

PetroThin®
Thin Sectioning System



BUEHLER

Excellent Results. Easily Repeatable.™

Re-sectioning & Grinding Thinning System

The PetroThin® Thin Sectioning System is a precise, easy-to-use instrument for re-sectioning and thinning a wide variety of samples, such as rocks and minerals, ceramics, concrete, bone, and teeth for performing materials characterization.

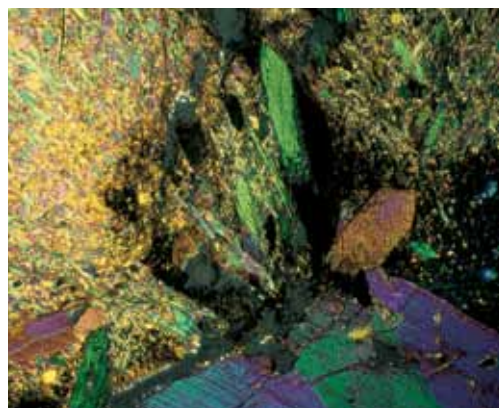
Every PetroThin® comes with a diamond cutting blade and a diamond grinding cup wheel mounted on one spindle. This eliminates the need to remove the glass slide between steps, increasing accuracy and parallelism. Two precision micrometers are used for controlling re-sectioning and thinning.

Each system features a universal vacuum glass slide chuck which accepts six different sized slides. A built-in pump provides a vacuum to insure the glass slide is held in place during preparation. Its quick release valve allows an operator to remove a sample any time for microscopic inspection. An innovative, in-line filter system removes any moisture from the vacuum line during use. The filter jar is automatically drained each time the vacuum pump is turned off. A recirculation system (optional) is available for water sensitive materials that require the use of a light oil or ethylene glycol coolants.

You can view the PetroThin® Minerals video at www.buehler.com/PetroThin_Thin_Section.html.



Microstructure from Niah Cave West Mouth, Sarawak, Malaysia which shows fine layers from the prehistoric cemetery sequence. Layers are primarily composed of guano. The slide was made by Julie A. Miller at the Thin Section Facility, Department of Archaeology, University of Cambridge, UK.



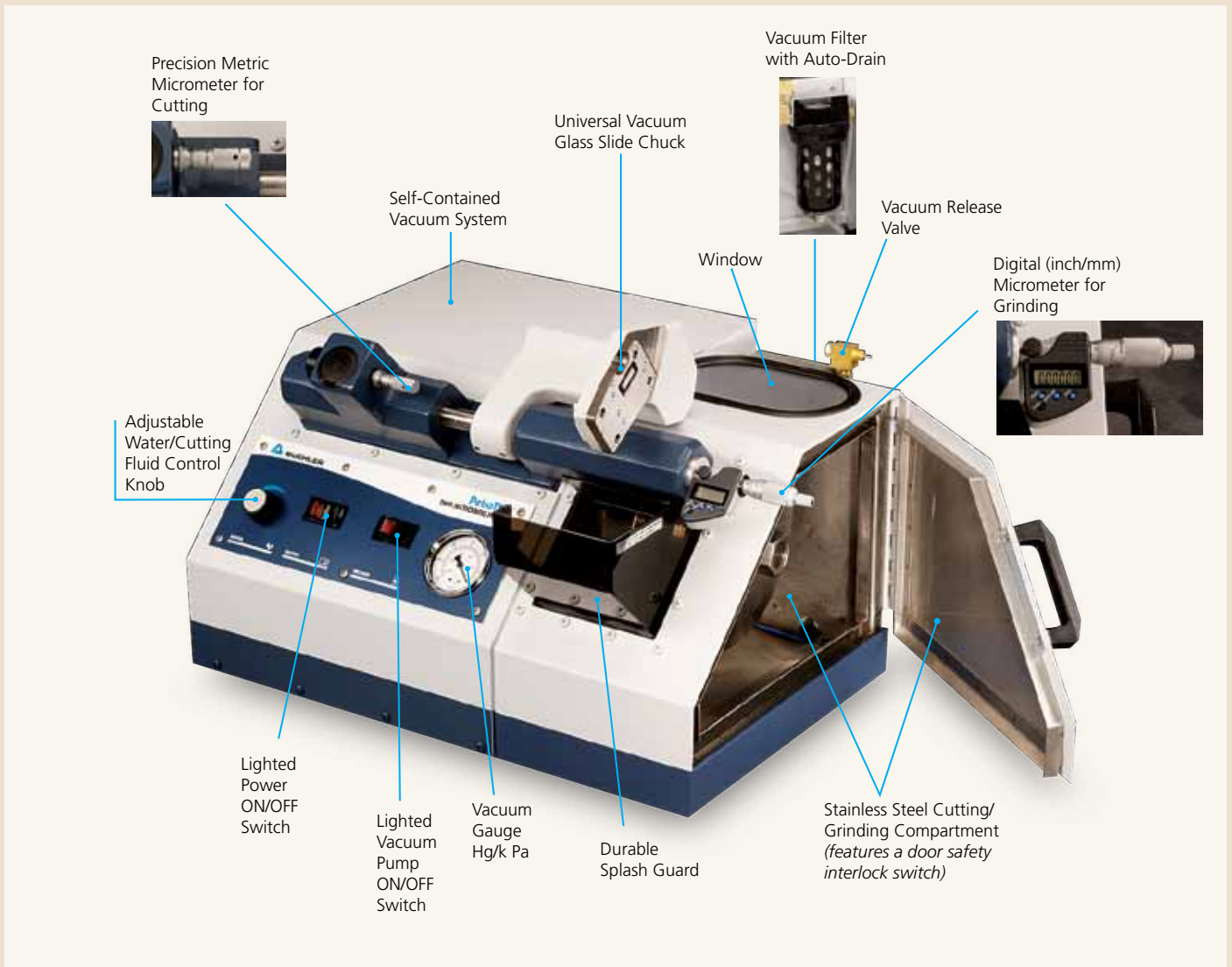
Microstructure of mineral acmite ($\text{NaFe}(\text{SiO}_3)_2$) viewed with transmitted polarized light, ~130X.



