IsoMet® 1000

Precision Sectioning Saw

BUEHLER

Excellent Results. Easily Repeatable.™

Precision Sectioning Made Easy

IsoMet® 1000 Precision Saw with optional fixturing accessories

The first step to quality sample preparation is selecting the proper cutting method, one that will not introduce structural damage or defects to the area under analysis. The IsoMet® 1000 Precision Saw was designed for today's material analyst who demands sample integrity and rapid sectioning capabilities. This saw quickly sections a broad range of materials including:

- Metals
- Plastics
- Biomaterials
- Mineral
- Ceramics
- Composites
- Rocks
- Electronic Components

Quality Sections

A wide selection of chucks, fixtures, goniometers and rotating vises guarantee the proper fixturing of samples. The gravity feed loading design will not "force feed" the sample into the diamond wafering blade, minimizing sample deformation.

This design allows the IsoMet® 1000 to achieve an as-cut surface which is as free as possible of damage and distortion.

The IsoMet® 1000 can be set to turn itself off at a predetermined cutting depth or at the completion of the section.

Accessories Increase Versatility

The IsoMet® 1000 can be equipped with an optional rotating chuck which effectively reduces the blade-sample contact area and frictional heat for quickly sectioning hard materials. This accessory will dramatically reduce sectioning time.

When sample size prohibits the use of standard chucks, the optional cutting table can be installed for manually sectioning or trimming biomaterials or electronic components.

Improved cutting performance is achieved by selecting the proper wafering blade for the material. Buehler's application-specific wafering blade match the material cutting needs to provide both minimal sectioning time and sample deformation.

Fully Enclosed Cutting

The IsoMet® 1000's cutting compartment is fully enclosed. The transparent cutting hood can be removed and replaced with the accessory Table Saw Attachment when sectioning larger samples that require a greater clearance.

The removable coolant tray is accessible from the front of the machine for fast cleaning and easy retrieval of cut samples. The coolant tray also incorporates the blade dressing device which rapidly dresses the diamond wheel while sample sectioning continues.

The IsoMet® 1000 Precision Sectioning Saw offers increased versatility and power for sectioning today's advanced materials.

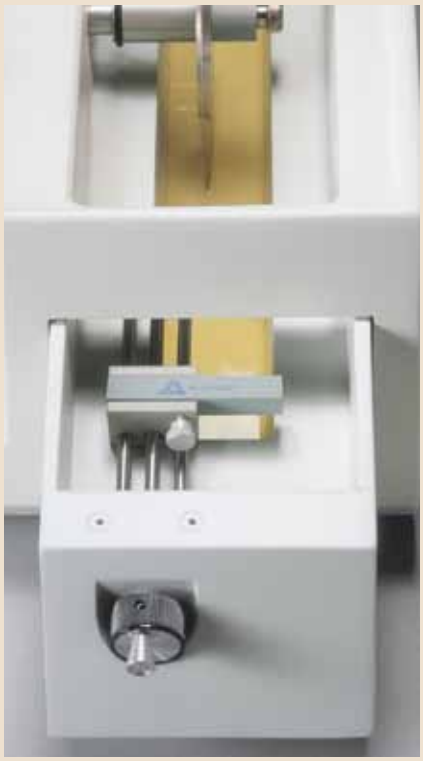
The 11-2181 Rotating/Ocsillating Chuck Accessory is available for sectioning difficult materials.

The 11-2482 Fastener Chuck makes longitudinal bolt sections easy.

11-2484 Glass Slide Chuck holds petrographic samples for resectioning

Weight arm and micrometer controls are conveniently located outside the cutting compartment.

Membran touch-pad control panel and LED display allow operators to quickly set cutting parameters.



Dressing chuck is conveniently located within the coolant tray.

The 11-2182 Table Saw Attachment effectively sections or trims printed circuit boards or larger samples.

Specifications

11-2180 IsoMet® 1000 Precision Saw, with automatic cut-off switch, counterbalanced sliding load weight system, 0-500gm (0-800gm with accessory weight kit), built-in inch or metric digital micrometer cross-fee for sample location, removable coolant tray with built-in dressing device, ⅛ HP (90W) DC motor with variable arbor speed 0-975 rpm. Includes one 11-4276 Series 15LC diamond wafering blade 6 x 0.0020 x ½" (152 x 0.5 x 12.7mm), 11-2282 3" (76mm) flanges, chucks 11-1184, 11-1185, 11-1186, 11-1187. Operating instructions. For worldwide operation on 85-264V/50-60Hz/single phase. Shipping weight: 75 lbs. (34kg). Dimensions: 15½ W x 12 H x 21" D (394 x 305 x 533mm).

