



**BUEHLER**

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# IsoMet™ Low Speed Saw

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### **Our Mission Statement**

Buehler's mission is to be recognized as the global leader in the materials preparation and analysis industry, providing our users with innovative & robust full-lab solutions, reliable service, support & access to the knowledge that comes from serving the industry for 80+ years. We also strive to achieve our goals following the ITW business model upholding the company values of integrity, respect, trust, shared risk and simplicity at all times.

**Strong Partner, Reliable Solutions**

# ***EC – DECLARATION OF CONFORMITY***

<b>Name of Manufacturer and contact information:</b>	 <b>BUEHLER</b> An ITW Company ITW Test & Measurement (Shanghai) Co., Ltd. Building 13A, No. 88 Xijunhuan Road, Block F, Caohejing Hi-tech Park, Pujiang, Minhang, Shanghai 201114, China
<b>Contact information of Buehler's authorized representative within the Community:</b>	ITW Test & Measurement GmbH Boschstrasse 10 73734 Esslingen am Neckar, Germany (49) (0) 711 4904690-0 / www.buehler.com <b>Juergen Vossbruch</b>
<b>Machine Name and Description:</b>	<b>Name:</b> IsoMet™ Low Speed Saw <b>Catalog Number:</b> 11-1280-xxx (voltage specified) <b>Description:</b> Precision sectioning saw designed for cutting all types of materials with little or no deformation
<b>Machine Serial Number:</b>	Month Code – ISF – Number of units built. (Every unit assembled is registered in our database.)
Buehler declares this product to be in compliance with EC Directive(s):	
2006/42/EC according to the following standards: EN ISO 12100-1: 2010 EN 60204-1: 2006	2004/108/EC according to the following standards: EN 61326-1:2006
<b>Quality Management System: (ISO 9001:2008)</b>	Registered firm: Underwriters Laboratories, Inc. QMS Cert. # 10001679 1130 W. Lake Cook Road / Suite 340 Buffalo Grove, IL 60089 / USA
<b>This machine is CE-marked:</b>	<b>Minhang, Shanghai, China, 1/2/2018</b>
<b>Prepared by:</b>	Arnold Buchanan, Electrical Engineer 

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# Table of Contents

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Buehler Worldwide Mission Statement .....	i
IsoMet Low Speed Saw .....	1
Warranty.....	2
18 Month Limited Equipment Warranty .....	2
6 Month Service Warranty .....	2
Instructions for Warranty Claims .....	2
Instructions for Technical Support.....	2
Specifications .....	3
Safety Information .....	4
Machine Use and Care .....	4
Safety Terms .....	5
Unpacking .....	5
Electrical Installation .....	6
Installation .....	7
Blade Installation .....	7
Blade Lubrication.....	9
Operation.....	10
Loading the Saw.....	10
Cut-off Switch Adjustment .....	11
Weight Selection.....	11
Sample Adjustment .....	11
Sample Cutting .....	12
Maintenance.....	13
Motor and Drive Belt Replacement.....	13
Micrometer Screw Assembly .....	15
Replacing Micrometers.....	16
Buehler Environmental Policy: .....	17
IsoMet Low Speed Saw Accessories.....	30
Diamond Wafering Blades.....	33

## IsoMet Low Speed Saw

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The IsoMet Low Speed Saw is a precision sectioning saw designed for cutting all types of materials with little or no deformation. Its low kerf loss capability and great versatility in holding all types of sample shapes and configurations give the IsoMet Low Speed Saw the capability to cut virtually any material including brittle or ductile metals, composites, cements, laminates, plastics, electronic devices, and biomaterials.

Using relatively low speeds (0-300 rpm) and application specific continuous rim diamond blades, the IsoMet Low Speed Saw achieves an *as cut* surface which is generally free of damage and distortion.

The IsoMet Low Speed Saw models include:

- 11-1280-160 IsoMet Low Speed Saw with *inch* micrometer
- 11-1280-170 and 11-1280-250 IsoMet Low Speed Saws with a *metric* micrometer

# Warranty

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## 18 Month Limited Equipment Warranty

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Buehler warrants all new serialized equipment for a period of 18 months starting from the date of delivery from the common carrier, when operated under recommended guidelines and when properly installed and maintained as determined by Buehler. The warranty is void if inspection shows evidence of abuse, misuse, unsafe use or unauthorized repair. This warranty covers all Buehler costs associated with the replacement of defective materials (e.g., parts and labor).

## 6 Month Service Warranty

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Buehler warrants that the services it provides to its customer will conform with any mutually agreed upon specifications or statements of work. The Services, and any service parts, are warranted for a period of 6 months from the date of completion of the Services. Buehler's sole liability and the customer's sole remedy under the Services Warranties will be for Buehler, at its option, to re-perform the Service or to credit the customer's account for such Services.

## Instructions for Warranty Claims

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In order to make a claim under Buehler's Limited Equipment Warranty, please contact Buehler Service through [www.buehler.com](http://www.buehler.com). Please have the following information available when contacting Buehler:

1. Customer Purchase Order Number
2. Buehler Invoice Number and Date
3. Serial Number of Equipment
4. Reason(s) for Warranty Claim

If the Equipment must be returned to Buehler for warranty service, you must receive prior authorization and a Return Material Authorization Number ("RMA") prior to the return.

## Instructions for Technical Support

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Pursuant to the terms of Buehler's Equipment Warranty, Buehler offers its customer unlimited technical support over telephone or email. In order to take advantage of this service, customers may contact Buehler Service at [www.buehler.com](http://www.buehler.com) or at the following contact details:

Region	Email	Phone	Phone Hours (local time)
Americas	<a href="mailto:service@buehler.com">service@buehler.com</a>	+1 847 295 6500	M-F 8:00-16:00
Europe	<a href="mailto:service.eu@buehler.com">service.eu@buehler.com</a>	+49 0 711 4904690-0	M-F 8:00-16:00
Asia	<a href="mailto:service.sh@buehler.com">service.sh@buehler.com</a>	+86 400 000 3418	M-F 8:00-16:00
Japan	<a href="mailto:info.japan@buehler.com">info.japan@buehler.com</a>	+03-5439-5077	M-F 8:00-16:00

For more information regarding the warranty policy and claim instructions, visit: [www.buehler.com](http://www.buehler.com).

## Specifications

<b>11-1280 IsoMet Low Speed Saw</b>	
Dimensions	10 ½" W x 6 ¼" H x 10 ½" D ( 270 mm x 160 mm x 270 mm)
Motor	1/50 (15 W) HP DC 0 – 300 rpm
Electrical	11-1280-160 & 11-1280-170: ..... 115 Volt, 50/60 Hz, 1Phase 11-2680-250 ..... 230 Volt, 50/60 Hz, 1Phase
Decibels	(No Load, 12 inches away level from machine) 74 dB
Weight	25 lbs (11.3 kg).

## Safety Information

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For safe installation and operation of this equipment, carefully read and understand the contents of this manual. Improper operation, handling, or maintenance can result in severe personal injury and equipment damage.

The IsoMet Low Speed Saw for use in dry, indoor laboratory and workshop environments away from strong electromagnetic fields and with normal temperature ranges (41° F to 104° F / 5° C to 40° C) and non-condensing humidity ranges (30-90%).

### Machine Use and Care

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**All operators should be trained in the use of cutting machines.** If training is needed contact Buehler at 800.BUEHLER (800.283.4537) or your local Buehler Sales Representative.

**Always use safety glasses.** Flying debris and liquids can cause severe eye injury.

**Dress properly.** Protective equipment should be worn to handle samples, which may be sharp or hot.

**Do not operate machine in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Sparks may ignite the dust or fumes. Flammable material such as magnesium must not be used with the IsoMet Low Speed Saw.

**Maintain the IsoMet Low Speed Saw with care.** Properly maintained machines are less likely to bind and are easier to control. Any alteration or modification is a misuse and may result in a dangerous situation.

**Only qualified repair personnel must perform machine service.** Service or maintenance performed by unqualified personnel could result in a risk of injury.

**Replace damaged or defective parts immediately and use only identical replacement parts.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electrical shock or injury.

**Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the machine operation.** If damaged, have the machine serviced before using. Poorly maintained machines cause many accidents.

**Machine coolant can present a biological hazard if not maintained correctly.** Change the coolant regularly in accordance with local regulations and safety practices.



## Safety Terms

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**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



**NOTICE** indicates practices not related to personal injury.

## Unpacking

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The IsoMet Low Speed Saw has been carefully packaged to protect it during transit from the factory to your location. Carefully unpack and check contents. If any components are missing or damaged, save the packing list and materials and advise the carrier and Buehler of the discrepancy.

Carefully unpack and check that the following items have been received:

- Balance Weight Shaft
- Counter-balance Weight
- Diamond Wafering Blade
- Dressing Stick
- Spanner Wrench
- Weights
- Weight Shaft
- 1/2 x 5/8 Wrench
- 2 Allen Wrenches
- 4 Chucks



**Equipment Damage.** The IsoMet Low Speed Saw weighs 25 lbs (11.3 kg). Follow local safety practices to lift the IsoMet Low Speed Saw unit from the shipping carton. Improper lifting can result in machine damage.

**Personal Injury.** Improper lifting of the IsoMet Low Speed Saw can result in personal injury.

The IsoMet Low Speed Saw is mounted to a wooden base for protection during shipping. Open areas are provided at the corners of the base for ease of lifting. Lift the IsoMet Low Speed Saw out of the carton and position it on a table so it overhangs the edge. Remove all bolts securing the IsoMet Low Speed Saw to the wood base.

## Electrical Installation

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**Electrical Shock Hazard.** Only a qualified electrical technician should perform electrical installation and maintenance.

**Electrical Shock Hazard.** Do not change the power plug in any way. Buehler machines are equipped with a polarized plug (one blade is wider than the other) and a ground pin. Polarized plugs reduce the risk of electrical shock. This plug will fit in a polarized outlet only one way.

- ***Disconnect the power supply before making any electrical adjustments. Install a lockout tag and follow lockout tag procedures to prevent any accidental starting of the machine.***
- ***The machine may retain a charge even if the unit is disconnected from the power supply. Do not open the IsoMet Low Speed Saw.***

Installation of the IsoMet Low Speed Saw must comply with local electrical standards or codes of practice.

The Specification Plate is located on the back of the IsoMet Low Speed Saw. Check that the Specification Plate values for voltage, current, and power consumption are compatible with the intended electrical supply before installation.

The IsoMet Low Speed Saw is equipped with an IEC cord connector and is supplied with the appropriate power cord for the country of use.

The IsoMet Low Speed Saw can be plugged into an outlet rated for the voltage and frequency listed on the Specification Plate.

## Installation

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Select a location for your IsoMet Low Speed Saw that provides an adequate working space and a power source.

Placement of the IsoMet Low Speed Saw should be on a sturdy, level table.

