Hall® MicroPower™ Instruction Manual

- Medium Speed Drill: 6020-021, 6021-021
- Sagittal Saw: 6020-022, 6021-022
- Reciprocating Saw: 6020-023, 6021-023
- Oscillating Saw: 6020-024, 6021-024

6020-021 / 6021-021

6020-022 / 6021-022

6020-023 / 6021-023

6020-024 / 6021-024
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Record the Model and Serial Numbers of the handpiece(s), and date received. Retain for future reference.

<table>
<thead>
<tr>
<th>Handpiece Model No.</th>
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1.0 INTRODUCTION

It is recommended that personnel study this manual before attempting to operate, clean or sterilize the MicroPower™ handpieces and accessories. The safe and effective use of this equipment requires the understanding of and compliance with all warnings, cautionary notices, and instructions marked on the product, and included in this manual.

1.1 Intended Use

The MicroPower components covered in this manual consist of a medium speed drill and three saws; a sagittal saw, reciprocating saw, and oscillating saw, which operate in conjunction with assorted bur guards, blades, burs and drill bits, to perform bone cutting, drilling, and soft tissue resection.

These handpieces can be operated using the PowerPro® (PRO2000/PRO2000I), the E9000® (E9000, E9000G, E9000J) or Advantage® (D3000, D3000I, D3000J) Controllers.

The MicroPower medium speed drill and saws are intended for small bone procedures such as: Arthroscopic, Neurosurgical, Orthopedic (hand, wrist, foot and ankle), Oral/Maxillofacial, and Plastic/Reconstructive.

1.2 Warnings and Cautions

This equipment is designed for use by medical professionals completely familiar with the required techniques and instructions for use of the equipment. Read and follow all warning and cautionary notices and instructions marked on the product and included in this manual.

Service intervals, as listed in “Table 2: Maintenance Schedule” on page 25, are required to keep the MicroPower handpieces and attachments at their optimum operating performance.

1.2.1 Warnings

1. Eye protection is always necessary when operating equipment. Eye injury may result.

2. Continually check all handpieces and attachments for overheating. If overheating is sensed, immediately discontinue use and return equipment for service. Overheating of the bur, bit or blade may cause damage to the bur, bit or blade and may cause thermal necrosis.

3. Do not attach, insert or remove attachments or accessories while the handpiece is operating. Serious injury may occur. Place the handpiece safety mechanism to the safe position prior to installation or removal of items.

4. Do not immerse handpieces in fluids.
5. Prior to each use, perform the following:
   • Inspect all equipment for proper operation.
   • Ensure all attachments and accessories are correctly and completely attached to the handpiece.

6. Do not use burs for plunge cutting. Injury or damage may occur.

1.2.2 Cautions

1. Handpieces are factory sealed. Do not disassemble or lubricate, as this may void the warranty. There are no user-serviceable parts inside.

2. Use only associated ConMed Linvatec attachments and accessories (saw blades, bits, etc.) as defined within the descriptions of each attachment.

3. Handle all equipment carefully. If any equipment is dropped or damaged in any way, return it immediately for service.

4. Never operate the MicroPower Medium Speed Drill (6020-021 / 6021-021) without a bur and appropriate bur guard in place and the collet locked. Damage will occur.

5. Do not operate the oscillating saw or reciprocating saw without a blade locked securely in place. Damage to the handpiece may occur.

6. Do not stall handpieces, damage can occur.

7. Do not handle the handpieces by the cord. Do not pull on the cord to remove it from the handpiece or controller. Use the connector portion of the cord for disconnection.

8. Do not excessively bend or kink the handpiece cord. Always inspect cords for signs of excessive wear or damage. If wear or damage is found, discontinue use and replace immediately.

9. Always inspect for bent, dull or damaged burs, blades or drill bits before each use. Do not attempt to straighten or sharpen. Do not use if damaged. After use, dispose of properly.

10. Always use a bur of the proper length for the specific guard.

11. Bur and neuro guards should be checked frequently. Overheating can occur if bur guard bearings are worn or not kept clean. Follow the recommended maintenance schedule on page 25.

12. Perform the following steps to verify guards are in good operating condition.

   NOTE: Bur and neuro guards are to be returned to the factory or a ConMed Linvatec authorized service facility for routine maintenance every six (6) months.

   (a) Remove the guard from the handpiece and insert a bur into the nose of the guard.
(b) While holding the bur, spin the guard. The guard should spin freely around the bur shaft without resistance.

(c) Attach the guard and bur to the handpiece.

