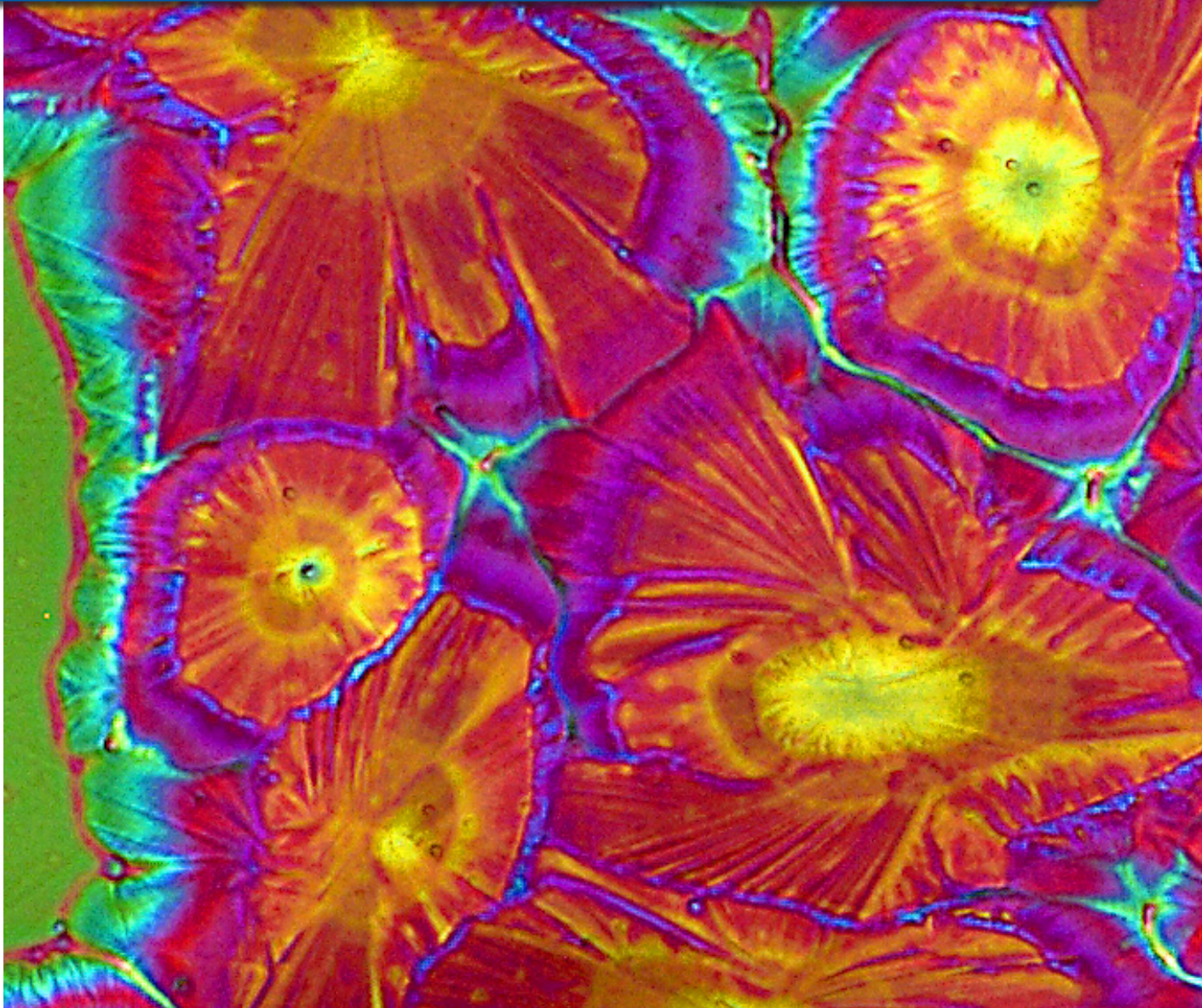




# SECTIONING

Simple set up and time saving conveniences are core to Buehler's sectioning products. Achieve high-quality cuts for any material.



## Abrasive Cutters

	AbrasiMet® M	AbrasiMatic® 300	AbrasiMet® XL Pro
Wheel Diameter	10in [254mm] 12in [305mm]	12in [305mm]	14in [356mm] 16in [406mm] 18in [457mm]
Motor Power	5.5Hp [4kW]	5.5Hp [4kW]	13.4Hp [10kW]
Cut Types	Chop	Chop, Y-Feed, Pulsing	Chop, Y-feed, Planar, Pulsing
Manual Movement	Z-axis	X-axis*, Y-axis, Z-axis	X-axis, Y-axis, Z-axis
Automated Movement		Y-axis	X-axis, Y-axis, Z-axis
Vising Table Size	12 x 9.8in [305 x 250mm]	14.4 x 10in [365 x 254mm]	19.9 x 11.8in [505 x 300mm]
Maximum Part Size in Chamber	25 x 13 x 4.3in [636 x 330 x 109mm]	16 x 6 x 3.75in [406 x 152 x 95mm]	49 x 24 x 7in [1245 x 610 x 178mm]
Cutting Capacity**	4.3in [109mm]	3.75in [95mm]	7in [178mm]

*\*Optional Items \*\*Maximum cutting capacity assumes largest size blade with smallest flange.*

## Precision Cutters

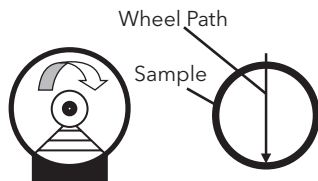
	IsoMet® Low Speed	IsoMet® 1000	IsoMet® High Speed	IsoMet® High Speed Pro	PetroThin® Thin Sectioning System
Maximum Wheel Diameter	5in [127mm]	7in [178mm]	8in [203mm]	8in [203mm]	8in [203mm]
Cut Style	Gravity Fed	Gravity Fed	Y-Feed	Y-Feed	Manual
Sample Movement	X-axis, Z-axis	X-axis, Z-axis			X-axis, Z-axis
Wheel Movement			X-axis, Y-axis	X-axis, Y-axis and Z-axis	
Maximum Cutting Capacity**	1.77in [45mm]	2.5in [64mm]	2.8in [71mm]; 2 x 6.5 x 1in [51 x 165 x 25mm]	2.8in [71mm]; 2 x 6.5 x 1in [51 x 165 x 25mm]	Petrographic Glass Slides: 1.06 x 1.81in [27x46mm], 3 x 1in [76 x25mm] or 3 x 2in [76 x 51mm]

*\*\*Maximum cutting capacity assumes largest size blade with smallest flange.*

## Cutting Style and Wheel Path

### Chop Cutting

The traditional form of machine operation. Wheel contact arc is governed by sample depth. Can sometimes have limited ability with large/difficult parts.



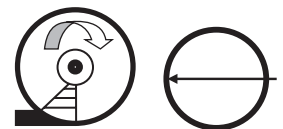
### Chop Cutting with Pulsing

Wheel contact still governed by sample depth. The pulsing action pauses the feed rate in short intervals enabling coolant to wash away swarf and dissipate heat, resulting in a better surface quality.