### Blade Installation

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1. Remove the thumbscrew, end-cap bushing, and outer flange from the drive shaft.
2. Install the blade on the drive shaft against the inner flange (see Figure 1).
3. Replace the outer flange and end-cap bushing.
4. Tighten the thumbscrew (**do not** over tighten).

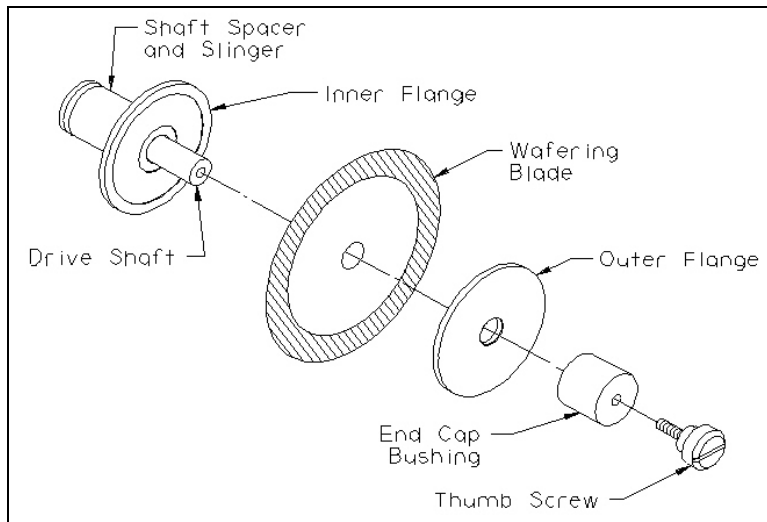


Figure 1: Blade Installation Diagram

### NOTICE

Smaller flanges must be installed when using the 11-1188 Chuck (used for thin sections) or the 11-1189 Chuck (used for 1-inch and 1¼ inch diameter specimens).

### CAUTION

**Equipment Damage. Use appropriate flanges. Flanges provide support for wafering blades. Failure to provide adequate flange support may result in curved cuts and damaged blades. Always select the maximum flange diameter to match the size of the specimen.**

## Wafering Blades

Before installing a wafering blade, place the end-cap bushing, screws, and flanges in a mild detergent solution to remove any particles from previous cuts. This will help prevent blade misalignment and poor quality cuts.

New wafering blades, including the original equipment blade, need to be dressed before making any sample cuts. Dressing removes debris and exposes the abrasive grain to provide quality cuts.

Older blades may need to be dressed as required by the properties of the sample material. When cutting metal samples it may be necessary to dress the blade after each cut.

1. To dress a blade, position the dressing stick in the 11-1187 Saddle Chuck.
2. Make thin transverse cuts through the dressing stick (or use an 11-1196 IsoMet Dressing Chuck).

The IsoMet dressing chuck enables blade dressing without removing the sample fixture.



**Equipment Damage. Feeding the dressing stick or any sample materials manually into the blade will result in damage to the blade.**

## Blade Lubrication

The IsoMet uses the *Drag Principle of Lubrication*, in that lubricant is carried to the sample on the edge of the blade.

Cool 3 Cutting Fluid reduces cutting time and produces superior quality cuts. The use of Cool 3 Cutting Fluid promotes effective lubrication, allowing the diamond particles to cut cleanly, minimizing blade loading, and providing a clean release from the blade and work surface.

1. Fill the lubricant pan with Cool 3 Cutting Fluid to a level that will immerse blade approximately ¼-inch.

### NOTICE

**Discard and replace the lubricant when it becomes contaminated with sludge and debris.**

2. Remove the lubricant pan by lifting off the door on the right side of the saw (see Figure 2).
3. Grasp the knob on the slide-lock and pull the slide-lock out until the lock disengages.
4. Lower the lubricant pan support tray and swing it out. This will enable the lubricant pan to be emptied.
5. Clean the pan and specimen basket.
6. Replace the basket and pan in the tray.
7. Swing the tray back into the unit.
8. With light pressure on slide-lock, lift the tray up until the slide-lock engages.
9. Press the slide-lock in to secure the tray.
10. Refill with fresh lubricant.

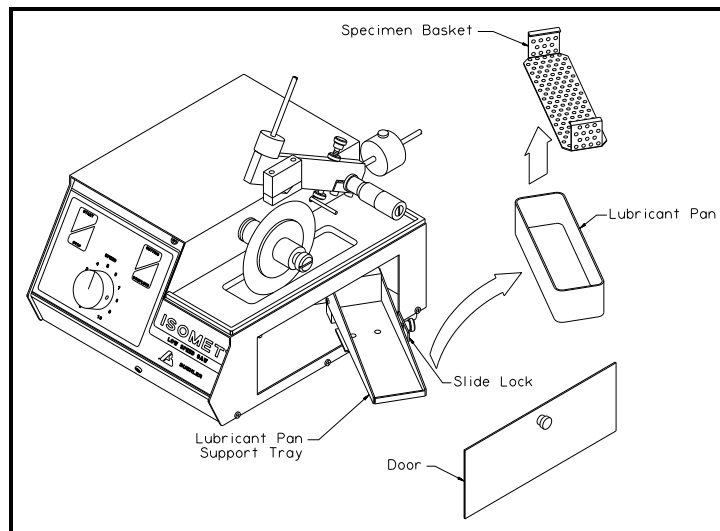


Figure 2: Lubrication Pan Diagram

## Operation

The first step in many material preparation methods is the initial sectioning of the sample. During this step it is important to avoid using methods or techniques that will introduce excessive damage to the sample material.

### Loading the Saw

1. Loosen the set knob (see Figure 3).
2. Place the counter-balance weight on the rear of the counter-balance weight shaft. This will hold the support arm in an upright position.
3. Select the proper chuck for the application and clamp the sample in place.

To clamp odd or irregular shaped samples it may be necessary to insert strips of metal between the sample and chuck.

4. Attach the loaded chuck to the support arm with the chuck-mounting thumbscrew.  
  
If a larger chuck is used or a heavy specimen is supported in the chuck, the optional socket head cap screw can be used to mount the chuck.
5. After the chuck is secured, adjust the micrometer head to move the support arm to the far left.
6. Slide the counter-balance weight to the front of the counter-balance weight shaft until proper balance is reached.
7. Tighten the set knob.

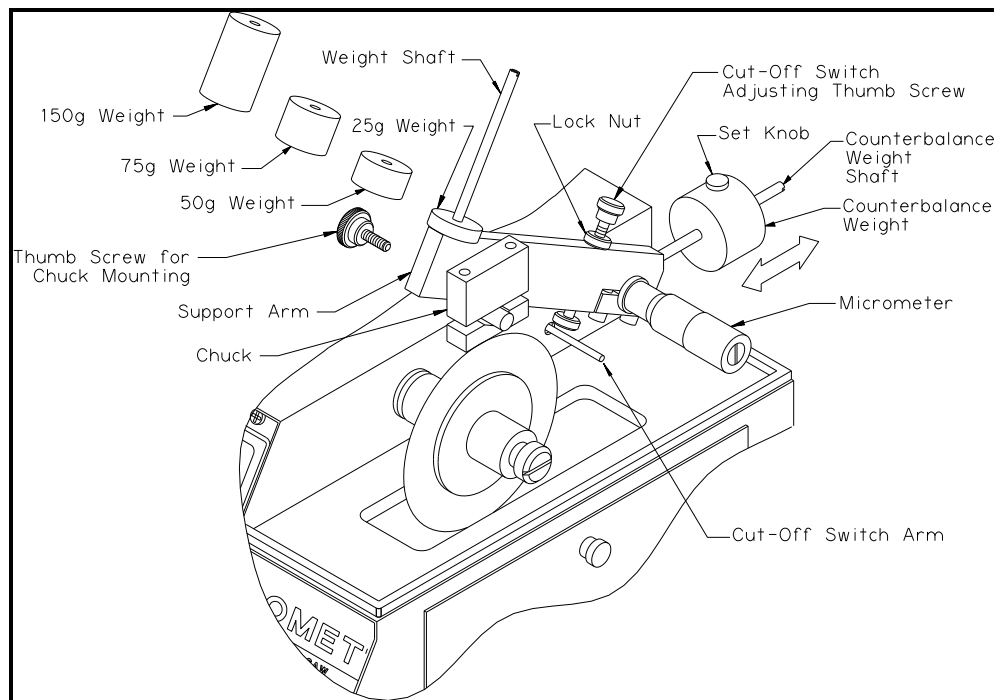


Figure 3: Weight Balance Diagram

## Cut-off Switch Adjustment

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The cut-off switch adjusting thumbscrew applies pressure to the cut-off switch arm and disengages the blade. The cut-off switch adjusting thumbscrew can be adjusted to disengage the blade at the end of a cut or just before the cut is complete.

1. Depending on the sample size, adjust the thumbscrew in the support arm to disengage the saw (see Figure 3).
2. By disengaging the saw before a cut is complete the weight on the cut is reduced and prevents possible burring or cleaving of fragile materials.

## Weight Selection

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Cutting loads can be applied to the holding arm in increments of 25 grams and the sample weight can be zeroed-out through the use of a counter-balance.

- Intermediate weights are applied by carefully adjusting the counter-balance weight at the rear of the support arm.
- Light weights are recommended. The heavier the load, the greater the surface damage to the specimen.



**Equipment Damage. When loading weights do not scratch the blade or drop the specimen on the blade edge.**

## Sample Adjustment

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The sample holding arm incorporates a precise micrometer adjustment for aligning the sample before cutting.

1. Adjust the micrometer to position the sample for cutting (see **Figure 3**).

## Sample Cutting

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1. Hold the Specimen Arm by hand above the blade.
2. Adjust the SPEED control knob to the desired speed (see Figure 4).

### NOTICE

**Faster speeds, like heavier weights, tend to damage the sample surface. Determine the importance of cutting time versus surface conditions in each case.**

**Settings of about 200 rpm are recommended for general use (approximately 6-7 on the SPEED control).**

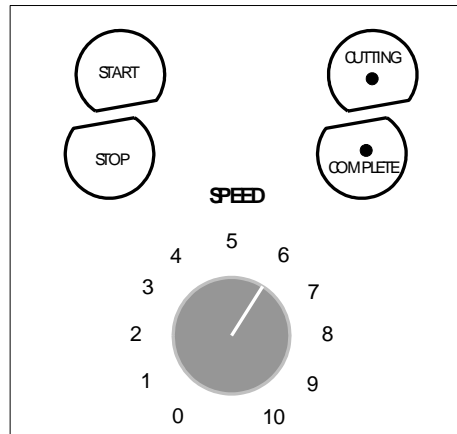


Figure 4: IsoMet Low Speed Control Panel

3. Set the SPEED.
4. Press the START button.
5. Carefully lower the specimen arm on the blade to begin cutting.  
The CUTTING indicator light will come on when the START button is pressed. (The blade will not start rotating until the SPEED is set above the zero (0) setting.)
6. When the cut is completed, the cut-off switch arm is automatically pressed and stops the saw.
7. The COMPLETE indicator light will light up.



