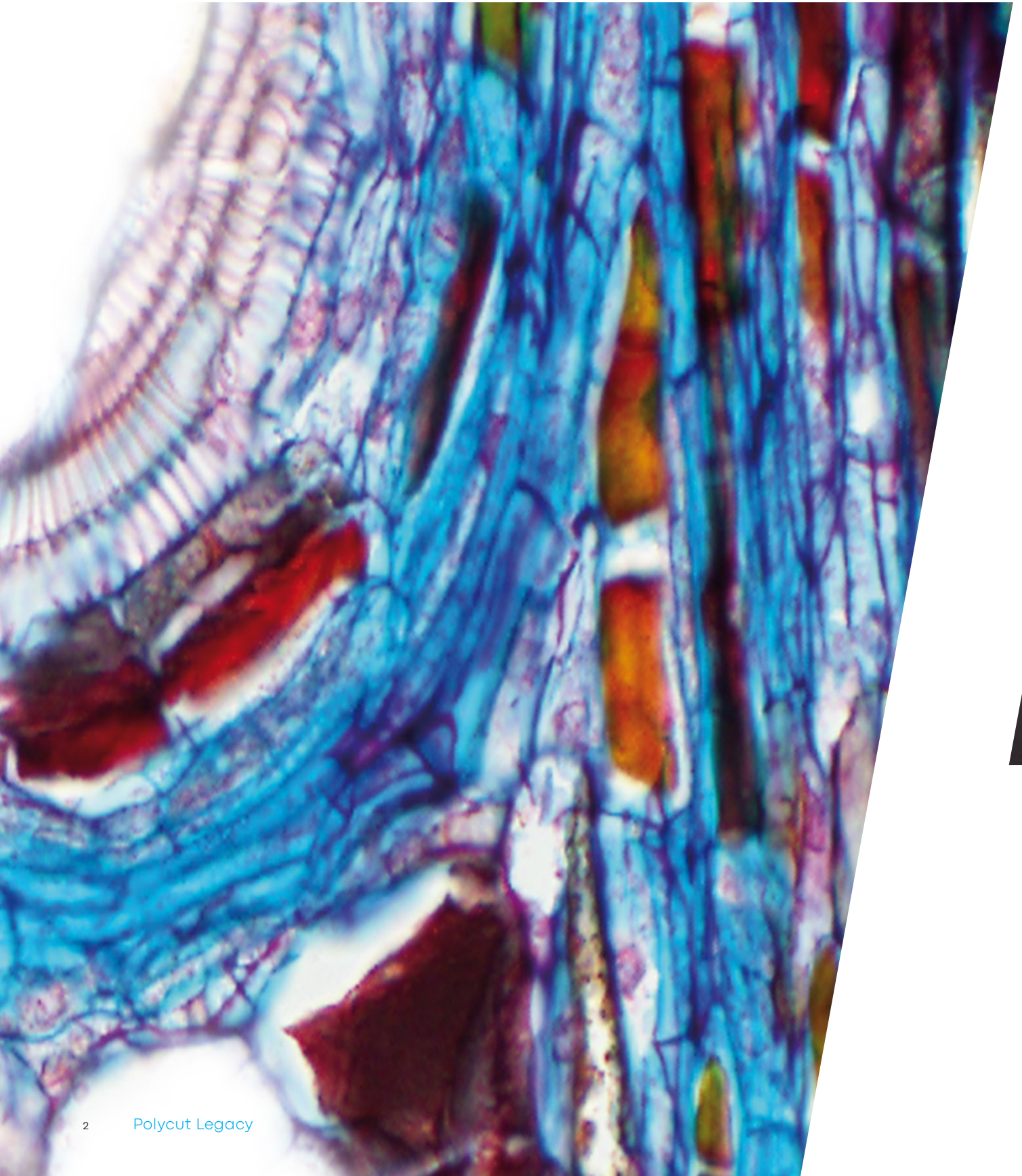
Polycut Legacy

HEAVY DUTY MICROTOME

DESIGN &
MANUFACTURING
MADE IN GERMANY

Polycut Legacy

The Gold standard in microtomy for histology life sciences and material sciences is redefined!





Polycut Legacy
Heavy duty microtome

Polycut Legacy

Heavy duty microtome

Made of metal.