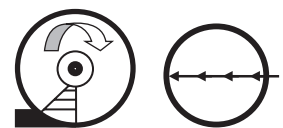
### Y-Feed Cut

The abrasive wheel is stationary and the cutting table moves forward completing a one time cut into the sample. Wheel contact arc is governed by sample height.



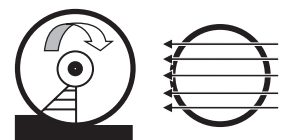
### Y-Feed Cut with Pulsing

Wheel Contact arc is still governed by sample height. The pulsing action pauses the feed rate in short intervals enabling coolant to wash away swarf and dissipate heat, resulting in a better surface quality.



### Planar Cut

In Planar mode, a Y-feed cut is completed in successive vertical steps. Wheel contact arc is governed by the height of each step rather than the height of the sample.



## Simple Setup for Efficient Cuts

The AbrasiMet M is an easy to use, manual, tabletop cutter that provides excellent cutting results.

# AbrasiMet® M

The AbrasiMet M is a benchtop manual cutting machine for 10in [254mm] and 12in [305mm] blades that provides consistent sectioning results.

### Easy to Cut and Maintain

- No tools required to change blades
- Adjustable cutting arm to maximize ergonomics
- Recirculation tank with filter minimizes the frequency and time required to clean

### Durable Machine with Versatile Performance

- Powerful motor cuts through materials with ease
- Dual blade feature performs two cuts in a single cycle

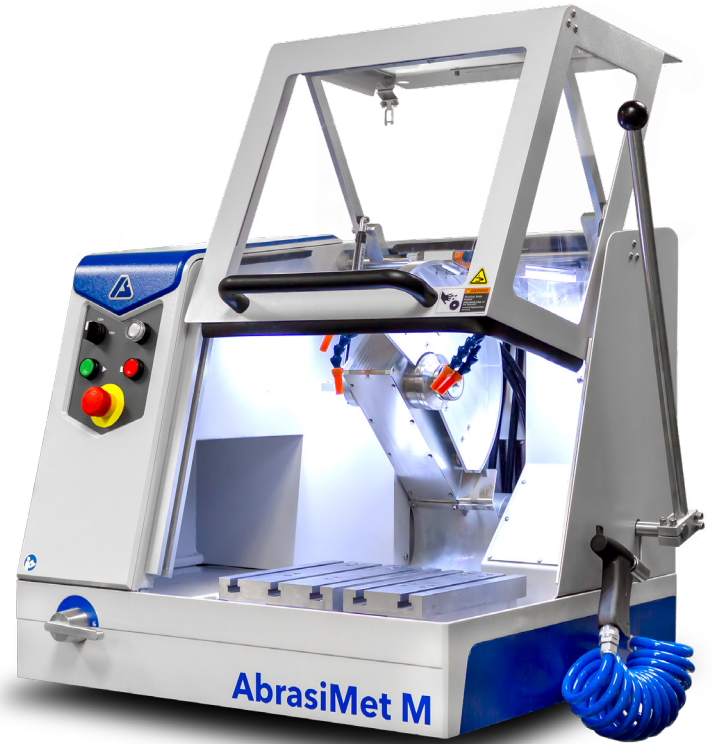
Part Number	Voltage/Frequency
10-10107-200	200 - 240VAC, 50-60Hz
10-10107-400	380 - 460VAC, 50-60Hz
10-10107-200C	CSA 200-240VAC, 50-60Hz

### Recirculation Tank (Required)

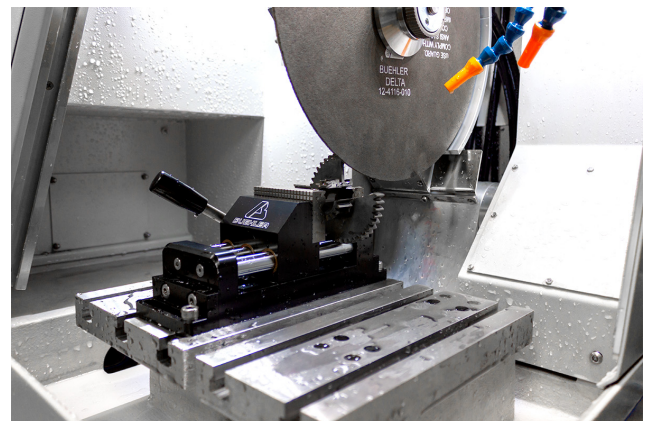
The Advanced Recirculation tank features a dual tank design that makes regular debris removal fast and simple, extending the time in between emptying the 19gal [70L] reservoir. See also on page 13.

10-2167-200 Advanced Recirculation Tank 200-240VAC, 50/60Hz

10-2167-400 Advanced Recirculation Tank 380-460VAC, 50/60Hz



**Dimensions:** 31.1in [791mm] W x 27.3in [694mm] D x 36.2in [979mm] H open  
 25.7in [653mm] H closed  
**Weight:** 309 lb [140 kg]



## Highly Reproducible Results

Our line of abrasive cutters are built for high volume environments. Our cutters combine speed and advanced features without compromising cut quality.

### AbrasiMatic® 300

The AbrasiMatic 300 is a benchtop cutting machine for 12in [305mm] blades that provides both manual and automatic cutting capabilities. These capabilities provide versatility in sectioning to suit a wide variety of needs. All configurations come with movement in the Y and Z directions, but X movement is an additional option.

#### Y and Z axis cutting only

Part Number	Voltage
10-2190-260	200-240VAC, 60Hz
10-2190-460	440-480VAC, 60Hz
10-2190-250	200-240VAC, 50Hz
10-2190-400	380-400VAC, 50Hz

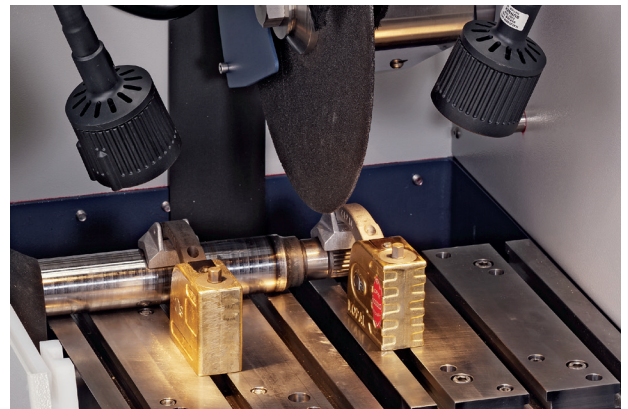
#### Additional X Axis cutting

Part Number	Voltage
10-2193-260	200-240VAC, 60Hz
10-2193-460	440-480VAC, 60Hz
10-2193-250	200-240VAC, 50Hz
10-2193-400	380-400VAC, 50Hz



Dimensions: 34in [864mm] x 27in [686mm] x 41in [1041mm] open  
24in [610mm] closed  
Weight: 350lb [165kg]

\*Requires recirculation system, see page 13



## Robust Machine with Intuitive Features

### AbrasiMet® XL Pro

The AbrasiMet® XL Pro is a floor standing automatic abrasive cutting machine for 14in [356mm] to 18in [457mm] blades that provides consistent and repeatable cut quality for large samples.