The 38-1490 PetroBond® Thin Sectioning Bonding Fixture is designed to accurately control the thickness of the bonding media between the specimens and glass slides.



The 30-8050 PetroVue® Thin Section Viewer is designed for monitoring section thickness and uniformity during the grinding/lapping processes. It provides a polarized light source.



Glass slide mounted specimen resectioned on the diamond cutting blade. The grinding wheel (right) reduces the specimen thickness without having to remove the specimen after resectioning.



Mineral samples re-sectioned and thinned to 30µm.

Specifications

38-1450-160 PetroThin® Thin Sectioning System, has a corrosion resistant table top cabinet, stainless steel cutting and grinding compartment, safety interlock cutoff switch, 8" (203mm) continuous rim diamond cut-off blade, 8" (203mm) diamond cup grinding wheel, micrometer for adjusting the cutting thickness, digital micrometer for adjusting the grinding thickness, intergral vacuum pump with gage and in-line filter, water cooling, vacuum glass slide chuck, 1/3 HP single speed motor, 115V/60Hz/1 phase with operating instructions. CE marked.

38-1450-250 PetroThin® Thin Sectioning System, same as 38-1450-160 but operates on 220V/50Hz/1 phase. CE marked.

Accessories

The PetroThin® Thin Sectioning System is designed to accept most slides:

Inch	Metric
1.06 x 1.81 inch	27 x 46mm
1.1 x 1.9 inch	28 x 48mm
1 x 3 inch	25.4 x 76.2mm
1½ x 3 inch	38.1 x 76.2mm
2 x 2 inch	50.8 x 50.8mm
2 x 3 inch	50.8 x 76.2mm

Petrographic Accessory Equipment

Description	Catalog Number
PetroVue® Thin Section Viewer	30-8050*
PetroBond® Thin Section Bonding Fixture	38-1490
Trim Saw, 10" (254mm)	10-10003*
Cast N' Vac 1000 Vacuum System	20-1382*

*Specific voltage & frequency required

PetroThin® Sectioning Supplies

Description	Size	Catalog Number
Continuous Rim Diamond Blade	8" x 0.055" x 1" (203mm x 1.4mm x 25.4mm)	11-4278
Continuous Rim Cubic Boron Nitride Blade*	8" x 0.055" x 1" (203mm x 1.4mm x 25.4mm)	11-4280
Diamond Cup Grinding Wheel	8" x ¼" x 1" (203mm x 6.35mm x 25.4mm)	40-4508
Cubic Boron Nitride Cup Grinding Wheel*	8" x 0.055" x 1" (203mm x 1.4mm x 25.4mm)	40-4512
Dressing Stick	½" x ½" x 4" (12.7mm x 12.7mm x 102mm)	40-4510

*Using a Cubic Boron Nitride (CBN) blade and grinding wheel cup, the PetroThin® is ideally suited for biomedical applications such as bone with an implant.

Petrographic Glass Slides & Cover Slides

Description	Inches	Millimeter	Quantity	Catalog Number
Glass Slides	1.06 x 1.81	27 x 46	1 gross (144)	40-8000-001
Glass Slides	1.06 x 1.81	27 x 46	10 gross (1440)	40-8000-010
Glass Slides, Micro	3 x 1	76.2 x 25.4	10 gross (1440)	40-8002-010
Glass Slides, Cover	0.94 x 1.54	24 x 39	10 gross (1440)	40-8008-010

Buehler continuously makes product improvements; therefore, technical specifications are subject to change without notice.

BUEHLER ANALYST® SECTION 6



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