Made for eternity.

Made in Germany.



Polycut Legacy

Highlights

- High section thickness range
- Huge specimen size
- 4 motorized sectioning modes
- Control panel
- Control unit
- Foot switch (optional)
- Second screen
- Professional photo-position

Item No.

Polycut Legacy, 50/60 Hz

upon request

Specifications microtome

Section thickness range	0 - 1,000 µm, adjustable in 1-µm-steps
Total horizontal specimen stroke	max. 275 mm
Total vertical knife feed	max. 70 mm
Knife retraction (during specimen return stroke)	0 - 1,000 µm, adjustable
Clearance angle adjustment	0° - 17°
Knife declination (declination blocks = optional equipment)	45°
Maximum specimen size (W x D x H)	250 x 200 x 70 mm
Specimen orientation (along x / y axis)	5°
Specimen orientation (rotation)	approx. +/- 3 and 90°
Sectioning speed	1 - 125 mm/s, adjustable in 1-mm-steps
Return speed	1 - 125 mm/s, adjustable in 1-mm-steps
Manual knife movement (slow / fast)	37 mm/s and 74 mm/s
Manual specimen movement (slow / fast)	37 mm/s and 74 mm/s

Specifications microtome

Four motorized sectioning modes	Single, Continuous, Interval and Multi (selectable either to be used via the control panel or the foot switch)
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Electrical connections

Nominal voltage	110 - 240 V
Nominal frequency	50 Hz - 60 Hz
Ampacity	4 A at 230 - 240 V / 10 A at 100 - 120 V
Maximum power draw	max. 900 VA
Protective class	I
Overvoltage category	II

Dimensions and weights

Microtome (W x D x H)	380 x 815 x 380 mm
Control unit (W x D x H)	340 x 290 x 180 mm
Required space for operating the machine	1,000 x 950 mm
Microtome	approx. 80 kg
Control panel	approx. 10 kg
Technical specifications subject to change.	

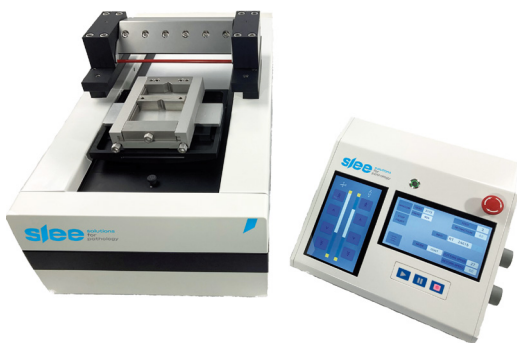
Overview

Knife holders, clamps & paraffin tables

Knife holders

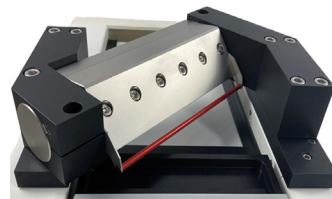
Knife holder KH-P

for parallel-sided full tungsten carbide knives



Knife holder KH-P 45

with declination blocks for long pulling cuts at 45° to section even the hardest materials



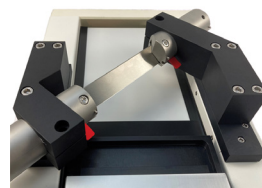
Knife holder KH-S

for all standard knives or like seen in this picture with our insert D-I for all disposable low profile blades up to 22 cm width



Knife holder KH-S 45

for all standard knives with 45° declination blocks for more tricky paraffin sections



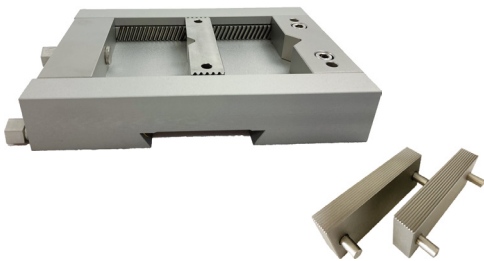
A wide range of equipment supports you in the application.