#### Intuitive and Quick to Operate

- Quickly set up for a cut by positioning the blade and table with the joystick and laser alignment
- Save cutting methods to ensure repeatability and consistency
- Filtration recirculation tank with vibration motor continuously filters and compacts the debris to minimize cleaning frequency and time.

#### Powerful Machine for Demanding Environments

- Ideal for heavy duty, repetitive use in the toughest environments
- Efficiently and quickly cut through difficult materials with the powerful 13.4hp [10kW] motor
- Choose between multiple cutting modes like Chop, Y-feed, Planar, and Manual to section parts
- Use Buehler's exclusive feature Variable SmartCut to maximize speed and cut quality

Part Number	Voltage/Frequency
10-2320-400	380-480VAC, 50/60Hz

See page 9 for vise with 12mm T-nuts  
Advanced Recirculation System included

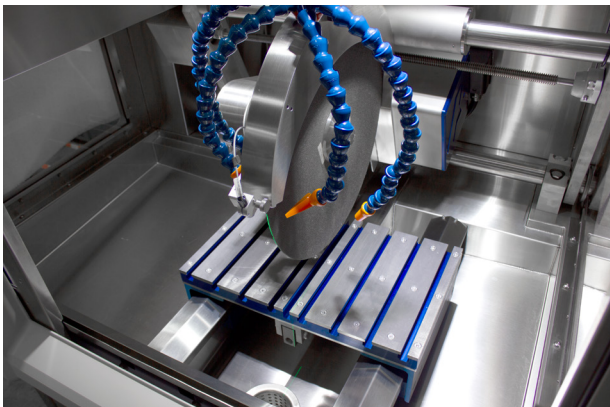


Dimensions: 54in [1372mm] W x 50.7in [1288mm] D x 75in [1905mm] H  
Weight: 1750 lb [800 kg]

#### Accessories

##### Mist Extractor

It is highly recommended to use the mist extractor listed below or connect the machine to a facility exhaust system  
10-2343-400 Mist Extractor



## Single Piece Sliding Vises

### Speed Clamping Vise



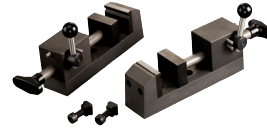
**Size:** Medium  
**Part Numbers:** Left: 10-3544  
 Right: 10-3545  
**Max Opening:** 2.75" [70mm]  
**Clamping Plate:** 3.2" x 1.4"  
 [80 x 35mm]  
**T-Nuts:** 12mm or 14mm



**Size:** Large  
**Part Numbers:** Left: 10-3546  
 Right: 10-3547  
**Max Opening:** 7.3" [185mm]  
**Clamping Plate:** 3.1" x 3.5"  
 [78 x 89mm]  
**T-Nuts:** 12mm or 14mm

### MetKlamp VIII S

*Ideal for AbrasiMet M*



**Part Numbers:** Left: 95-C1821S  
 Right: 95-C1822S  
**Max Opening:** 2.08" [53mm]  
**Clamping Plate:** 1.75" x 2.25"  
 [45 x 58mm]  
**T-Nuts:** 12mm

### MetKlamp VIII



**Part Numbers:** Left: 95-C1821  
 Right: 95-C1822  
**Max Opening:** 3.125" [80mm]  
**Clamping Plate:** 1.75" x 2.25"  
 [45 x 58mm]  
**T-Nuts:** 12mm

## Two Piece Sliding Vises

### Sliding Vise Kit



**Size:** Medium  
**Part Numbers:** Left: 10-3540  
 Right: 10-3541  
**Clamping Plate:** 2.36" x 3"  
 [60x76 mm]  
**T-Nuts:** 12mm\*

**Size:** Large  
**Part Numbers:** Left: 10-3542  
 Right: 10-3543  
**Clamping Plate:** 2.95" x 4.23"  
 [74 x 107mm]  
**T-Nuts:** 12mm\*  
 \*14mm conversion kits are available  
 Medium: 10-3548  
 Large: 10-3549

## Specialty Vises

### Chain Clamping Kit



**Application:** For clamping very large or irregularly shaped samples  
**Part Number:** 46-0030

### Fastener Vise



**Application:** For longitudinal sectioning of fasteners. Must be held with either Single Piece (recommended) or Two Piece Left Hand Vising.

**Max Opening:** 1.6" [40.6mm]  
**Part Number:** 95-C1702

## Vertical Clamping Vises

### Vertical Clamping Kit



*Includes 2 clamping systems*

**Size:** Small  
**Part Numbers:** 10-3531  
**Clamping Height:** 2.3" [58mm]  
**Reach:** 2.1" [54mm]  
**T-Nuts:** 12mm

**Size:** Large  
**Part Numbers:** 10-3523  
**Clamping Height:** 4" [102mm]  
**Reach:** 2.4" [61mm] + 3.5" [90mm]  
 with extension (included)  
**T-Nuts:** 12mm and 14mm

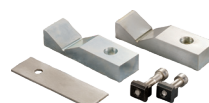
### Riser Blocks

Small: 10-3532; 2.4" [60mm]  
 Large: 10-3528; 2.9" [74mm]



### Vee Block Clamp Kit

**T-Nuts:** 12mm and 14mm  
**Part Number:** 10-3527



### Horizontal Clamp

**T-Nuts:** 12mm and 14mm  
**Part Number:** 10-3526



### Adjustable Vee Blocks

**T-Nuts:** 12mm and 14mm  
**Part Number:** 10-3525



## Recirculating Systems for Abrasive Sectioning

### For AbrasiMet® M

### For AbrasiMatic® 300



#### Advanced Recirculating System 19 gal [70L]

24.5 W x 16.5 D x 24.5in H  
620 W x 420 D x 620mm H  
10-2167-200 [200-240VAC, 50/60Hz]  
10-2167-400 [380-460VAC, 50/60Hz]



#### Recirculating System 22 gal [85L]

26.5 W x 18.25 D x 26.5in H  
674 W x 464 D x 674mm H  
(22.5in [572mm]H w/o wheels)  
10-2332-260 [200-240VAC, 60Hz]  
10-2332-460 [440-480VAC, 60Hz]  
10-2332-250 [200-240VAC, 50Hz]  
10-2332-400 [380-400VAC, 50Hz]

Part Numbers	Description
10-2431-400	42 gal [160L] with sloped filter for AbrasiMatic 300 and Delta 30 W x 25.5 D x 24in H 762 W x 648 D x 610mm H

## Additional Abrasive Accessories



#### Cool 3 Fluid

Water miscible fluid concentrate recommended for abrasive cutting. Dilute coolant to 1:25 to 2:25, with water.