(d) Operate the handpiece for approximately 30 seconds, then stop the handpiece. Once the bur has stopped moving, carefully feel the end of the guard where the guard encases the shaft of the bur for overheating. If overheating is noticed, return guard for service.

13. After each use, thoroughly clean the controller, handpieces, attachments and accessories (See “3.1 Cleaning and Sterilizing” on page 26).

14. Do not use in the presence of flammable anesthetics, gases, disinfecting agents, cleaning solutions, or any material susceptible to ignition due to electrical sparking.

### 1.3 Symbol Definitions

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>😢</td>
<td>Attention, consult accompanying documents.</td>
</tr>
<tr>
<td>⚥️</td>
<td>Type B equipment.</td>
</tr>
<tr>
<td>⚥️</td>
<td>Single Use Only.</td>
</tr>
<tr>
<td>🕶️</td>
<td>Eye Protection Required.</td>
</tr>
<tr>
<td>⚔️</td>
<td>No user service recommended. Refer servicing to qualified ConMed Linvatec service personnel.</td>
</tr>
<tr>
<td>⚥️</td>
<td>Indicates product component should not be sterilized.</td>
</tr>
<tr>
<td>⚥️</td>
<td>Indicates product component should not be immersed in any type of fluid.</td>
</tr>
<tr>
<td>⚥️</td>
<td>Indicates handpiece should not be immersed in any fluid.</td>
</tr>
<tr>
<td>⚥️</td>
<td>Indicates product should not be oiled or lubricated.</td>
</tr>
<tr>
<td>⚥️</td>
<td>Not to be used for plunge cutting.</td>
</tr>
<tr>
<td>Rx ONLY</td>
<td>Caution: Federal Law restricts this device to sale by or on the order of a physician</td>
</tr>
</tbody>
</table>
1.4 Handpieces

1.4.1 MicroPower Drills and Saws

1. **Bur Lock Collar** — Rotate to lock or unlock a bur.

2. **Blade Collet** — Holds the blade in place.

3. **Blade Lock Collar** — Rotate to open or lock the blade collet.

4. **Collet Lock Mechanism** — Locks a blade into place.

5. **Activation Lever** — Depress to operate the handpiece. The activation lever can be removed for leverless operation on all 6020 series handpieces (Reference “2.3.3.4 Removing the Detachable Handpiece Activation Lever” on page 19).

6. **Safe/Run Slide** — Place in the “SAFE” position prior to inserting or removing attachments and/or accessories (blades, bits, burs) and when the handpiece is not in use. Place in the “RUN” position to activate the handpiece.

7. **Handpiece Cord Connector** — The handpiece cord connects here to provide power to the handpiece. Uses the MC5057 Handpiece Cord.

NOTE: Do not allow saline to enter into the handpiece cord connector and cord. Damage may occur to the handpiece.
1.5 Irrigation Tubing Set (E9418) for use with MicroPower Drills and Saws

The E9418 Tubing Set is used to provide irrigation for blades, bits and burs while using any of the MicroPower drill or saws.

1. **Spike Line** — Connects to the fluid supply for fluid distribution to the surgical site.

2. **Cassette** - Attaches to the peristaltic pump of the controller to aid in fluid delivery.

3. **Roller Clamp** — Used to adjust the fluid flow to the surgical site.

4. **Handpiece Cord Clips** — Used to attach the tubing to the handpiece cord.

5. **Irrigator Tip** — Accepts various irrigation tips (See “4.4.1 Handpieces, Attachments and Accessories” on page 37) for MicroPower drill and saws for fluid distribution to the surgical site.
1. To attach the handpiece cord:
   (a) Ensure pins on cord and handpiece are completely dry prior to connecting.
   (b) Insert the handpiece cord into the cord receptacle of the handpiece. Push together until fully seated.

   **NOTE:** Do not force the cord into the handpiece cord connector. This may bend the pins and damage the handpiece.

2. Connect the handpiece cord to the appropriate console.

3. To remove the handpiece cord:
   (a) Press the latch and remove the cord from the handpiece.
2.2 Hall Bur Guard Assembly Instructions

WARNINGS:

1. Do not operate the drill without the appropriate bur guard. Always use a bur of the proper length. The tip of the bur guard should cover the safe line on the bur, if applicable. Without the stabilization that the proper guard provides, the bur can break and be propelled with great force.

2. To reduce the risk of injury, prior to surgery, spin the bur guard on a bur. If the bur guard spins freely, the bearing is still good. Otherwise, the bur guard must be sent for repair immediately. DO NOT USE.