Clamps & paraffin tables

Basic clamp with vise

for specimen up to 80 x 100 mm with top jaws for high specimen

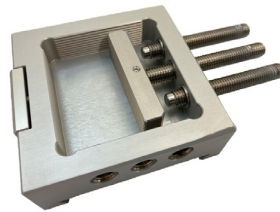
- equipped with V-inserts for round specimen for different diameters
- it is the base to clamp all paraffin tables
- lateral movement to benefit from the whole width of the knife
- x/y-orientation in every direction



Object clamp

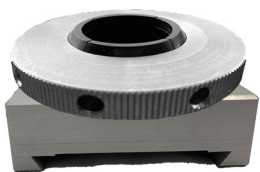
for specimen up to 44 x 58 mm

- lateral movement to benefit from the whole width of the knife
- x/y-orientation in every direction



Round clamp

with inserts for 6, 15 and 25 mm



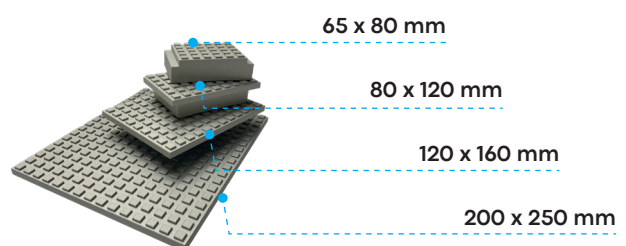
Insert D-TC

for the Knife holder KH-P to clamp disposable tungsten carbide knives up to a width of 8 cm



Paraffin tables

65 x 80 mm, 80 x 120 mm, 120 x 160 mm, 200 x 250 mm



Control unit

Everything at a glance on the control unit.



Fast alignment of the specimen to the knife with the dedicated touch screen for knife / sledge movements

Everything at a glance on the second screen

Highlights

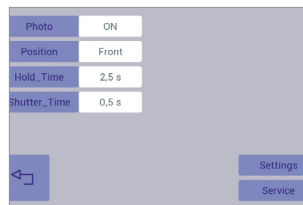
- Everything at a glance on the control unit
- Illuminated buttons for Start, Pause and Stop that symbolize the actual state in the sectioning process
- Dedicated turnbutton for the sectioning feed for a quick change of values
- Dedicated turnbutton to change the sectioning speed
- Big emergency-stop button for your safety

Second screen

- Sectioning window
- Stop-position as selected
- Sectioning feed
- Retraction feed
- Cutting speed
- Return speed
- Sectioning modes: Single, Continuous, Interval or Multi Cuts (with a preselected amount of sections)



Professional photo-position



Acquire microscope pictures or surface photographs of oversectioned specimen by mounting some optional equipment on top. Plug-in a 6.3 mm jackplug and control it through the software.

Optional foot switch



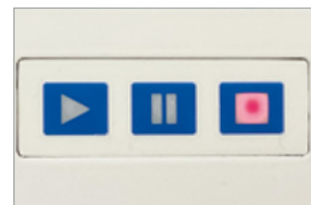
Foot switch with integrated emergency-stop function.

Safety features



Big emergency-stop button for your safety.

Illuminated buttons



Start, Pause and Stop symbolize the actual state in the sectioning process.