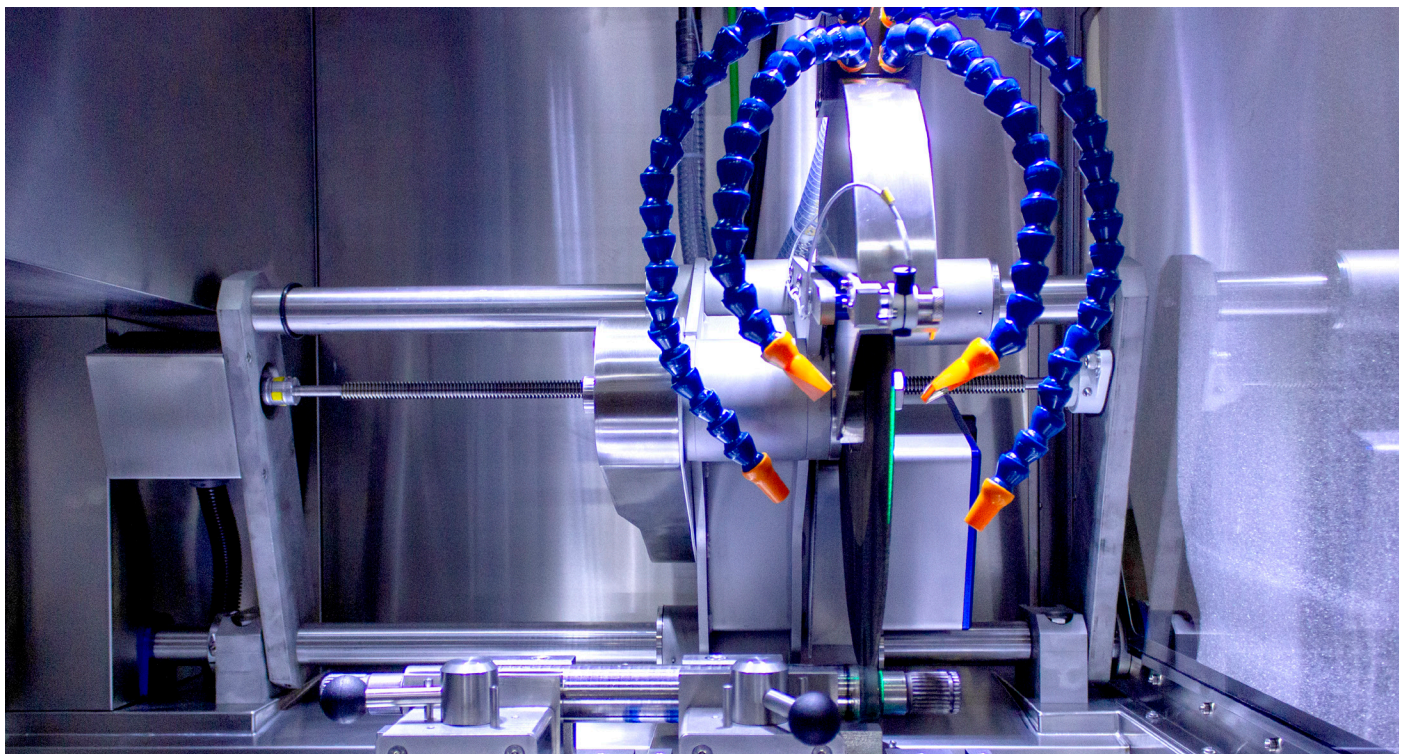
10-6001 33.8oz [1L]  
10-6004 1gal [4L]  
10-6010 2.6gal [10L]



#### Base Cabinet

For AbrasiMet M and AbrasiMatic 300  
36 W x 30 D x 36in H  
[910 W x 760 D x 910mm H]

80-10001





## Abrasive Blades

Buehler's Abrasive Blades are designed to provide high quality sectioning results with no burning and minimal surface deformation. This can reduce the amount of grinding & polishing required later in the preparation process.

### Efficient Cutting with Extended Life

An abrasive blade wears down during cutting to expose new abrasive particles and maintain efficient cutting. However, too fast of a wear rate leads to shortened blade life. Buehler's blades have been designed to balance this wear rate to maintain efficient cutting while extending blade life.

### Resin Bond vs Rubber Bond

Buehler's line of abrasive blades includes both rubber bonded and resin bonded blades. While both provide high quality cutting, there are some differences between them. Rubber bonded blades may be thinner for some applications, but emit a burnt rubber odor while cutting. Resin bonded blades offer similar performance with a reduced odor.

## Abrasive Blades Selection, 1.25in [32mm] Arbor (Qty 10)

[Blade Thickness is listed under Part Number] Rubber Bond =  Resin Bond =

SiC Cutting Particle=  Al<sub>2</sub>O<sub>3</sub> Cutting Particle=

[Click Here](#) to shop Abrasive Blades

Recommended Use	10in [254mm] Chop/Linear	12in [305mm] Chop/Linear	14in [356mm] Chop/Linear	16in [406mm] Chop/Linear
Superalloys, General Steel, Non-Ferrous	12-4205-010 0.051in [1.3mm]	12-4405-010 0.055in [1.4mm]	12-4305-010 0.063in [1.6mm]	10-31605-010 0.125in [3mm]
		10-31205-010 0.08in [2mm]	10-31405-010 0.10in [2.5mm]	12-5605-010 0.075in [1.9mm]
Ferrous materials >HRC60	10-4210-010 0.083in [2.1mm]  102509P 0.06in [1.5mm]	12-4110-010 0.09in [2.3mm]	10-4310-010 0.075in [1.9mm]	10-31610-010 0.125in [3mm]
		103009P 0.08in [2mm]	103509P 0.098in [2.5mm]	
Ferrous materials HRC50-60	10-4212-010 0.083in [2.1mm]  10-31014-010 0.06in [1.5mm]	10-4412-010 0.105in [2.7mm]	10-4312-010 0.09in [2.3mm]	10-31612-010 0.125in [3mm]
		10-31212-010 0.08in [2mm]	103509P 0.098in [2.5mm]  10-31412-010 0.10in [2.5mm]	
Ferrous materials HRC35-50	10-4216-010 0.083in [2.1mm]  102510P 0.06in [1.5mm]  10-31014-010 0.06in [1.5mm]	12-4116-010 0.105in [2.7mm]	12-4305-010 0.063in [1.6mm]	10-31616-010 0.125in [3mm]
		103010P 0.083in [2.1mm]	103510P 0.098in [2.5mm]	
		10-31218-010 0.08in [2mm]	10-31416-010 0.10in [2.5mm]	
Ferrous materials HRC15-35	10-4220-010 0.067in [1.7mm]  102511P 0.06in [1.5mm]	12-4120-010 0.105in [2.7mm]	12-4305-010 0.063in [1.6mm]	
		103011P 0.079in [2mm]		
High Speed Steel, Stainless Steel, Carburized Steel	102508P 0.063in [1.6mm]	103008P 0.079in [2mm]	103508P 0.102in [2.6mm]	
Delicate Cutting	10-4227-010 0.032in [0.8mm]			
Titanium Alloys, Zirconium Alloys, Ductile Materials	10-4245-010 0.063in [1.6mm]  102507P 0.06in [1.5mm]	12-4145-010 0.087in [2.2mm]	10-4345-010 0.063in [1.6mm]	
		103007P 0.079in [2mm]	103507P 0.098in [2.5mm]	
Non-Ferrous Materials (Aluminum, Copper, Brass), Very Soft Ferrous Materials	10-4250-010 0.063in [1.6mm]  102512P 0.06in [1.5mm]	103012P 0.079in [2mm]	10-4350-010 0.087in [2.2mm]	10-31650-010 0.125in [3mm]