**The Power switch on the back of the IsoMet is also a 2-pole circuit breaker, providing protection for the IsoMet in the event of an overload. Continual tripping of the circuit breaker indicates a problem within the unit.**



## Maintenance

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The IsoMet Low Speed Saw will continue to perform at optimum levels with proper care, daily cleaning, and general maintenance.

### NOTICE

**When the IsoMet is used in a Hot Cell or Glove Box, the inert atmosphere may cause excessive motor brush wear. Brushes may need to be replaced monthly. This replacement is not covered under the warranty,**

### Motor and Drive Belt Replacement

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To replace the motor (1280S195) or drive belt (R10066) the front and back panels of the IsoMet need to be removed.

1. ***Disconnect the power supply to the IsoMet.***
2. Remove the two screws (3000S104) securing the front panel (see Figure 5).
3. Push the panel out from inside the lubricant tray compartment.
4. Disconnect the electrical plug from the socket.
5. Remove the panel.
6. Remove the three small screws (1180S68) securing the back panel.
7. Push the back panel out.

#### Remove the Motor

1. Disconnect the 2 leads from the motor control board and the single ground wire from the base plate.
2. Unscrew the four screws (R2405) on the bottom of the base plate.

#### Replace the Belt

1. Loop the new belt over the drive shaft pulley (see Figure 6).
2. Slip the belt on the larger pulley (1280S196). Do not stretch the belt excessively during installation.

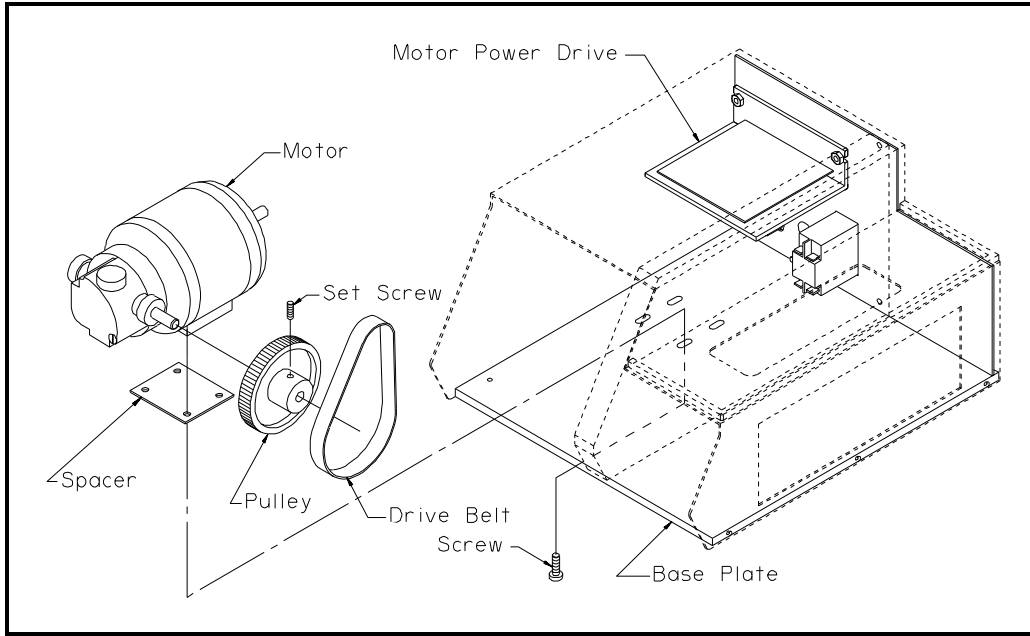


Figure 5: Motor Diagram

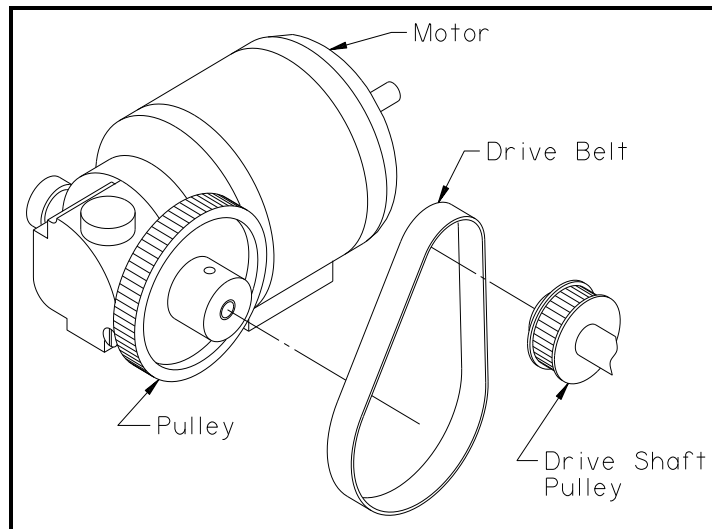


Figure 6: Belt Diagram

## **Micrometer Screw Assembly**

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### **Cleaning the Micrometer Screw**

1. Remove the end screw with the spanner wrench.
2. Loosen the thimble by tapping against the end of the thimble with a plastic hammer or screwdriver handle.
3. Carefully remove the thimble from the shaft.
4. Clean the exposed assembly with a grease solvent to remove residues and contaminant particles.

### **Adjusting the Micrometer Screw**

1. Attach the provided spanner wrench to the hole in the adjusting nut.
  - Turn counterclockwise to loosen, clockwise to tighten.
2. Lubricate the assembly with #1620 Starrett Tool and Instrument Oil or its equivalent.
3. Re-install by lining up the 0-line on the thimble with the graduated index line on the sleeve.
4. Hold the thimble in place and tighten the end screw.

## Replacing Micrometers

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Remove the exterior case of the IsoMet to replace the Micrometer or exchange English and Metric Scale Micrometers.

1. ***Disconnect the power supply to the IsoMet.***
2. Remove shaft thumbscrew, end-cap bushing, flanges, blade, and spacers.
3. Remove the arm assembly by removing two screws holding the clamp to the arm.
4. Remove Micrometer thimble.
  - Remove the end screw with the spanner wrench.
  - Loosen the thimble by tapping against the end of the thimble with a plastic hammer or screwdriver handle.
  - Carefully remove the thimble from the shaft.
5. Swing out the support tray and remove lubricant pan with the basket.
6. Remove six screws (three on each side) securing the case to the base plate.
7. Remove two front screws.
8. Remove the front panel and disconnect the electrical plug.
9. Remove the three rear screws.
10. Pull the rear panel back but do not fully remove the back panel. The wires should remain connected and allow enough space for the case to clear.
11. Tip the case toward the shaft side and slide the case over the shaft, micrometer spindle, and cut-off switch arm.
12. Re-assemble in reverse sequence. Do not pinch the electrical wires or bend the micrometer spindle, cut-off switch arm, or the blade shaft.

## **Buehler Environmental Policy:**

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Buehler is committed to complying with accepted environmental practices, including the commitment to meet or exceed applicable legal and other requirements, to strive for continual improvement in our environmental management system, and to minimize the creation of wastes and pollution. We at Buehler will, therefore, manage our processes, our materials, and our people in order to reduce the environmental impacts associated with our products.

To help conserve natural resources and to protect human health and environment, please follow your state and local regulations on recycling and disposing of waste, consumables, or parts related to your Buehler machine.

For End Of Life on Buehler machines, if recycling and disposal facilities are not available in your area, please call Buehler Service at 1.800.BUEHLER (283.4537) or email at [service@buehler.com](mailto:service@buehler.com). We will provide options on how to properly recycle and dispose of your Buehler machine.

# IsoMet™ Low Speed Drawings

**Note:** Drawings and part numbers are subject to change without notice.

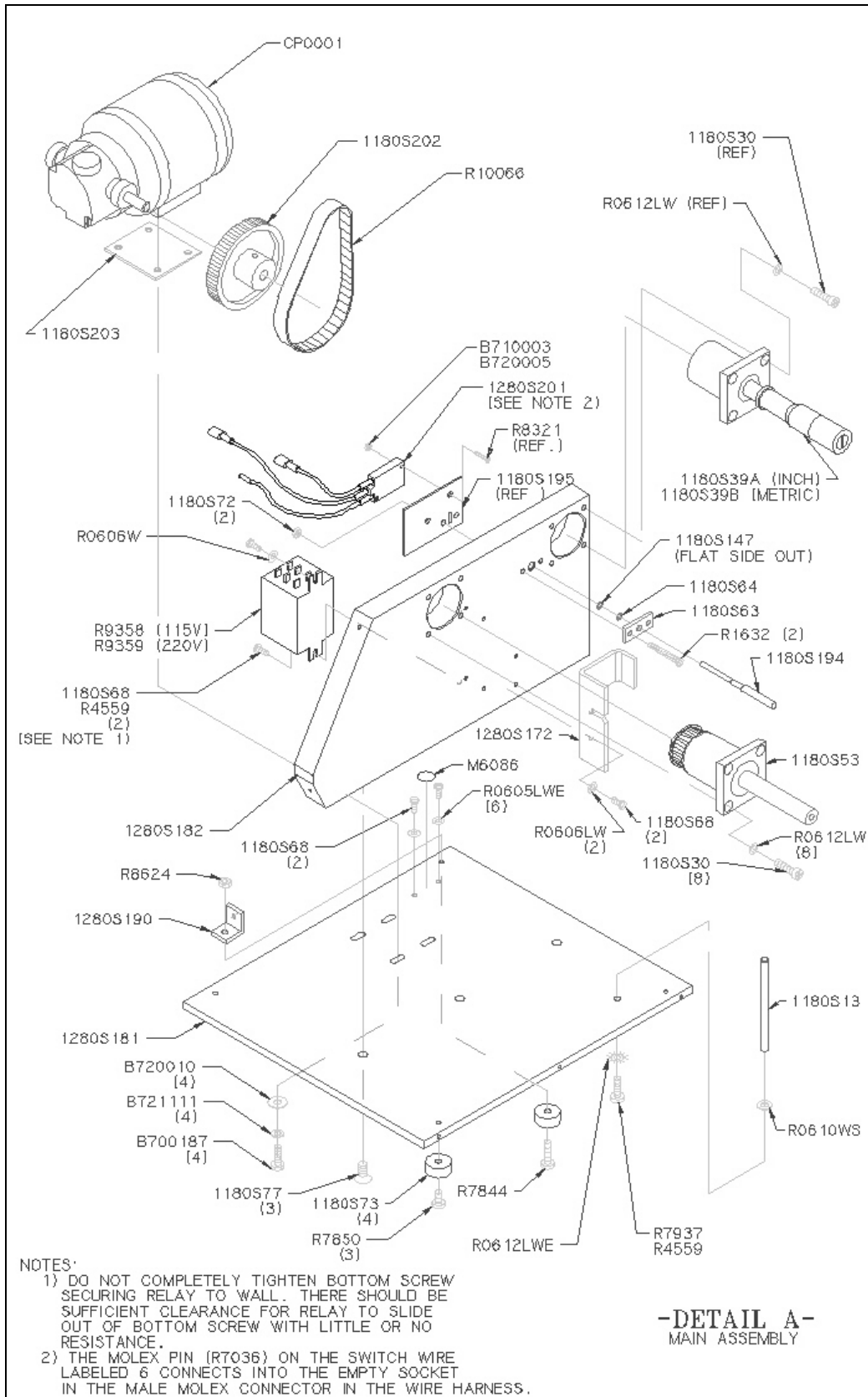


Figure 7: IsoMet Low Speed Saw Assembly Detail A (1280901C)