LN2

Liquid Nitrogen

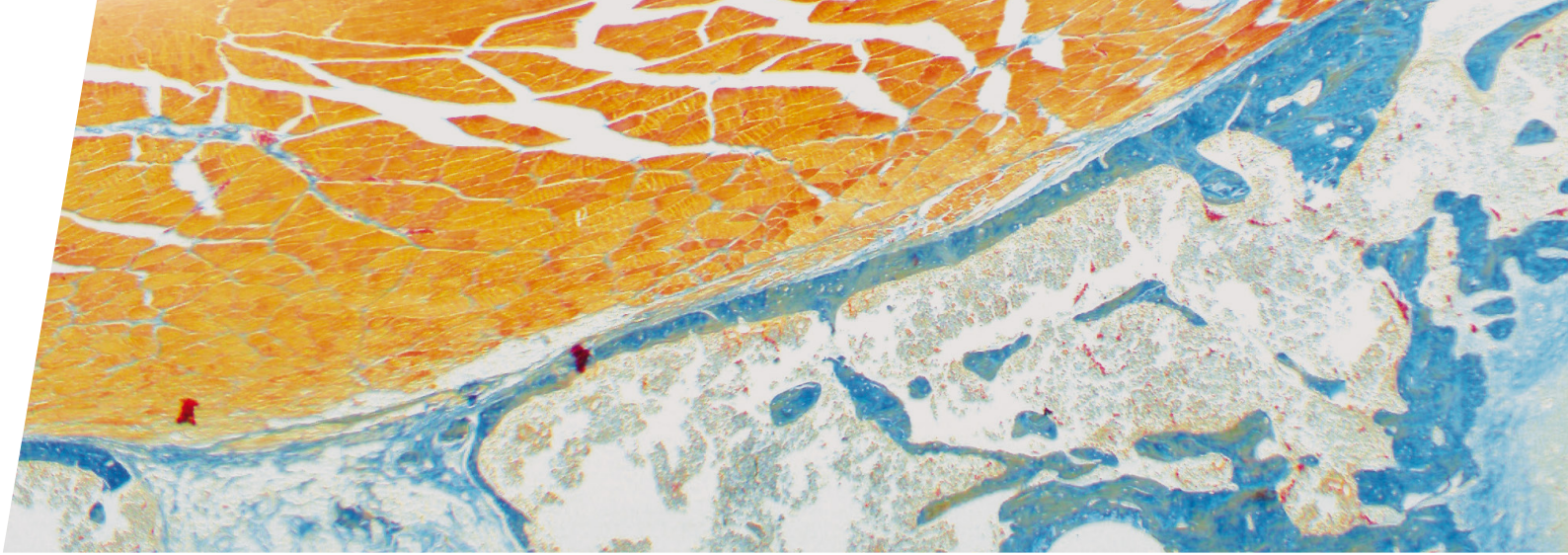
Customized solutions: We can turn paraffin tables into cryostages so you can section fresh biological native specimen at an ambient surrounding temperature.

We can turn each of our clamps into cryostages so you can section e.g. foam or leather or other materials right at their glasspoint.



Highlights

- Automatic advanced programmable LN2 micro-dosing system with PC controlled software
- Pressure-less flowing LN2, without spilling, noise, vibrations, etc.
- 35 l dewar included
- Microdosing pump with flow-control from some drops up to 1 l / min
- All connectors and cables included
- Your customized cryostage



Knives & resharpening service

Carbide knives

Full tungsten carbide knives parallel 16 cm 40° or 50°.
Full tungsten carbide knives rotary 16 cm, D-edge or C-edge.



Standard knives

Standard knives from surgery steel 16, 22 and 30 cm, D-edge or C-edge.



Disposable blades

Disposable tungsten carbide blades TC65 with 65 mm width (5 pcs. per box).