Accessories

11-2181 Rotating/Oscillating Chuck, for holding and rotating (5 rpm) samples up to 2" (50mm) in diameter

11-1183 Chuck, double hold-down saddle type. Prevents possible damage to specimen by holding section portion firmly after cutting is completed. Useful for larger sample and sheet stock.

11-1184 Chuck for bar and tube stock up to ⅜" (10mm) in diameter

11-1185 Chuck for irregular shaped samples

11-1186 Chuck for wafer, single crystals and thin sections

11-1187 Chuck for long samples, saddle type

11-1188 Chuck for petrographic and ceramographic thin-sections, vacuum type, to hold glass slide

11-1189 Chuck for 1" (25mm) or 1¼" (32mm) diameter in mounted samples. This chuck requires use of one set of two 11-1192 Recessed Flanges

11-1190 Dressing Stick, for dressing Series 15 and 20 wafering blades

11-1290 Dressing Stick, for dressing Series 5 and 19 wafering blades

11-1191 Flange, 1¾" (44mm) diameter, recedded, set of two for use with the swivel arm assembly for larger specimens and where greater depth of cut is required

11-1192 Flange, 1⅜" (35mm) diameter, recedded, set of two for use with 11-1188 Chuck, with 11-1189 Chuck and where maximum depth cut is required

11-2182 Table Saw Attachment, for hand-cutting stuffed PC boards, glass slides or bio-materials

11-2183 Accessory Weight Set, for increasing cutting load to 800gm

11-2185 IsoMet® 1000 Goniometer

11-2282 Flanges, 3" (76mm) diamter, for greater depth of cut with larger diameter blades, set of 2

11-2283 Flanges, 4" (102mm) diameter, for additional blade support at higher speeds, set of 2

11-2284 Flanges, 5" (127mm) diameter, for additional blade support at higher speeds, set of 2

11-2489 Specimen Chuck, for 1½" and 40mm mounted samples

11-2482 Fastener Chuck, for longitudinal sectioning of fasteners, tubes and solid cylinders from 1⅛ to 2" (29 - 50mm) in length

11-2483 Double Saddle Chuck, 1" (25mm) diameter capacity, prevents damage to specimen by holding sectioned portion firmly after cutting is completed

11-2484 Glass Slide Chuck, holds 27 x 46mm standard glass slides for thin sections

11-2488 Glass Slide Chuck, holds 2 x 3" (51 x 76mm) standard glass slides for thin sections

11-2496 Chuck Padding, applied to chucks for holding brittle or friable specimens, strips of 1 x 6" (25 x 152mm) with adhesive backing resistant to cutting fluids

Diamond Wafering Blades ½" (12.7mm) Arbor

Type and Use	Diameter and Thickness				
Blade Series	3" x 0.006" (76 x 0.2mm)	4" x 0.012" (102 x 0.3mm)	5" x 0.015" (127 x 0.4mm)	6" x 0.015" (150 x0.5mm)	7" x 0.025" (180 x 0.6mm)
Series 30HC Diamond, for use with polymers, rubber and other soft, gummy materials			11-4239**		11-4241**
Series 20HC Diamond, for aggressive general sectioning of ferrous and non-ferrous materials			11-4215*		11-4237*
Series 15HC Diamond, for routine use, metal matrix composites, PC boards, thermal spray coatings and titanium	11-10066	11-4244	11-4245	11-4246	11-4247
Series 20LC Diamond, for use with hard/tough materials, structural ceramics, boron carbide, boron nitride, silicon nitride			11-4225*		11-4227
Series 15LC Diamond, for use with hard/brittle materials, structural ceramics, electronic substrates, alumina, zirconia, silicon carbide	11-10067	11-4254	11-4255	11-4276	11-4277
Series 10LC Diamond, for use with medium to soft ceramics, electronic packages, GaAs, AlN and glass fiber reinforced composites	11-10068		11-4285		11-4287*
Series 5LC Diamond, for use with soft friable ceramics, composites with fine reinforcing media CsF_2, MgF_2, and carbon composites	11-10069		11-4295		
IsoCut® Wafering Blades A cubic boron nitride abrasive. IsoCut® Wafering Blades work well for many materials, giving significantly shorter cutting times.					
For iron and cobalt base alloys, nickel base super alloys and lead base alloys	11-10070	11-4264	11-4264	11-4266	11-4267

**Alternate blade thickness of 0.020" (0.5mm)* ***Alternate blade thickness of 0.030" (0.8mm)*

For a complete listing of consumables, please refer to our Consumables Buyer's Guide. Buehler continuously makes product improvements; therefore technical specifications are subject to change without notice.

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