# IsoMet™ Low Speed Drawings

**Note:** Drawings and part numbers are subject to change without notice.

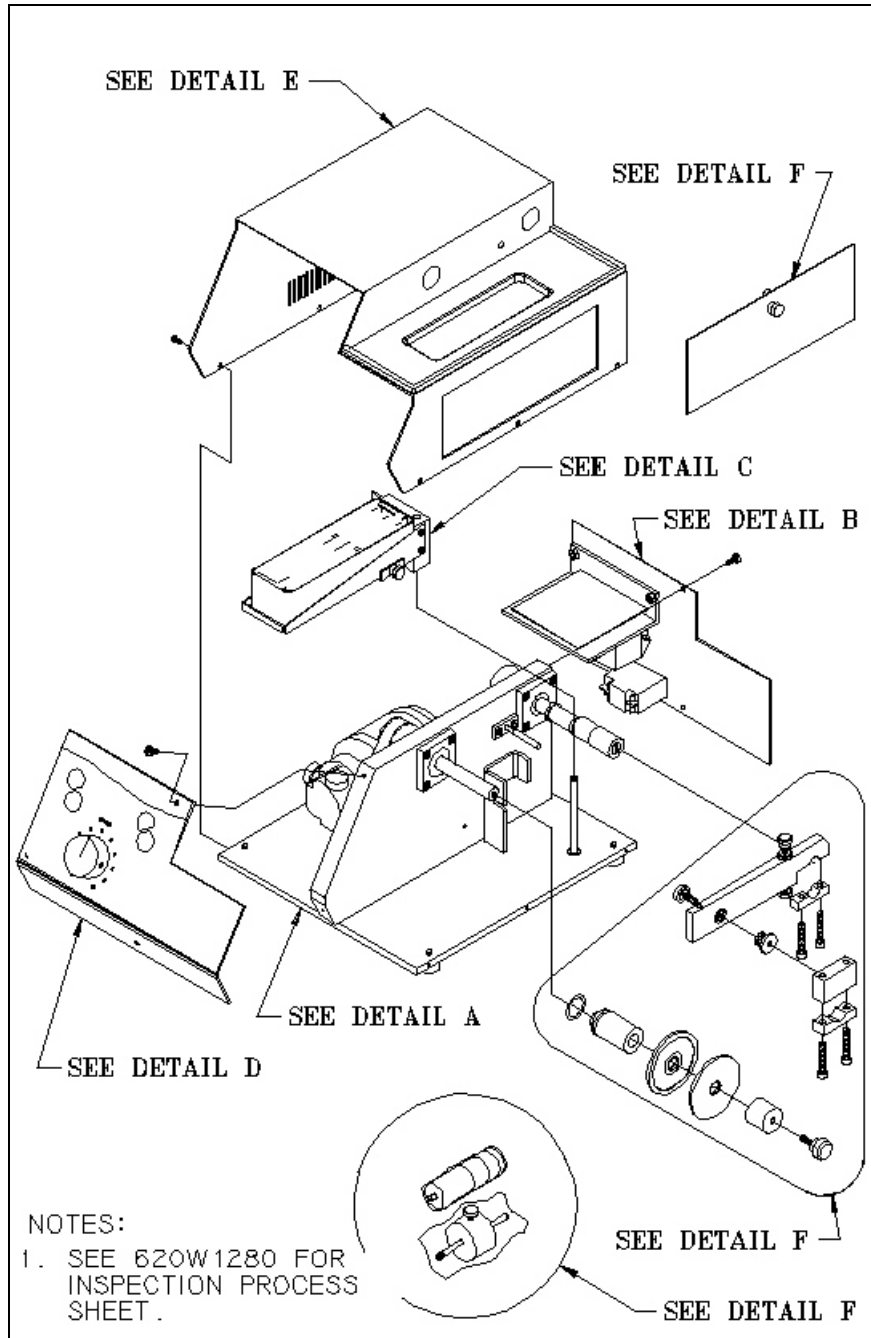


Figure 8: IsoMet Low Speed Saw Assembly (1280900B)

# IsoMet™ Low Speed Drawings

**Note:** Drawings and part numbers are subject to change without notice.

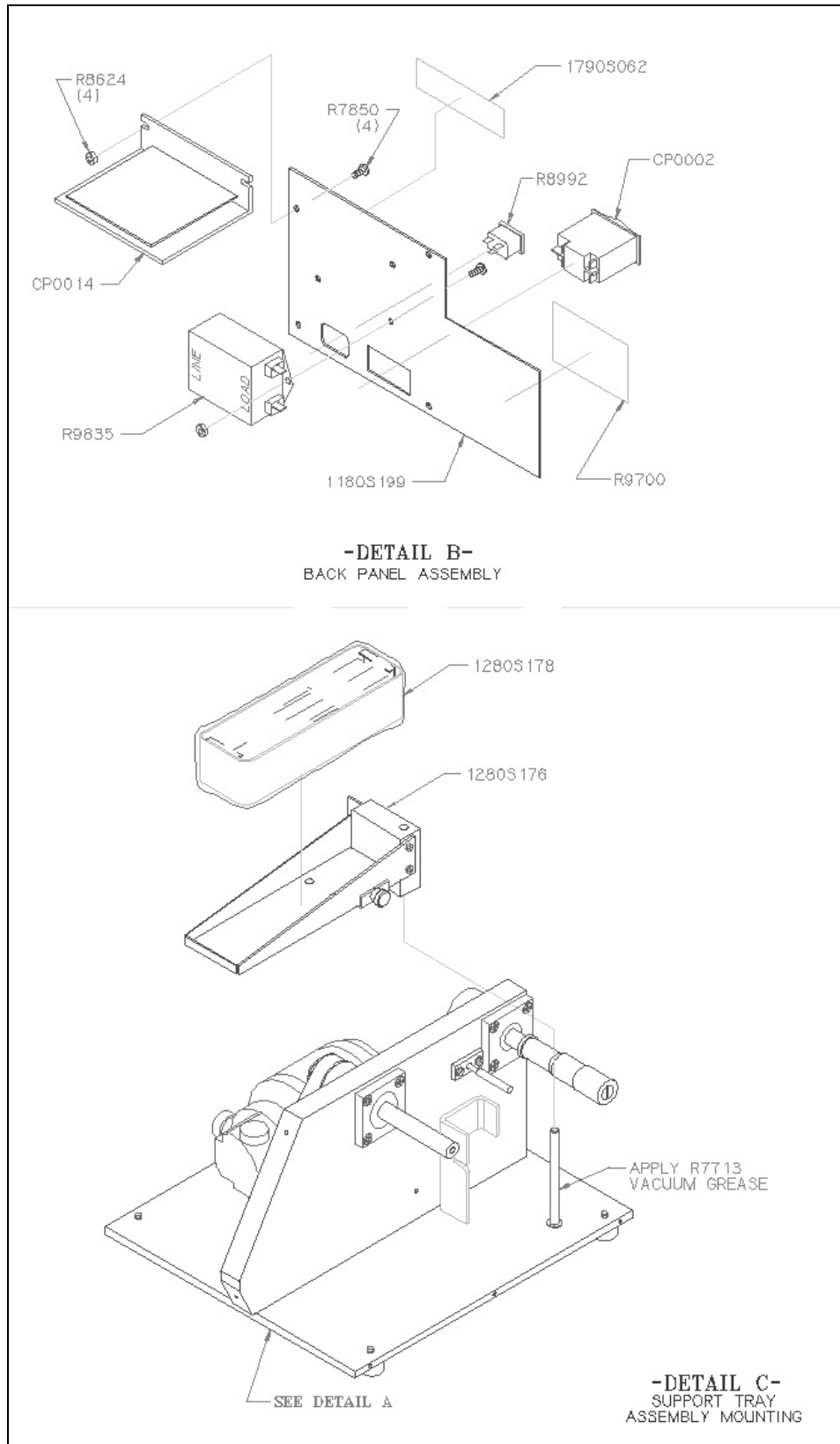


Figure 9: IsoMet Low Speed Saw Assembly Detail B and Detail C (1280901D)