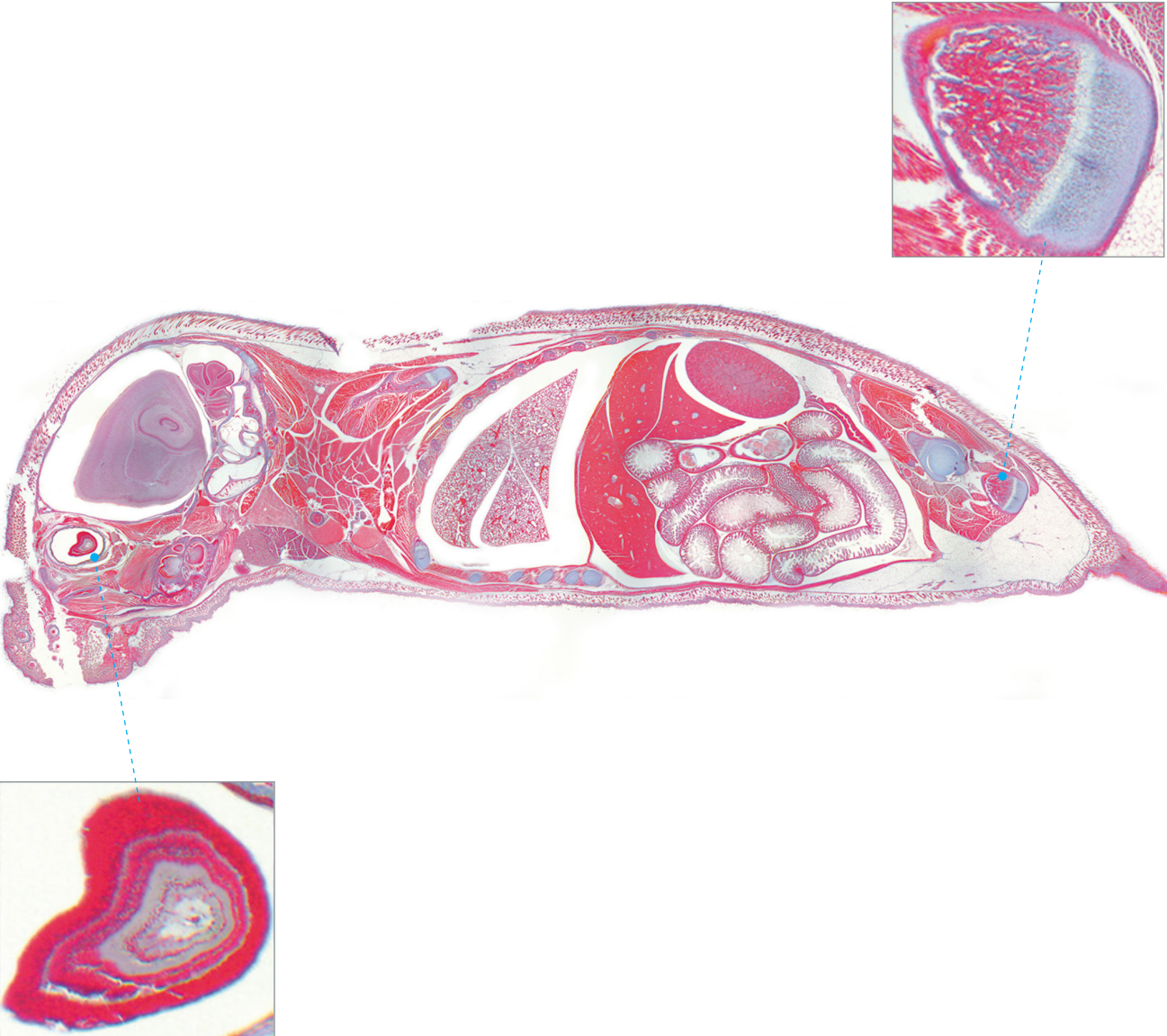
For more information please feel free to contact us directly.

The whole thing is of interest ...

But the details should stay in focus!

250 mm

Whole body section of a mouse from a paraffin block multi acquisition picture from a microscope slidescan specimen up to **200 x 250 x 70 mm**.



Sections of complete organs

E.g. whole brains, eye bulbs etc.

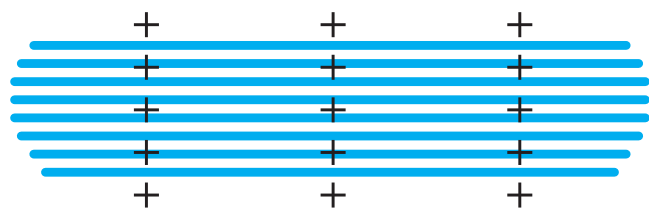
Whole brain section from a paraffin block for a later 3D stacking of microscope pictures for an organ reconstruction.



Cross section a of complete eye bulb microscope picture from a slidescan of multi acquisition positions.



3D reconstruction of whole organs with any number of serial sections.



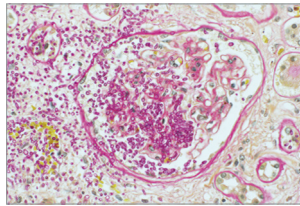
200 mm

Tissues

Biological specimens

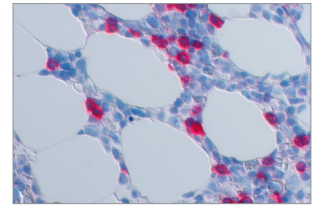
When **oversized or even hard tissues** should be sectioned in one piece from paraffin, methyl-methacrylate or native like wood or bones with perfect sectioning results ... it is time for the ... "Polycut Legacy"

Human kidney



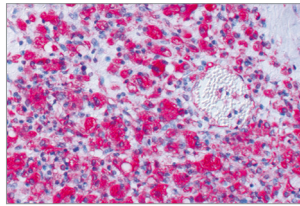
Whole organ section from a paraffin block, stained Tri-PAS.