## AcuThin™ Blades (Qty 10)



For certain applications, it is important to minimize the amount of damage done to the sample during sectioning. The AcuThin series offers thin blades that have been developed to minimize the area of cutting thus reducing the amount of damage to the sample. These blades utilize a rubber bond and allow for precise, delicate abrasive sectioning with minimal surface damage. [Blade Thickness is listed under Part Number]

Recommended Use	9in [230mm]	10in [254mm]	12in [305mm] Chop	14in [356mm] Chop
General Use <HRC45	102301 0.032in [0.8mm]	102501 0.04in [1mm]	10-4360-010 0.032in [0.8mm]	10-3501 0.063in [1.6mm]
Ferrous Materials >HRC45	10-4161-010 0.025in [0.635mm]	10-4261-010 0.025in [0.635mm]	10-4361-010 0.025in [0.635mm]	103502 0.105in [2.7mm]

## Orbital Abrasive Blades Selection, 1.25in [32mm] Arbor (Qty 10)

[Blade Thickness is listed under Part Number] Rubber Bond =  Resin Bond =

Click [Here](#) to shop Abrasive Blades

SiC Cutting Particle =  Al<sub>2</sub>O<sub>3</sub> Cutting Particle =

Recommended Use	12in [305mm] Orbital	14in [356mm] Orbital	16in [406mm] Orbital	18in [457mm] Orbital
Superalloys, General Steel, Non-Ferrous	12-4405-010 0.055in [1.4mm]	12-4305-010 0.063in [1.6mm]	12-5605-010 0.075in [1.9mm]	12-5805-010 0.1in [2.5mm]
Ferrous materials >HRC60	12-4410-010 0.105in [2.7mm]	12-4310-010 0.105in [2.7mm]	12-5610-010 0.125in [3mm]	12-5810-010 0.153in [3.8mm]
Ferrous materials HRC50-60	12-4410-010 0.105in [2.7mm]	12-4310-010 0.105in [2.7mm]	12-5612-010 0.125in [3mm]	12-5816-010 0.153in [3.8mm]
Ferrous materials HRC35-50	12-4416-010 0.105in [2.7mm]	12-4316-010 0.105in [2.7mm]	12-5616-010 0.125in [3mm]	12-5816-010 0.153in [3.8mm]
Ferrous materials HRC15-35	12-4420-010 0.105in [2.7mm]	12-4320-010 0.087in [2.2mm]	12-5616-010 0.125in [3mm]	12-5816-010 0.153in [3.8mm]
Titanium Alloys, Zirconium Alloys, Ductile Materials			12-5645-010 0.075in [1.9mm]	

## Diamond & CBN Blades for Abrasive Cutters

[Blade Thickness is listed under Part Number] 1.25in [32mm] Arbor (Qty 1)



Recommended Use	Blade Type	10in [250mm]	12in [300mm]	14in [350mm]
General Use	Diamond	114610E 0.051in [1.3mm]		
Hard Materials	Diamond	114810E 0.047in [1.2mm]	103056 0.055in [1.4mm]	114814E 0.059in [1.5mm]
Ceramic and Petrographic samples	Diamond	114710E 0.047in [1.2mm]	103053 0.087in [2.2mm]	114714E 0.059in [1.5mm]
Plastics and Polymers	Diamond	102557 0.049in [1.25mm]		
General use, hardened steel, HRC55 and Up	CBN			103551 0.079in [2mm]

## Excellent Cut Quality for Delicate Samples

Sectioning tools capable of cutting virtually any material including metals, composites, cements, laminates, plastics, electronic devices and biomaterials.

### IsoMet® High Speed

The IsoMet High Speed and IsoMet High Speed Pro are benchtop precision cutters. These machines enable variety in sample preparation to best fit each sample process with automatic cutting capabilities. Quick sample placement or adjustments are achieved in seconds with the rapid rail and tool-less vising system. Sample capacity is 2.8in [71mm] diameter with blade speeds of 200-5000 RPM.

#### Automatic Dressing System

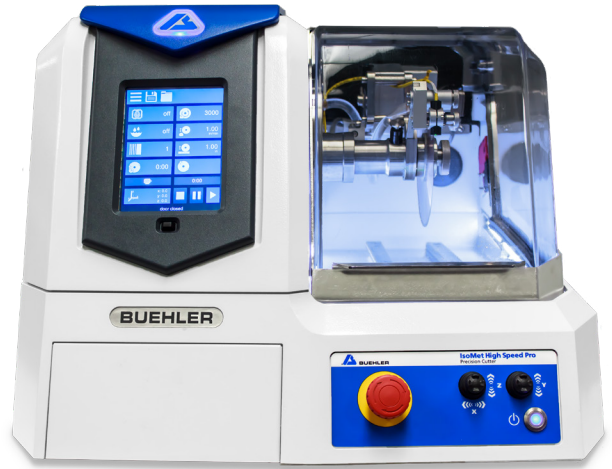
- Maintain consistent cut quality between and during cutting with the automatic dressing system.

#### Rapid Alignment Laser

- Minimize setup time by rapid visual alignment with the IsoMet High Speed Laser.

#### Precise Cut Alignment [Z-Axis]

- Align precise cuts quickly by using the 3 axis variable movement of the blade.



**Dimensions:** 24in [609.6mm]W x 30in [762mm]D x 36in [914.4mm]H open  
19in [482.6mm]H closed  
**Weight:** 157lbs [71kg]

Model	Part Number	Voltage/Frequency
IsoMet® High Speed Pro	11-2700	100 - 240VAC, 50-60Hz
IsoMet® High Speed	11-2600	100 - 240VAC, 50-60Hz

#### Accessories

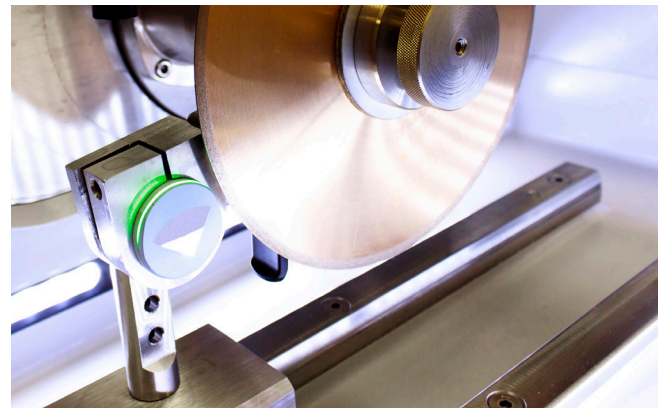
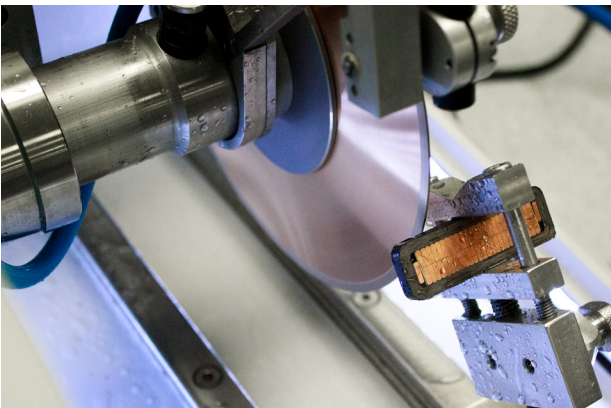
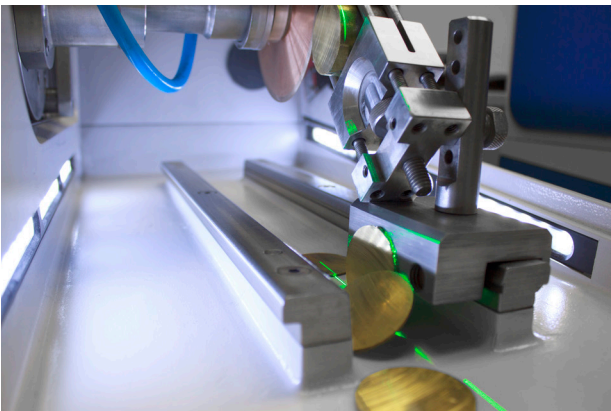
##### Table Attachment