# IsoMet™ Low Speed Drawings

**Note:** Drawings and part numbers are subject to change without notice.

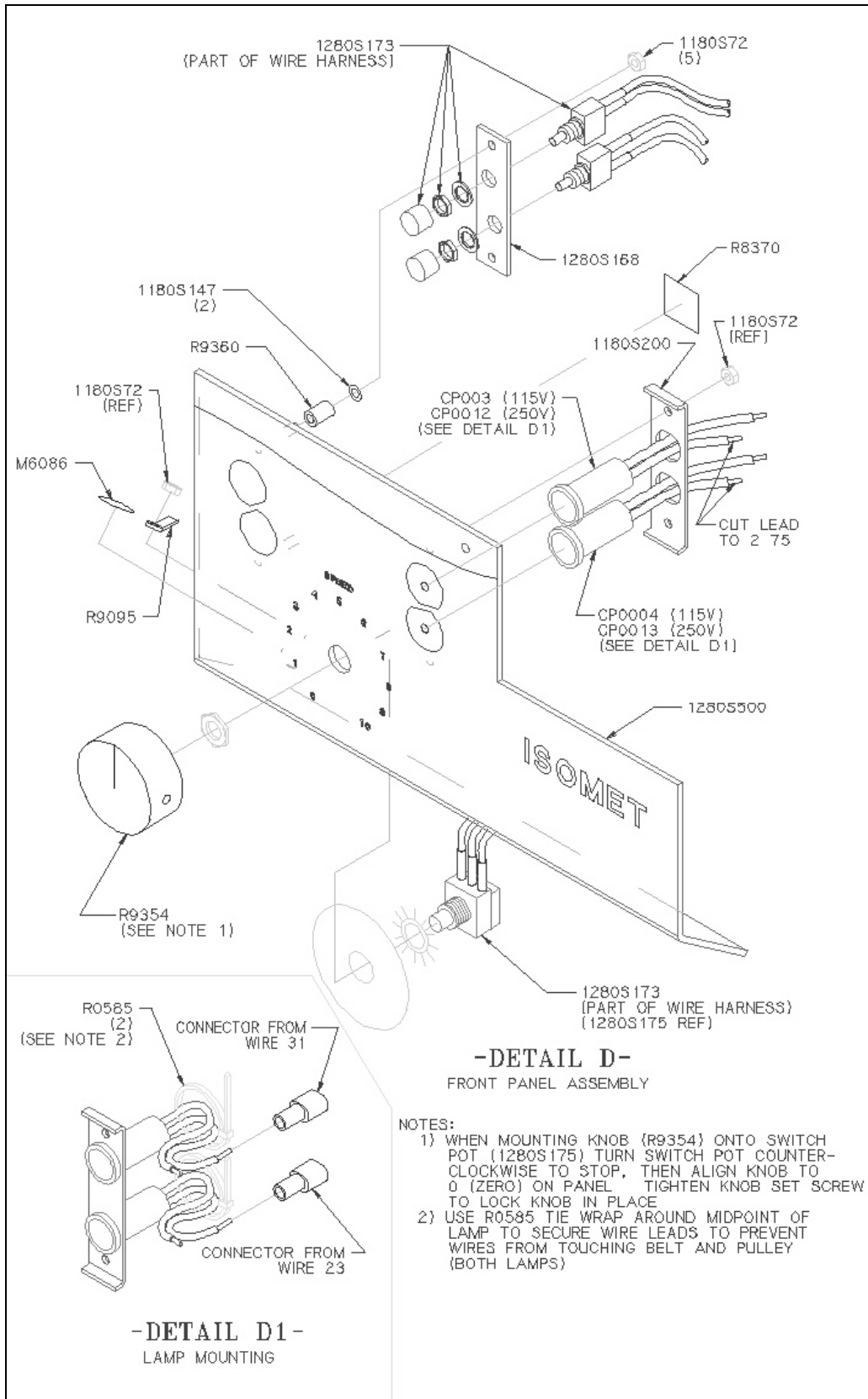


Figure 10: IsoMet Low Speed Saw Assembly Detail D (1280901E)

# IsoMet™ Low Speed Drawings

**Note:** Drawings and part numbers are subject to change without notice.

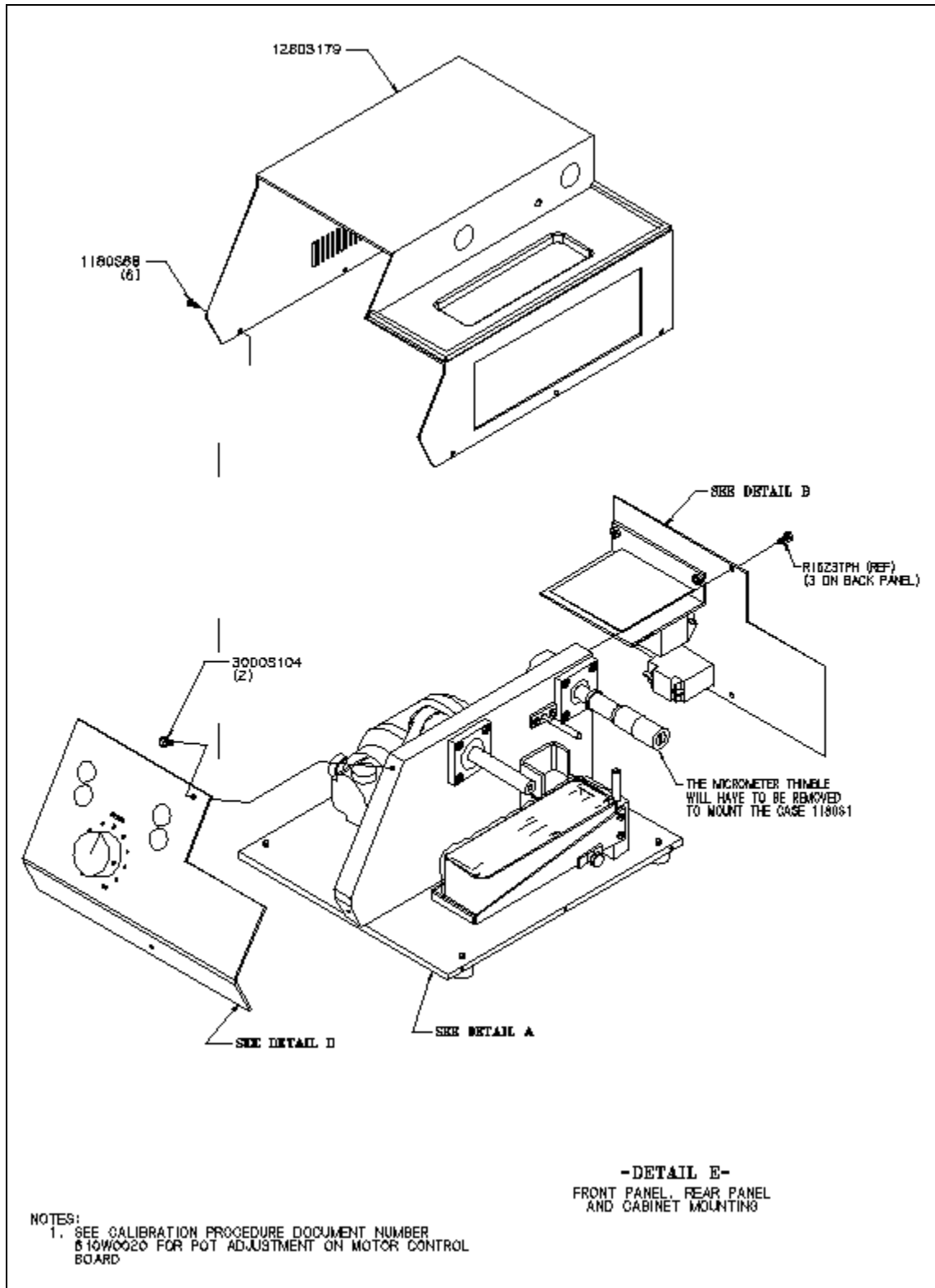


Figure 11: IsoMet Low Speed Saw Assembly Detail E (1280900F)

# IsoMet™ Low Speed Drawings

**Note:** Drawings and part numbers are subject to change without notice.

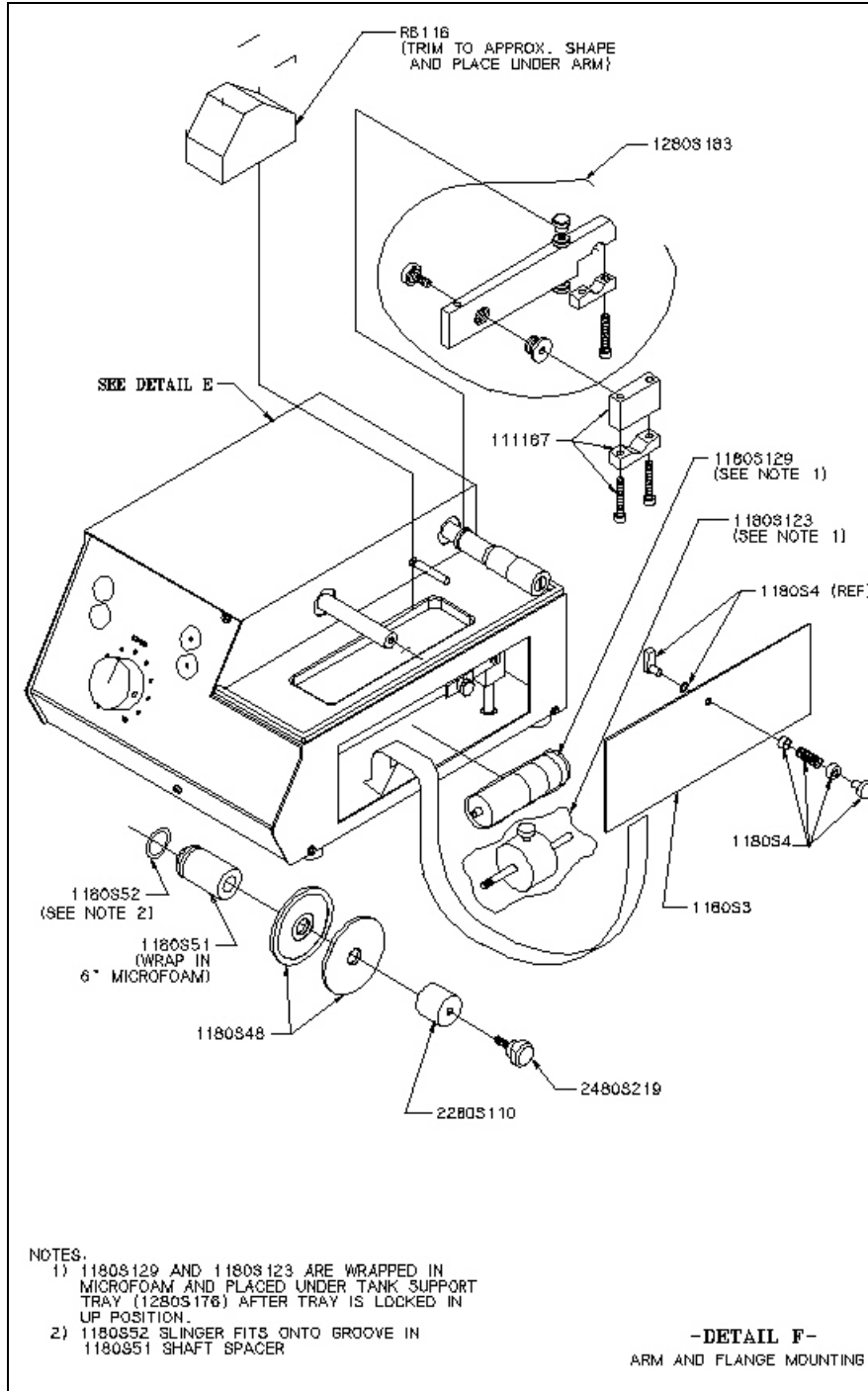


Figure 12: IsoMet Low Speed Saw Assembly Detail F (1280900G)