Human iliac crest



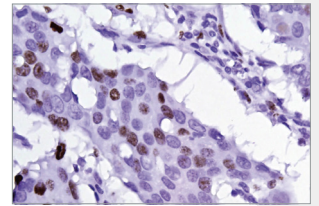
Section from an iliac crest embedded in MMA, stained CD79a.

Human kidney



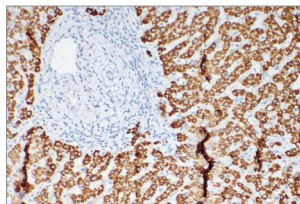
Whole organ section from a paraffin block for cancer research, stained Vimentin.

Human mamma



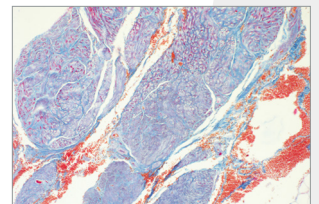
Whole organ section from a paraffin block for cancer research, stained Ki67.

Human liver



Whole organ section from a paraffin block for cancer research, stained HBVsAG.

Human prostate gland



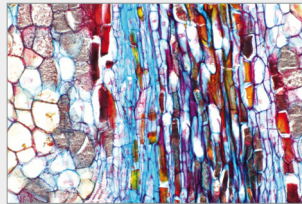
Section from a whole human prostate gland in one paraffin block. While complete organ sections are primarily interesting in research, so even in routine diagnostics they can play an important role as you need to process less cassettes, have less sections and a quicker diagnosis.

Tissues

Tricky and hard

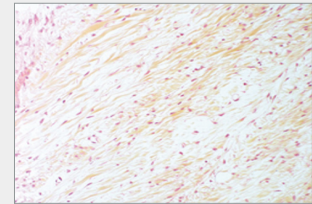
When **undersized microtomes** are far beyond their limits, your research, your analysis and your target and goal is yet far away from being reached ... then it is time for the next dimension of microtome ... "Polycut Legacy"

Wood



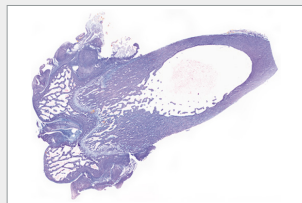
Native section of an adult grapevine wood with a declinated section angle of 45°.

Bone



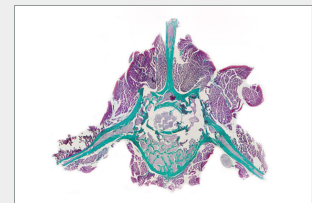
Bone section from a methyl-methacrylat embedded block stained Movat Pentachrom.*

Thigh bone



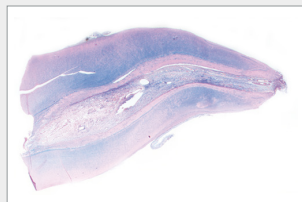
Complete in paraffin embedded femur, thigh bone, sectioned and stained Alcian Blue for slidescan of multiple microscope pictures.*

Vertebrae



Section through a complete vertebrae bone with muscles, stained Masson Goldner from a methyl-methacrylat embedding, microscopic slidescan from multiple pictures.*

Tooth



Whole longitudinally tooth section in a Goldner Anilin-blue stain for a microscopic slidescan of the whole section.*

Implants



Cross section of a shinbone (tibia lat.) with implants in it, in a Goldner stain for a scan of the whole section area under the microscope - of course the implants moved out of the block within the section, but the 4 µm section was perfect.*

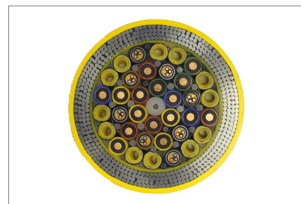
*With friendly help by the University Centre of Orthopaedics & Trauma Surgery of the University Hospital Carl Gustav Carus at the Technical University Dresden, Germany. Thanks to Suzanne Manthey.