Add a 12mm T-slot table to use Buehler's abrasive vising on this machine

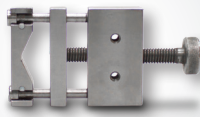
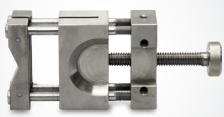




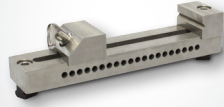


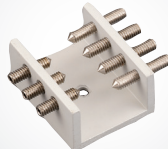

11-2707 12mm T-slot table

##### Abrasive Vising


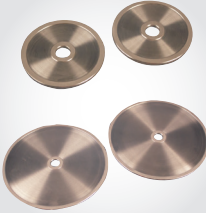
The MetKlamp VIII S (95C1821S/22S) and Medium sliding Vises (103540/41) are compatible with the IsoMet High Speed equipped with 12mm T-slot table (112707)



## IsoMet® High Speed Cutter Accessories

<p><b>Single Saddle Chuck</b></p> 	<p><b>Double Saddle Chuck</b></p> 	<p><b>Mount Chuck</b></p> 	<p><b>Fastener Chuck</b></p> 
<p>Large Single Saddle Chuck holds specimens up to 1.5in [38mm]</p> <p>11-2661</p>	<p>Securely holds specimens up to 1.5in [38mm] from 2 points when extra support is needed</p> <p>11-2662</p>	<p>Stainless steel chuck holds mounted samples</p> <p>11-2666 1.25in [30mm] 11-2667 1.5in [40mm]</p>	<p>Holds specimens from 0.04in [1mm] to 2in [50mm] for longitudinal sectioning</p> <p>11-2687</p>
<p><b>Large Bone Chuck</b></p> 	<p><b>T-Slot Bed</b></p> 	<p><b>Sliding Vise</b></p> 	<p><b>Rapid Rail Post</b></p> 
<p>Ideal for clamping bone, plastics, or other semi-rigid specimens up to 2in [50mm] in diameter</p> <p>11-2494</p>	<p>Additional T-slot for positioning vises</p> <p>11-2707</p>	<p>6in [152mm] maximum opening, use requires flange to be 2in [50mm] or less, requires T-slot bed</p> <p>11-2669</p>	<p>Use with Rapid Rail</p> <p>11-2660</p>
<p><b>Small Vertical Clamp</b></p> 	<p><b>Irregular Specimen Chuck</b></p> 	<p><b>Recirculating System 7gal [27L]</b></p> 	
<p>Clamps specimens up to 2.28in [58mm] in height</p> <p>460022</p>	<p>Adjusts to hold irregular shaped specimens up to 1in [25mm] in diameter</p> <p>11-1185</p>	<p>Increases cutting fluid capacity to 7gal [27L] at 1.25gal/min [4.7L/min] 16in [406mm]W x 20in [508mm]D x 15in [381mm]H</p> <p>11-2640</p>	

## IsoMet® Precision Cutter Flanges

	<p><b>Aluminum Flange Set</b></p> <p>11-1192 1.38in [35mm] 11-1191 1.75in [44mm] 11-2679 2.5in [64mm] 11-2282 3in [76mm] 11-2283 4in [102mm] 11-2284 5in [127mm]</p>		<p><b>Stainless Steel Flange Set</b></p> <p>11-2688* 3in [76mm] 11-2689* 4in [102mm]</p> <p><i>*Recommended for the IsoMet High Speed</i></p>
---	--	---	---

## Precision with Flexibility

The gravity-fed machines in the IsoMet family provide great versatility in holding all types of sample shapes and configurations.

### IsoMet® 1000

The IsoMet 1000 is a precision sectioning saw designed for cutting various types of materials with minimal deformation. Targeted for delicate parts by only using gravity fed force.

*\*Includes 6in 15LC diamond blade, 3in aluminum flanges and the following chucks: Single Saddle, Bar & Tube, Wafer and Irregular Specimen*

Part Number	Voltage
11-2180	85-264VAC, 50/60Hz

#### Accessories

##### Table Saw Attachment

Transform the machine into a manual table saw, ideal for electronics and other planar cutting applications

11-2182 Table Saw Attachment



**Dimensions:** 15.5in [394mm]W x 20.25in [514mm]D x 24.5in [622mm]H open  
12in [305mm]H closed

**Weight:** 56lbs [25kg]

### IsoMet® Low Speed

The IsoMet Low Speed is a precision sectioning saw designed for cutting various types of materials with minimal deformation. Targeted for delicate parts by only using gravity fed force.

*Includes 4in IsoMet Blade, assorted weights, dressing stick, flanges and the following chucks: single saddle, irregular specimen and wafer*

Part Number	Voltage	Units
11-1280-160	115VAC, 50/60Hz	Inches
11-1280-170	115VAC, 50/60Hz	Millimeters
11-1280-250	230VAC, 50/60Hz	Millimeters



**Dimensions:** 10.5in [267mm]W x 12in [305mm]D x 13in [330mm]H  
**Weight:** 25lbs [11.3kg]

## Tips, Tricks & Techniques



For the best performance from your Precision Cutter System:

- Always tightly clamp your sample
- Use double saddle chucks for long parts such as rods
- Do not hand dress blades
- Mount spheres, unusual shapes and friable materials
- Use the largest flange for your blade and specimen
- Soft, gummy materials can build up on the blade during the cut and may require dressing while sectioning these materials.