# IsoMet™ Low Speed Drawings

**Note:** Drawings and part numbers are subject to change without notice.

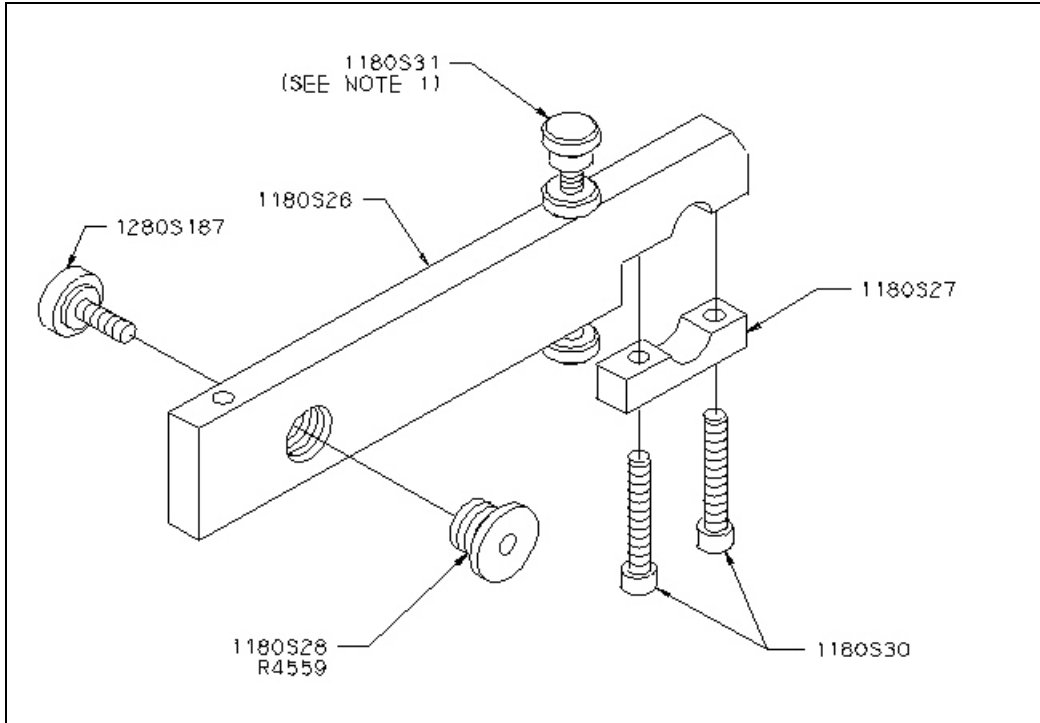


Figure 13: IsoMet Arm Assembly

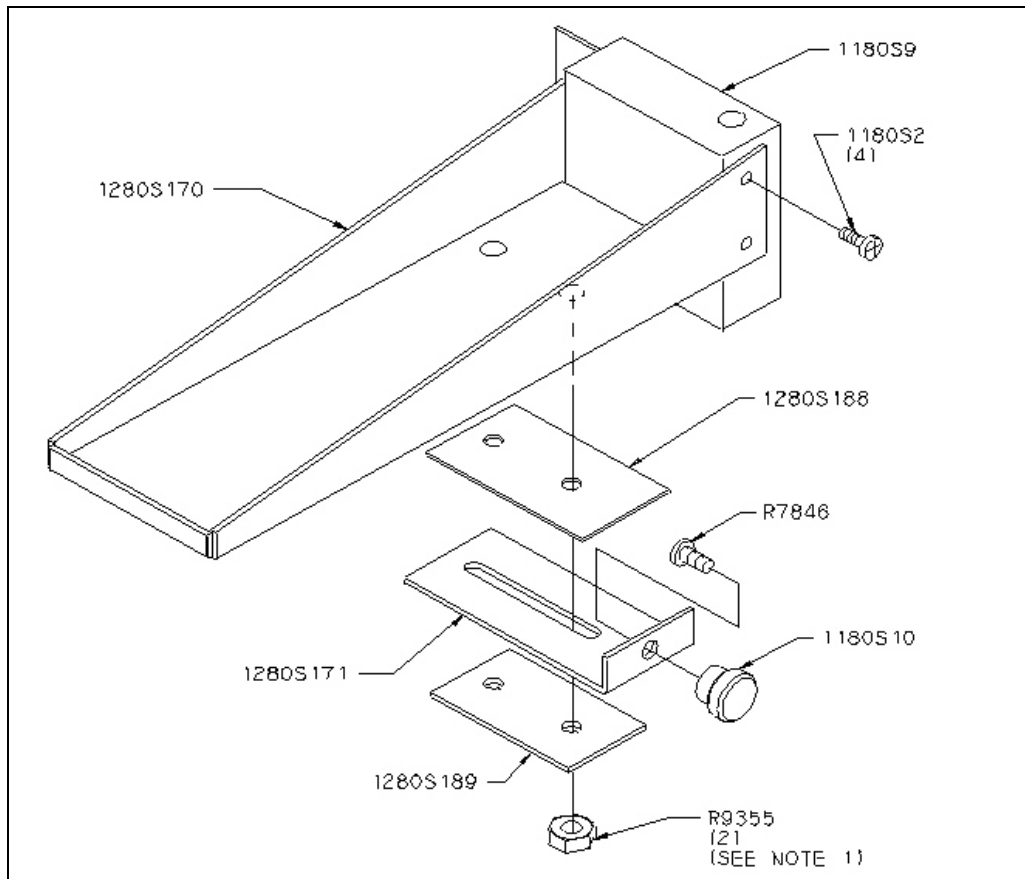
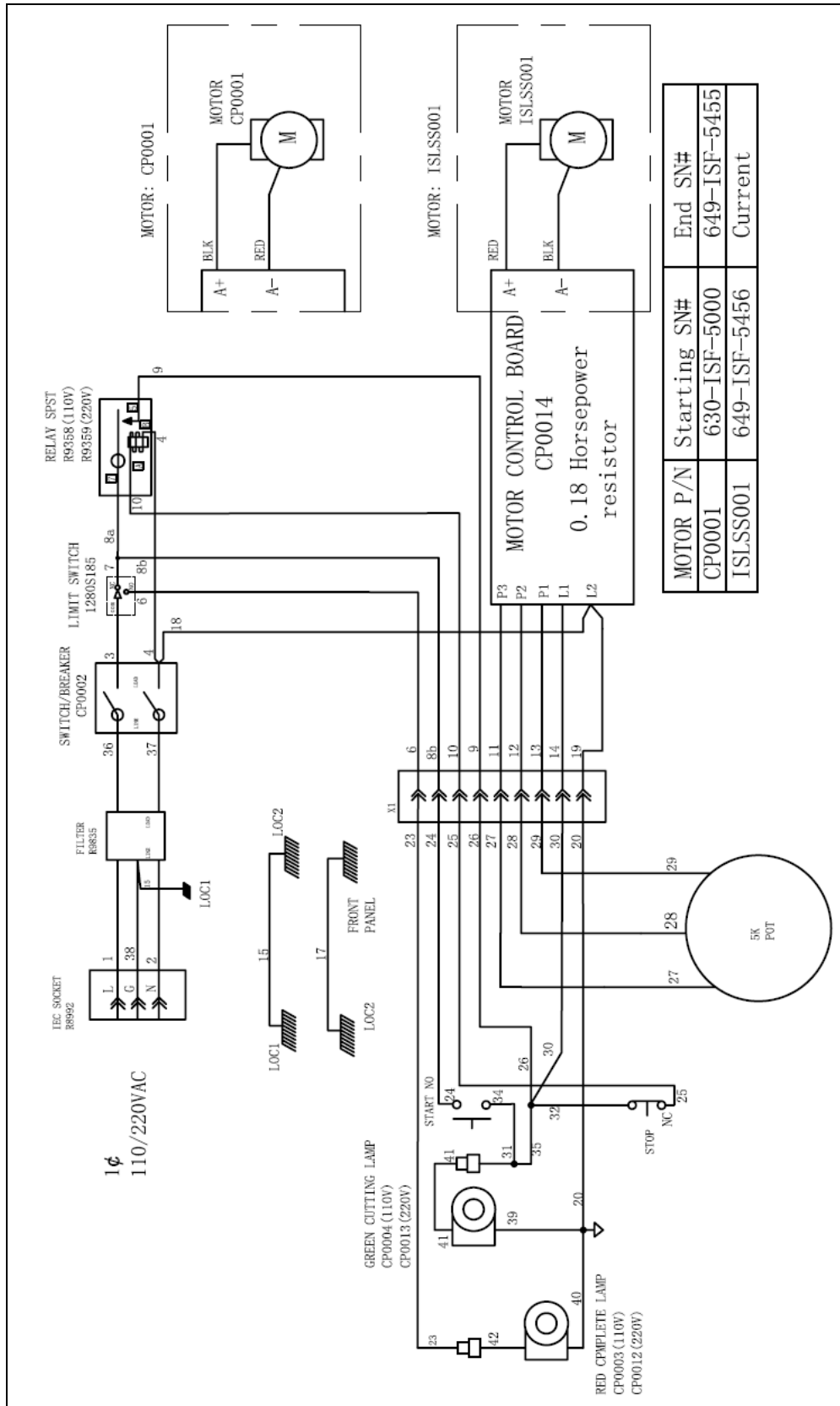


Figure 14: IsoMet Support Tray Assembly

# IsoMet™ Low Speed Drawings

**Note:** Drawings and part numbers are subject to change without notice.



MOTOR P/N	Starting SN#	End SN#
CP0001	630-ISF-5000	649-ISF-5455
ISLSS001	649-ISF-5456	Current

Figure 15: IsoMet Low Speed Saw Electrical Diagram (1280901H)