Tissues

Material sciences

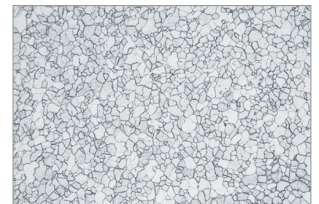
Every industrially manufactured component differs, as it comes from countless materials and substances forged together to one new thing. We know best that you are not sectioning paraffin like in hospitals! You need a microtome with much more capacity, more power, more flexibility and especially more volume for your very demanding preparations when other instruments are simply limited. Your solution has a name: "Polycut Legacy"

Undersea cable



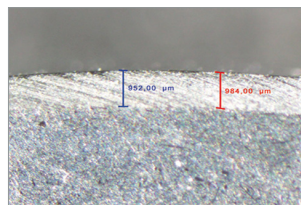
Cross section of an undersea cable with a diameter of 8 cm (different metals & polymers combination) for inspection in a bright field microscope.

Aerospace



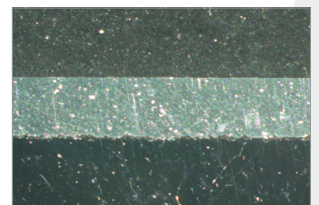
Oversectioned aerospace metal component to control the grain size distribution in the grid network.

Metal or plastic parts



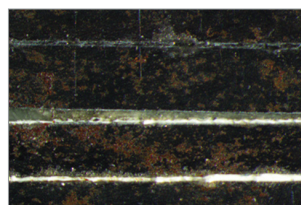
Cross section through a two component material. Here two metals are merged together to form one piece. Coating thickness seems to vary in the production process as the measurements differ so it evidences insufficient quality tolerances.

Tubes



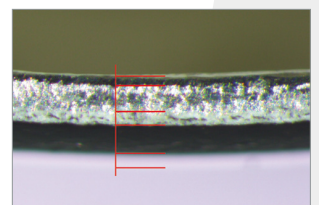
Cross section through a tube which contains a metallic body and a plastic coating. The bonding quality of the synthetic coating is of interest by measuring the layer thickness.

Automotive



Corrosion analytics and weld seam testing on an automotive component with multiple pressed layers.

Coating layers



Coating layer measurements from a component put into MMA for sectioning. Microscopic picture from quality control process to validate production requirements.

Power cable



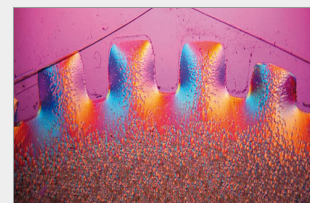
Oversection of a 7 cm in diameter (\varnothing) copper/plastic composite cable with V-inserts clamped to investigate the surface.

Power cable



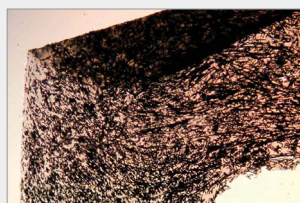
Cross section of the above power cable with 250 μm when the copper leaves the composite while sectioning, but now one can investigate the pigment distribution in the now transparent plastic.

Gears



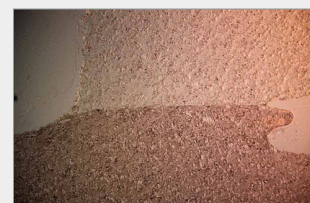
Cross section through a gear made from polyoxymethylen.

Carbon fibres



Cross section through a polyphenylenesulfide component with a high percentage of carbon fibres.

Glass fibres



Cross section of a polyamide component with a high percentage of glass fibres.

Service

We are committed to provide world-class support to our global customers at all times. We strive to advise you professionally before purchase and to support you during installation and initial setup. In addition, it goes without saying that we will always be available as a reliable partner during the longtime use of our products.

You can contact us directly with any kind of questions. In order to process your inquiries in time, please always include the following information:

- User name
- Address
- Phone number
- E-mail
- Type of device
- Serial number of device
- Date of purchase
- Detailed case description

Service Hotline: +49 (0) 6136 76997-0

Service E-mail: service@slee.de

Trainings

Service and application training

Well-trained staff is crucial for the implementation of regular service and maintenance of high quality.

We offer regular service and application training for our worldwide distribution partners.

Visit www.slee.de to access the training schedule and to download the registration form.

Training requests

Tel.: +49 (0) 6136 76997-0

E-mail: mail@slee.de

Notes



SLEE medical GmbH · Am Neuberg 14
55268 Nieder-Olm · Germany
www.slee.de

T: +49 (0) 6136 76997-0
E: mail@slee.de



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