## IsoMet® Low Speed Cutter Accessories

### Goniometer



Positions specimen along 3 axis

[11-2381](#)

### Manual Feed Control Dressing Chuck



Enables blade dressing without removing the sample fixture

[11-1196](#)

### Splash Guard Kit



Prevents lubricant from splashing out of saw

[11-1199](#)

## IsoMet® Low Speed Cutter & 1000 Accessories

### Swivel Arm Assembly



Swivels to position specimen cutting surface perpendicular to blade (replaces support arm provided with cutter)

[11-1181](#)

### Bar & Tube Chuck



Securely holds end of a bar tube up to 2in [50mm] long and 0.5in [13mm] in diameter

[11-1184](#)

### Wafer Chuck



Use mounting wax, 40-8150 or 40-8145 to glue specimens to wafer chuck  
1.125 x 2in [29 x 51mm]

[11-1186](#)

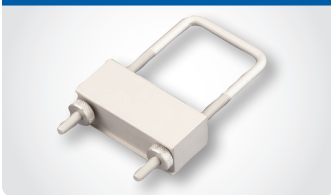
### Vacuum Chuck



Holds specimens mounted to glass slides to chuck with vacuum force

[11-1188](#)

### Small Bone Chuck



Ideal for clamping bone, plastics, or other semi-rigid solids up to 1.5in [32mm] in diameter

[11-1194](#)

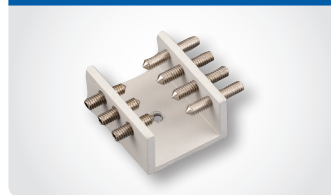
### Double Saddle Chuck



Small Double Saddle Chuck that securely holds specimen up to 0.875in [22mm] from 2 points

[11-1183](#)

### Irregular Specimen Chuck



Adjusts to hold irregular shaped specimens up to 1in [25mm] in diameter

[11-1185](#)

### Single Saddle Chuck



Holds specimens up to 0.75in [19mm] in diameter

[11-1187](#)

### Mount Chuck



Aluminum chuck holds mounted samples  
1-1.25in [25-32mm]

[11-1189](#)

## IsoMet® 1000 Accessories

### Table Saw Splash Guard



Catches splashing lubricant when used in conjunction with the Table Saw Attachment (11-2182)

11-2186

### Table Saw Attachment



Transforms gravity fed IsoMet 1000 into convenient table saw

11-2182

### 800 gram Weight Set



Additional weights for gravity fed saws

11-2183

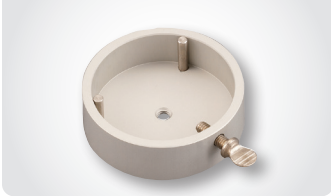
### Swivel Arm Accessory



Swivels to position specimen cutting surface perpendicular to blade (*replaces provided support arm*)

11-2184

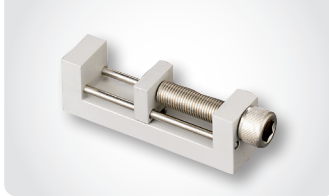
### Mount Chuck



Holds mounted samples 1.5in [40mm]

11-2489

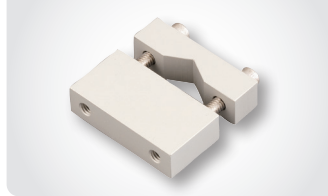
### Fastener Chuck



Holds specimen from 0.96in [24.5mm] to 2in [50mm] for longitudinal sectioning

11-2482

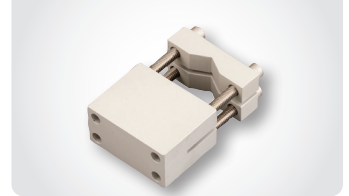
### Single Saddle Chuck



Medium Single Saddle Chuck holds up to 1in [25mm] specimen

11-2487

### Double Saddle Chuck



Large Double Saddle Chuck that securely holds specimen up to 1.5in [38mm] from 2 points

11-2483

### Small Glass Slide Chuck



Holds 27 x 46mm, 1 x 2in, or 1 x 3in glass slides

11-2484

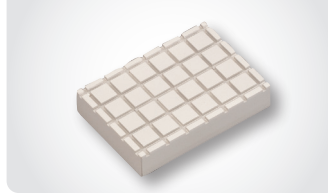
### Large Glass Slide Chuck



Holds 2 x 3in glass slides

11-2488

### Wafer Chuck



Use mounting wax (40-8150) to adhere specimens to wafer chuck 1.75 x 2.5in [44 x 64mm]

11-2486



## Precision Sectioning Blades for IsoMet® Cutters, 0.5in [12.7mm] Arbor (Qty 1)

[Blade Thickness is listed under Part Number]

Recommended Use	3in [76mm]	4in [102mm]	5in [127mm]	6in [152mm]
Use with Saws	All	All	All	1000 IsoMet High Speed
<b>IsoMet 30HC</b> - Polymers Rubber, Soft Gummy Materials, epoxies			11-4239 0.030in [0.76mm]	
<b>IsoMet 20HC</b> - Aggressive general sectioning of non-ferrous materials			11-4215 0.020in [0.5mm]	
<b>IsoMet 15HC</b> - Blades for routine use, metal matrix composites, PC boards, bone, titanium, thermal spray coatings, otoliths	11-4243 0.006in [0.15mm]	11-4244 0.012in [0.3mm]	11-4245 0.015in [0.4mm]	11-4246 0.02in [0.5mm]
<b>IsoMet 20LC</b> - Hard tough materials, structural ceramics, boron nitride, silicon nitride			11-4225 0.02in [0.5mm]	
<b>IsoMet 15LC</b> - Hard and brittle materials, structural ceramics, glass, electronic substrates, alumina, zirconia, concrete	11-4253 0.006in [0.15mm]	11-4254 0.012in [0.3mm]	11-4255 0.015in [0.4mm]	11-4276 0.02in [0.5mm]
<b>IsoMet 10LC</b> - Medium to Soft Ceramics, Glass Fiber Reinforced Composites	11-4283 0.006in [0.15mm]		11-4285 0.015in [0.4mm]	
<b>IsoMet 5LC</b> - Soft, Friable Ceramics, Composites with Fine Reinforcing, CaF <sub>2</sub> , MgF <sub>2</sub> , Carbon Composites	11-4293 0.006in [0.15mm]		11-4295 0.015in [0.4mm]	
<b>IsoCut CBN</b> - Ferrous materials, nickel, cobalt, lead-based alloys and super alloys	11-4263 0.006in [0.15mm]	11-5264 0.012in [0.3mm]	11-5265 0.015in [0.4mm]	11-5266 0.02in [0.5mm]
Cup Grinder for Ceramic & Geological Materials			11-2740	

Recommended Use	7in [178mm]	8in [203mm]	Dressing Stick*
Use with Saws	1000 IsoMet High Speed	IsoMet High Speed Pro only	
<b>IsoMet 30HC*</b> - Polymers Rubber, Soft Gummy Materials	11-4241 0.03in [0.76mm]	11-4242 0.035in [0.9mm]	Blade should not be dressed
<b>IsoMet 20HC</b> - Aggressive general sectioning of non-ferrous materials	11-4237 0.025in [0.6mm]	11-4238 0.035in [0.9mm]	11-1190 11-2490
<b>IsoMet 15HC</b> - Blades for routine use, metal matrix composites, PC boards, bone, titanium, thermal spray coatings	11-4247 0.025in [0.6mm]	11-4248 0.035in [0.9mm]	11-1190 11-2490
<b>IsoMet 20LC</b> - Hard tough materials, structural ceramics, boron nitride, silicon nitride	11-4227 0.025in [0.6mm]	11-4228 0.035in [0.9mm]	11-1190 11-2490
<b>IsoMet 15LC</b> - Hard Brittle Materials, Glass, Al <sub>2</sub> O <sub>3</sub> , ZrO <sub>3</sub> , Concrete	11-4277 0.025in [0.6mm]	11-4279 0.045in [1.1mm]	11-1190 11-2490
<b>IsoMet 10LC</b> - Medium to Soft Ceramics, Glass Fiber Reinforced Composites	11-4287 0.02in [0.5mm]	11-4288 0.045in [1.1mm]	11-1290
<b>IsoMet 5LC</b> - Soft, Friable Ceramics, Composites with Fine Reinforcing, CaF <sub>2</sub> , MgF <sub>2</sub> , Carbon Composites			11-1290
<b>IsoCut CBN</b> - Ferrous materials, nickel, cobalt, lead-based alloys and super alloys	11-5267 0.025in [0.6mm]	11-5268 0.035in [0.9mm]	11-1190 11-2490

All Blades (Except 30HC) come with a Dressing Stick included. The Part Numbers shown in the table can be used for re-ordering the Dressing Sticks.