# IsoMet™ Low Speed Drawings

**Note:** Drawings and part numbers are subject to change without notice.

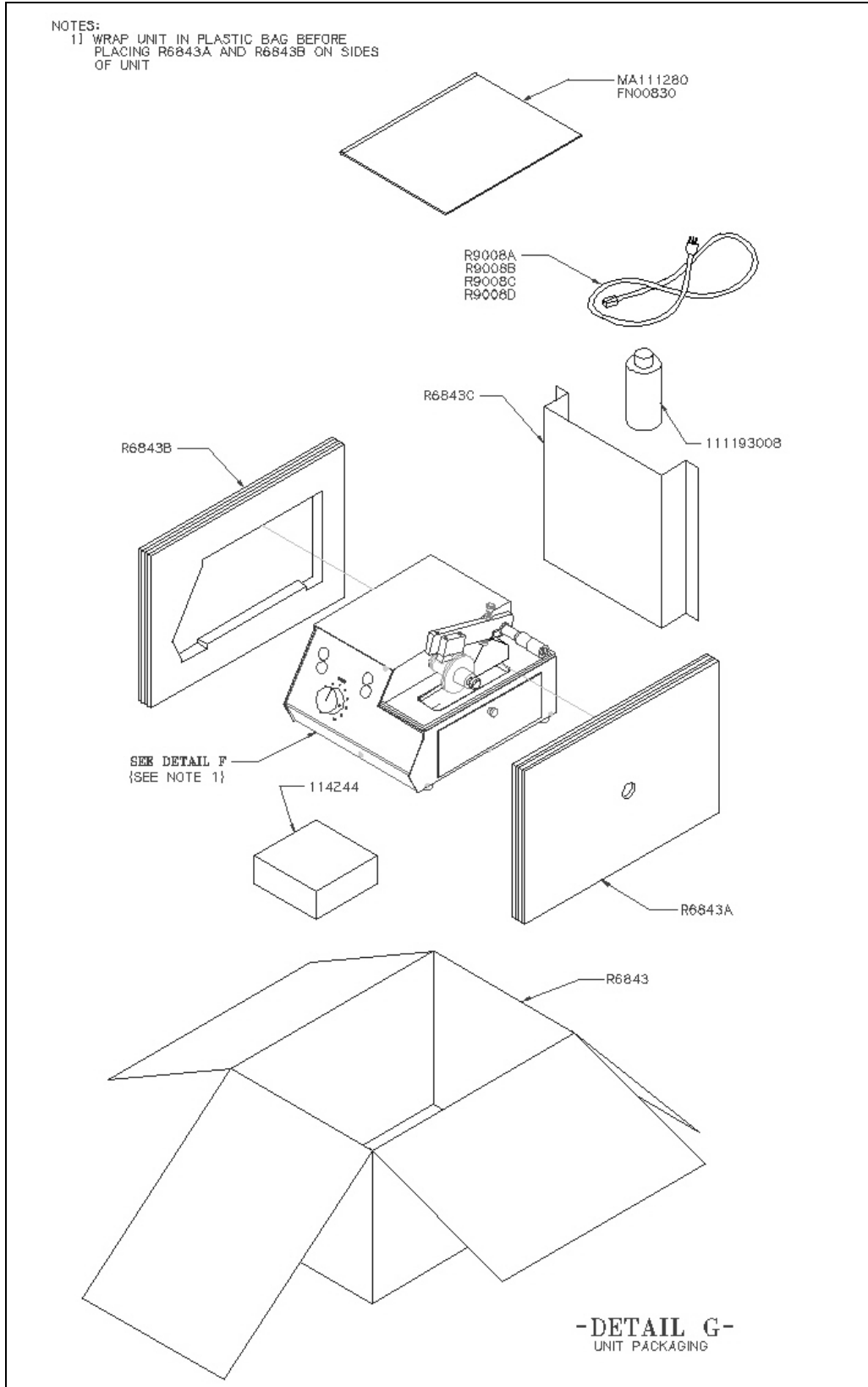


Figure 16: IsoMet Low Speed Saw Packaging (12809011)

## Parts List

Part Number	Description	Qty	U/M
<b>Note:</b> Drawings and part numbers are subject to change without notice.			
111182	ISOMET BLADE WIPER	1	EA
111184	CHUCK-BAR & TUBE STOCK	1	EA
111185	CHUCK-IRREGULAR SAMPLES	1	EA
111186	CHUCK-WAFERS	1	EA
111187	CHUCK-LONG SAMPLES	1	EA
114244	WAFERING BLADE 4X.012X1/2 15HC	0	EA
408144	NAPTHA 140 FLASH	0	GM
1180S10	KNOB	1	EA
1180S123	WEIGHT ASSY-COUNTER BALANCE	1	EA
1180S125	ADJ SCREW SHAFT	1	EA
1180S126	KNOB	1	EA
1180S127	FOOT	1	EA
1180S128	NUT, 10-32 KNURLED	1	EA
1180S129	WEIGHT ASSEMBLY	1	EA
1180S13	SUPPORT TRAY SHAFT	1	EA
1180S147	WASHER, #5 SS	4	EA
1180S194	SHAFT, CUT-OFF SWITCH	1	EA
1180S195	PLATE, MOUNTING-LIMIT SWITCH	1	EA
1180S199	COVER, REAR, CHINA	1	EA
1180S2	SCREW, 4-40 X 1/4 PAN PHIL F	4	EA
1180S200	BRACKET, LAMP	1	EA
1180S201	BRACKET, CONTROLLER RETROFIT	1	EA
1180S202	PULLEY, MOTOR	1	EA
ISLSS002	BRACKET, LINIX GEARMOTOR	1	EA
1180S25	CONTROL-BAL WEIGHT	1	EA
1180S26	ARM	1	EA
1180S27	ARM CLAMP - INCLUDED W/1180S26	1	EA
1180S28	CHUCK MTG BUSH	1	EA
1180S3	PANEL-DOOR ISOMET	1	EA
1180S30	SCREW, 10-32 X 3/4 PAN FIL ZINC PLATE	13	EA
1180S39A	MICR ASSY INCH	1	EA
1180S4	DOOR LATCH ASSEMBLY	1	EA
1180S40	RETAINING RING INT .866 ID BOW	1	EA
1180S48	FLANGE 2.5 INCH DIAMETER	2	EA
1180S5	SAMPLE BASKET	1	EA
1180S51	SPACER-SHAFT	1	EA
1180s52	SLINGER	1	EA
1180S53	DRIVE SHAFT ASSEMBLY	1	EA
1180S6	LUBRICANT PAN	1	EA
1180S63	PLATE, CUT-OFF SWITCH MOUNTING	1	EA
1180S64	O-RING 1/8 ID	1	EA
1180S68	SCREW, 6-32 X 3/8 RD HD PHIL SS	13	EA
1180S72	NUT, 6-32 KEPS	7	EA
1180S73	RUBBER FOOT	4	EA
1180S77	SCREW, 1/4-20 X 3/4 FLT HD PHIL	3	EA
1180S9	MOUNTING BLOCK	1	EA

## Parts List

Part Number	Description	Qty	U/M
<b>Note:</b> Drawings and part numbers are subject to change without notice.			
1280S167	NAMEPLATE, ISOMET	1	EA
1280S168	PLATE, SWITCH MOUNTING	1	EA
1280S170	TRAY, SUPPORT	1	EA
1280S171	SLIDE, SUPPORT	1	EA
1280S172	BRACKET, SLOTTED SUPPORT	1	EA
1280S173	HARNESS, WIRE ISOMET	1	EA
1280S177	WRENCH KIT	1	EA
1280S179	CABINET, ISOMET	1	EA
1280S181	BASE PLATE, ISOMET	1	EA
1280S182	PLATE, MOUNTING	1	EA
1280S187	THUMBSCREW, 10-32 X .6	1	EA
1280S188	PLATE, UPPER TEFLON	1	EA
1280S189	PLATE, LOWER TEFLON	1	EA
1280S190CN	BRACKET, BACK SUPPORT	1	EA
1280S201	SWITCH, END OF CUT ASSEMBLY	1	EA
C1800072	PLATE, BILINGUAL CAUTION	1	EA
2280S110	BUSHING-SHAFT END ANODIZED	1	EA
2480S219	SCREW, 10-32 X .63 THUMB	1	EA
3000S104	SCREW, 6-32 X 3/8 PHIL TR HD BLACK	2	EA
8175S007	OLIVE OIL BULK	0	EA
B704024	SCREW, M4X16 PHIL PAN SS	4	EA
CSR818M5L20	SCREW PAN HD M5X20 TAPTITE	4	EA
B710003	Nut M3 SS, HEX	2	EA
B710107	NUT FULL HEX SS M4	4	EA
B720007	WASHER, GB/T 95 4 SS	8	EA
B720009	WASH, PLAIN SS 5	4	EA
B721107	WASHER LOCK, GB/T 93 4 SS	8	EA
B721109	WASH, SPRING SS TYPE A, 5	8	EA
ISLSS001	GEAR MOTOR, 130VDC	1	EA
CP0002	CIRCUIT BREAKER, 5A	1	EA
CP0003	LAMP, GREEN $\varnothing$ 16, 110VAC, AD16-16B 110V	1	EA
CP0004	LAMP, RED, $\varnothing$ 16, 110VAC, AD16-16B 110V	1	EA
CP0014	KBLC-240D, 0.18 RESISTOR	1	EA
CSW819.2M3L15	SCREW M3x1 5	2	EA
M6086	GROUND LABEL	2	EA
M6592	LASER ETCH SPEC-DIAMOND BLADES	0	EA
R0585	TIE STRAP .10X4IN	6	EA
R0605LWE	WASHER, #6 SS EXTERNAL TOOTH LOCK	6	EA
R0606LW	LOCK WASHER #6 SS	2	EA
R0606W	WASHER, #6 SS	2	EA
R0610WS	WASHER, #10 SMALL BRASS	1	EA
R0612LW	WASHER, #10 SS LOCK	8	EA
R0612LWE	WASHER, #10 SS EXTERNAL TOOTH LOCK	1	EA
R0962	SCREW, 10-32 X 3/8 SOC SS	1	EA
R10066	BELT, DRIVE BODINE MOTOR	1	EA
R1174	SCREW, #8-32 3/8" CUP PT 18-8 SS SOCKET SET	2	EA



## Parts List

Part Number	Description	Qty	U/M
<b>Note:</b> Drawings and part numbers are subject to change without notice.			
R1623TPH	SCREW, 6-32 X 1/4 TR PHIL HD SS	3	EA
R1632	SCREW, 6-32 X 1-1/4 TR PH HD SS	2	EA
R2889	TUBE 5/16 X 3/16	1	EA
R2983	SNAP RING--BOWED	0	EA
R4559	ADHESIVE-ANAEROBIC THREAD GR.	1	EA
R6116	BLOCK, ETHAFOAM 3X3X1-1/2	1	EA
R6181	BOTTLE 8 OZ PVC CLEAR	0	EA
R6190	WHITE POLYPROP RIB CAP	0	EA
R6315	POLY BAG, 2 X 4, 2 MIL THK	1	EA
R6323	POLY BAG, 6 X 10, 4 MIL THK	1	EA
R6328	TWIST-TIE, POLY BAG-12" BLUE	1	EA
R6329	POLY BAG 4X10-4 MIL	1	EA
R6332	POLY BAG 3X4-4 MIL	1	EA
R6334	POLY BAG 3X10-4 MIL	1	EA
R6335	POLY BAG 4X4-4 MIL	1	EA
R6390	ENVELOPE, WARRANTY-9X14X4MIL	1	EA
R6616	POLY BAG 20X20-2 MIL	1	EA
R6843	CARTON, 111280 ISOMET SAW	1	EA
R6843A	INSERT, DOOR SIDE	1	EA
R6843B	INSERT, BLANK SIDE	1	EA
R6843C	INSERT, REAR	1	EA
R7844	SCREW, 8-32 X 3/4 PHIL PAN HD SS	2	EA
R7846	SCREW, 6-32 X 1/4 PAN PHIL HD SS	1	EA
R7850	SCREW, 8-32 X 3/8 PHIL PAN HD SS	10	EA
R7937	SCREW, 10-32 X 3/4 PHIL PAN SS	1	EA
R8095	LABEL, A SIZE	1	EA
R8370	CABLE TIE, MOUNT	4	EA
R8624	NUT, 8-32 KEPS ZINC PLATE STL	5	EA
R8992	INLET, POWER - IEC - SNAP-IN	1	EA
R9008A	CORD, IEC POWER - U.S.	0	EA
R9008B	CORD, IEC POWER - EUROPE	0	EA
R9008C	CORD, IEC POWER - U.K.	0	EA
R9008D	CORD, IEC POWER - JAPAN	0	EA
R9095	CONNECTOR, .187 MALE TAB BRASS	1	EA
R9354	KNOB, 1.50 DIAX0.66 HIGH BLACK	1	EA
R9355	NUT, 8-32 THIN STEEL CAD LOCK	2	EA
R9358	RELAY, 115V 13 AMP SPDT	1	EA
R9360	SPACER, 6-32X.25ODX.375 LG	2	EA
R9407	SPACER, PLASTIC	2	EA
2150S150	PLATE, SPEC CE APPROVED	1	EA
R9760	WRENCH, OPEN END 1/2 - 5/8 IN	1	EA
R9835	FILTER, LINE 3 AMP	1	EA

## IsoMet™ Low Speed Saw Accessories

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### IsoMet Low Speed Saw Accessories

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<u>Description</u>	<u>Catalog Number</u>
Weight, 25 gram .....	1180S33
Weight, 50 gram .....	1180S34
Weight, 75 gram .....	1180S35
Weight, 150 gram .....	1180S36
Swivel Arm Assembly..... Adjustable spherical bushing permits positioning of chuck for angular sectioning of a specimen. May be used with any IsoMet chuck.	11-1181
Chuck Double (hold-down saddle type) ..... Prevents possible damage to specimen by holding sectioned portion firmly after cut is complete.	11-1183
Chuck (Vacuum type)..... For petrographic thin sections.	11-1188
Chuck ..... For 1" and 1¼" diameter specimens.	11-1189
Dressing Stick ..... For Diamond Wafering Blades, Series 15 & 20.	11-1190
Dressing Stick ..... For Diamond Wafering Blades, Series 5 & 10.	11-1290
Flange 1 3/4" diameter ..... Recessed flange for use with 11-1188 Vacuum Chuck and 11-1181 Swivel Arm Assembly. For larger specimens and where greater depth of cut is required.	11-1191
Flange 1 3/8" diameter ..... Recessed flange for use with 111188 Vacuum Chuck and 11-1189 Chuck. Where maximum depth of cut is required.	11-1192
IsoMet Bone Chuck..... Used for gripping bones and other irregularly shaped specimens.	11-1194
Plastic Guide Plate..... Used for supporting bones and other specimens during manual operation.	11-1195
IsoMet Dressing Chuck ..... Used for dressing wafering blades without removing samples.	11-1196
IsoMet Splash Guard Kit ..... Used to catch cutting fluid splattered to the front and rear of the saw.	11-1199

## IsoMet™ Low Speed Saw Accessories

Description	Catalog Number
Goniometer..... Used for precision sectioning along specific planes, with each axis providing movement in 2° increments.	11-2381
Chuck Padding (Used to protect fragile samples).....	11-2496
Cool 3 Cutting Fluid (33.8 oz / 1 liter) .....	10-6001
Cool 3 Cutting Fluid (1 gal. / 4 liter) .....	10-6004
Cool 3 Cutting Fluid (2.6 gal. / 10 liter) .....	10-6010
Mineral Spirits (Per quart).....	40-8140-032
Mineral Spirits (Per gallon).....	40-8140-128
Chuck, Bar & Tube Stock (Shipped standard with unit).....	11-1184
Chuck, Irregular Samples (Shipped standard with unit).....	11-1185
Chuck, Wafers (Shipped standard with unit).....	11-1186
Chuck, Long Samples (Shipped standard with unit).....	11-1187

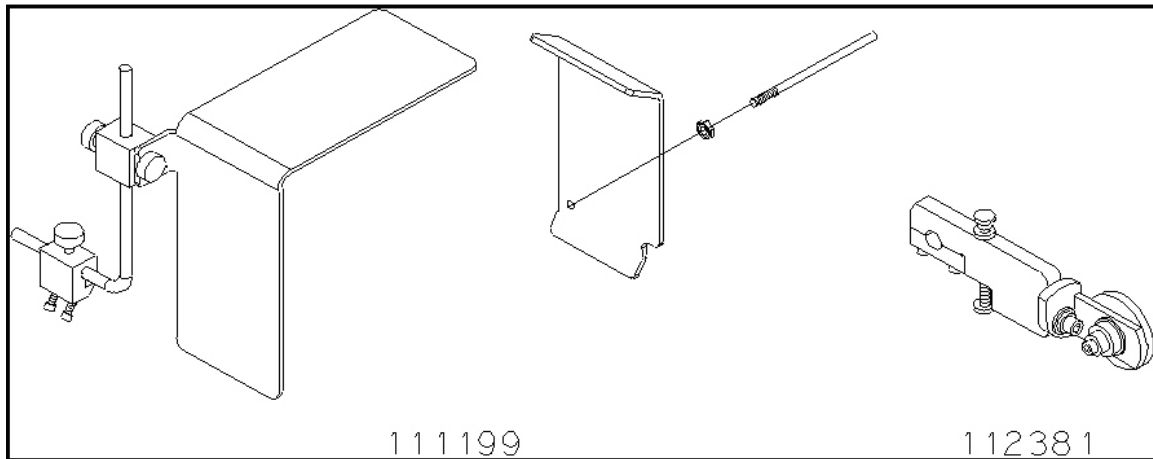


Figure 18: IsoMet Low Speed Saw Accessories

# IsoMet™ Low Speed Saw Accessories

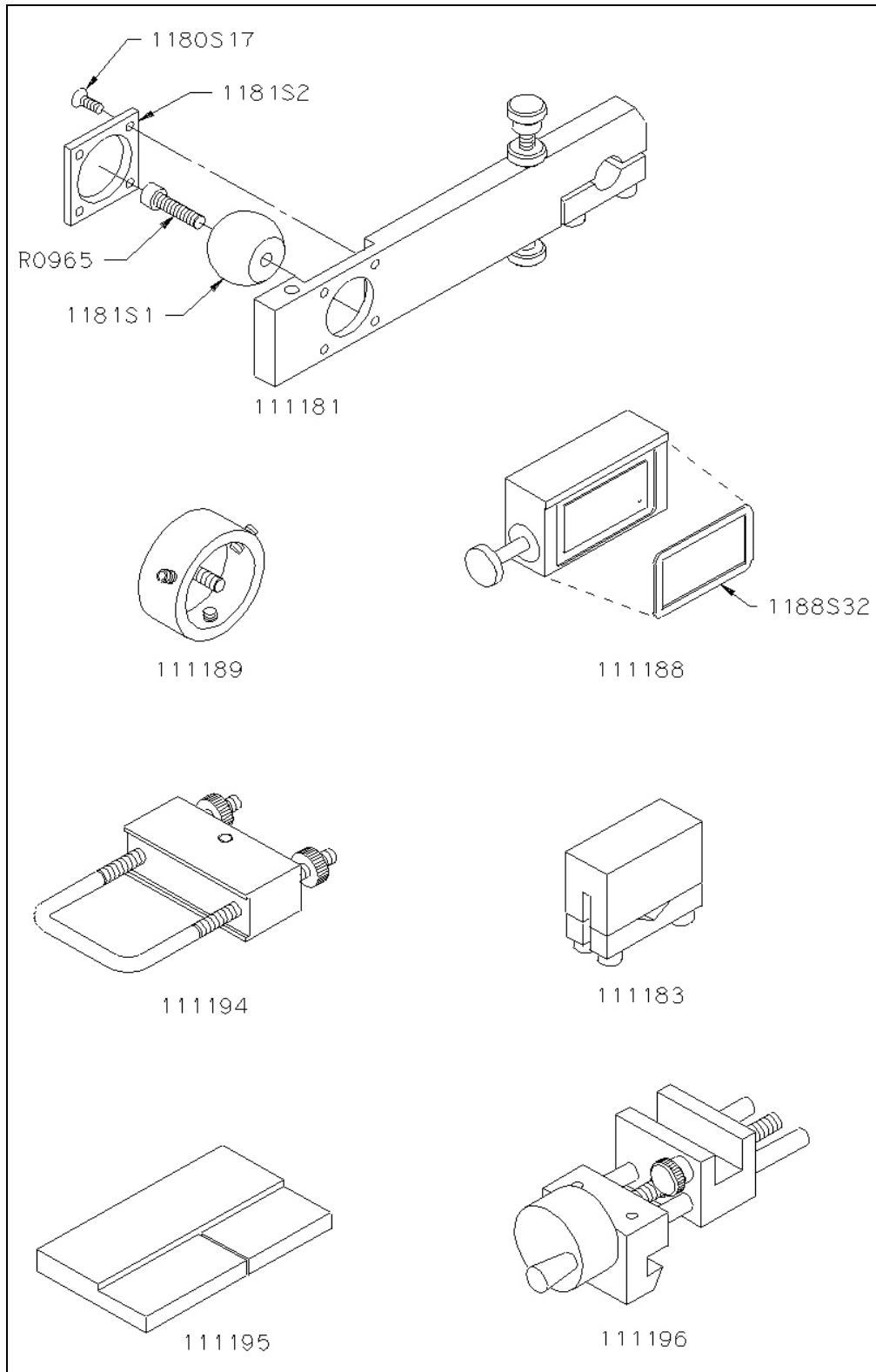


Figure 19: IsoMet Low Speed Saw Accessories

## IsoMet™ Low Speed Saw Accessories

### Diamond Wafering Blades

Diamond Wafering Blades: ½-inch (12.7 mm) arbor

Type and Use	Diameter and Thickness		
	3" x 0.006" (7.6 cm x .15 mm)	4" x 0.012" (10.2 cm x .3 mm)	5" x 0.015" (12.7 cm x .4 mm)
<b>Series 20HC Diamond</b> For aggressive general sectioning of ferrous and non-ferrous materials.			11-4215*
<b>Series 15HC Diamond</b> For routine use, metal matrix composites, PC boards, thermal spray coatings.	11-4243	11-4244	11-4245
<b>Series 20LC Diamond</b> For use with hard/tough materials, structural ceramics, boron carbide, boron nitride, silicon nitride.			11-4225*
<b>Series 15LC Diamond</b> For use with hard/brittle materials, structural ceramics, electronic substrates, alumina, zirconia, silicon carbide.		11-4254	11-4255
<b>Series 10LC Diamond</b> For use with medium to soft ceramics, electronic packages, GaAs, AlN, and glass fiber reinforced composites.			11-4285
<b>Series 5LC Diamond</b> For use with soft friable ceramics, composites with fine reinforcing media, CaF <sub>2</sub> , MgF <sub>2</sub> , and carbon composites	11-4298		11-4295

### IsoCut™ Wafering Blades

Some materials can be cut at a faster rate using a synthetic alloy abrasive rather than a diamond wafering blade. IsoCut wafering blades work well for many materials and give significantly shorter cutting times with iron and cobalt base alloys, nickel base super alloys, and lead base alloys.

IsoCut Wafering Blades: ½-inch (12.7 mm) arbor

Recommended Use	3" X 0.006" (7.6 cm x .15 mm)	4" X 0.012" (10.2 cm x .3 mm)	5" X 0.015" (12.7 cm x .4 mm)
LOW Concentration			
For Iron and Cobalt Base Alloys, Nickel Base Alloys, and Lead Base Alloys	11-4263	11-4264	11-4265

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## Notes

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