\* Use an IsoMet 30HC blade for cutting a PWB when using Table Saw Attachment



## AcuThin™ Abrasive Blades for IsoMet® Precision Cutters, 0.5in [12.7mm] Arbor (Qty 10)

[Blade Thickness is listed under Part Number]

Recommended Use	5in [127mm]	7in [178mm]	150mm	200mm
Tool Steel, hard steel, HRC45 & Up	10-4060-010 0.019in [0.48mm]			
Medium hard, soft steel, HRC45 & Below	10-4061-010 0.019in [0.48mm]			
Steel, Stainless Steel		11-4207-010 0.030in [0.76mm]		
Hard, soft non-ferrous materials		11-4217-010 0.030in [0.76mm]		
Tough materials and general use			1015998E 1mm	1020998E* 1.5mm

*\*IsoMet High Speed Pro Only*

## Additional Precision Cutting Consumables

### IsoCut® Fluid



Oil based coolant only for use with the IsoMet Low Speed Saw or any saw with a maximum speed of 500rpm

11-1193-032 1qt [0.95L]  
11-1193-128 1gal [3.8L]

### Glossy



Clear paste for keeping cutter windows clear

109003 2oz [60mL]

### Cool 3 Fluid



Water miscible fluid concentrate. Dilute coolant to 1:25 to 2:25, with water.

10-6001 33.8oz [1L]  
10-6004 1gal [4L]  
10-6010 2.6gal [10L]

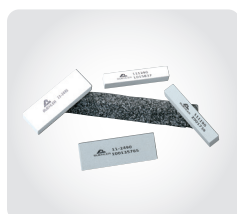
### Dressing Wheel



For IsoMet High Speed and High Speed Pro

11-2655 20 HC, 15HC, 20LC, 15LC, CBN HC, and CBN LC blades  
11-2656 10 LC and 5LC blades

### Dressing Sticks



11-1190 3 x 0.5 x 0.5in [76 x 13 x 13mm] for 20HC, 15HC, 20LC, 15LC, CBN LC and CBN HC precision blades

11-2490 3 x 1 x 1in [76 x 25 x 25mm] for 20HC, 15HC, 20LC, 15LC, CBN LC and CBN HC precision blades  
11-1290 3 x 0.5 x 0.5in [76 x 13 x 13mm] for 10LC and 5LC precision blades



## Excellent cut quality for delicate samples

Buehler offers a complete solution for preparation of thin sections, bulk mounts, or as a powder such as mineral tailings. Each preparation method is dependent on the type of material and the examination method, and starts with proper sample sectioning and mounting.

### PetroThin<sup>®</sup>

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.

#### Precise Cut Location Control

- Two precision micrometers are used for controlling re-sectioning and thinning
- Precision of resections and grinds material within  $\pm 5\mu\text{m}$

#### Increase Accuracy and Parallelism of Samples

- Single spindle design ensures parallelism of sample by eliminating the need to remove the glass slide between diamond cutting blade and diamond grinding cup steps

*\*8in diamond blade and an 8in diamond grinding cup included*



Dimensions: 23.5in [597mm] x 19in [483mm] x 16in [406mm]  
Weight: 94lbs [43kg]

Part Number	Voltage/Frequency
38-1450-160	115VAC, 60Hz
38-1450-250	220VAC, 50Hz

## Petrography Accessories



#### PetroBond<sup>™</sup>

Thin section bonding fixture assists in bonding specimens to glass slides, accurately controlling the thickness of the bonding media. Applies continuous pressure until sample has completely cured. Controls adhesive thickness by evenly distributing adhesive. Can hold up to 12 slides.

38-1490



#### PetroVue<sup>™</sup>

Thin Section Viewer  
Polarized light allows monitoring of thickness & uniformity of the specimen.

30-8050-220 220VAC, 50/60Hz

## PetroThin Consumables



Part Number	Description
11-4278	Continuous Rim Diamond Blade, 8 x 0.045 x 1in [203 x 1 x 25mm]
40-4508	Diamond Cup Grinding Wheel, 8 x 0.25 x 1in [203 x 6 x 25mm]
40-4510	Dressing Stick, 0.5 x 0.5 x 4in [13 x 13 x 102mm]

Shelf life is defined as the length of time listed products are considered best suitable for performance. This does not mean that a product will not perform beyond this time period, nor does it mean that the product will be usable continuously for this time frame. The shelf life is independent of the warranty\* period as defined below. The shelf life depends on proper storage - i.e. Abrasive Cut-Off Wheels must be stored lying flat and in a dry location. Stored standing up or in a humid area breaks down the wheel composition.

Product Name	Shelf Life**
Abrasive Cut Off Wheels	2 years
CarbiMet Paper, PSA or S Backed	1 year
CarbiMet Paper, Plain Backed	2 years
Acrylic Systems	1 year
Aluminum Oxide Powder	2 years
Apex® Bimetallic Plate	1 year
Apex CGD and DGD	1 year
ApexHercules Grinding Disc	1 year
Apex Magnetic Disc	1 year
Apex S Carrier Films	1 year
AutoMet® Lapping Oil	2 years
Cool 3 Fluid	2 years
Diallyl Phthalate Powder	2 years
Epoxy Systems	1 year
EpoMet® F & G Powder	1 year
FibrMet® Discs PSA Backed	2 years
Flat Edge Filler	2 years
IsoCut® Cutting Fluid	1 year
KonductoMet Powder	1 year
MasterMet® 2	3 years
MasterMet	2 years
MasterPolish®	1 year
MasterPrep	2 years
MetGrip® Liners	1 year
MetaDi® Fluid	2 years
MetaDi® Suspensions & Pastes	2 years
MicroPolish Alumina Suspension & Powder	1 year
PhenoCure® Powder & PreMolds	2 years
Pigments for Castable Mounts	1 year
Planar Grinding Stones	2 years
Polishing Cloths with PSA	1 year
Powdered Mold Release	2 years
ProbeMet® Powder	1 year
Release Agent	1 year
Silicon Carbide Powder	2 years
TransOptic Powder	1 year
UltraPrep® Diamond Lapping Film	1 year
Wafering Blades	1 year

\*Warranty depends on Quality Assurance/Lab evaluation on an individual basis

\*\*Shelf life starts when product is shipped

See Terms & Conditions for warranty information