3. When not in use and prior to connecting or removing attachments and accessories, always place the handpiece in its safe, or off position, if applicable.

Table 1: Bur Guard and Attachment Guide

<table>
<thead>
<tr>
<th>REF</th>
<th>Description</th>
<th>Instructions</th>
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<tbody>
<tr>
<td>1375-012</td>
<td>Medium Bur Guard - Use only 5091 series medium burs except 5091-080, 5091-081, 5091-082 and 5091-083</td>
<td>See page 8</td>
</tr>
<tr>
<td>1375-011</td>
<td>Long Bur Guard - Use only 5092 series long burs</td>
<td>See page 8</td>
</tr>
<tr>
<td>1375-023</td>
<td>Cloward Extra-Long Bur Guard - Use only 5093 series extra-long burs</td>
<td>See page 8</td>
</tr>
<tr>
<td>1375-020</td>
<td>Laminectomy Bur Guard - Use only 5092-103 Long Carbide Bur</td>
<td>See page 10</td>
</tr>
<tr>
<td>1387-022</td>
<td>Tissue Retractor Guard - Use only with long burs (5092 series) which have a diameter of 4.0mm or less. Recommended bur: 5092-136</td>
<td>See page 8</td>
</tr>
<tr>
<td>1375-032</td>
<td>20° Angle Attachment - Use only 5092 series long burs</td>
<td>See page 11</td>
</tr>
<tr>
<td>1375-033</td>
<td>20° XL Angle Attachment - Use only 5093 series extra-long burs</td>
<td>See page 11</td>
</tr>
<tr>
<td>1375-034</td>
<td>70° Contra-Angle Attachment with Dental Head Use friction grip burs only - size 1/16” or 1.58mm in diameter</td>
<td>See page 12</td>
</tr>
<tr>
<td>1375-035</td>
<td>70° Contra-Angle Attachment with Surgical Head Use only 5089 extra-short burs and 5090 series short burs</td>
<td>See page 12</td>
</tr>
<tr>
<td>1375-036</td>
<td>90° Angle Attachment Use only 5089 extra-short burs and 5090 series short burs</td>
<td>See page 12</td>
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2.2.1 Assembly Instructions for the:
- Medium Bur Guard (1375-012)
- Long Bur Guard (1375-011)
- Cloward Extra-Long Bur Guard (1375-023)
- Tissue Retractor Guard (1387-022)

NOTE: When using the Tissue Retractor Guard, use only 5092 series long burs which have a diameter of 4.0 mm or less. The recommended bur is the 5092-136 Long Oval Cutting Bur.

1. Place the handpiece in the “SAFE” position.

2. To install a bur guard:
   (a) Slide the appropriate bur guard over the end of the drill. Ensure it is seated completely. Do not operate the drill without the bur guard completely seated to the nose of the drill.

3. Prior to installing a bur, but only while using the 1375-012 Medium Bur Guard, it is recommended that a SmartGuard® Protector Sleeve (1375-112) be attached. Reference the associated insert that comes packaged with the SmartGuard for additional information.

NOTES:
- SmartGuard Protector Sleeves are designed to be attached to the Medium Bur Guard during surgical applications. They are intended to be used as a heat-sensing and insulating device that changes color from PURPLE (SAFE to use bur guard) to PINK (REPLACE bur guard) to indicate over-heating of the attached bur guard.
- Overheating might occur if bearings are worn or are not kept clean. If overheating occurs while a SmartGuard Protector Sleeve is attached to the Medium Bur Guard, the SmartGuard Protector Sleeve will change color from PURPLE to PINK. Immediately discontinue use of the bur guard to prevent possible injury to the patient and/or operator. Replace the bur guard and return original bur guard for service.
• Under prolonged use or intense cutting, the tip of the SmartGuard Protector Sleeve may turn pink while the rest of the sleeve retains its purple color. If more than 50% of the SmartGuard Protector Sleeve turns pink, discontinue use immediately to prevent possible injury to the patient and/or operator. Replace the bur guard and return original bur guard for service.

4. To attach a SmartGuard Protector Sleeve:
   (a) Remove the SmartGuard Protector Sleeve from its sterile packaging within the sterile field.
   (b) Press-fit the SmartGuard Protector Sleeve onto the end of the associated bur guard until fully seated (see figure below).
   (c) After the SmartGuard Protector Sleeve is attached, install a bur.

5. To install a bur:
   (a) Select a proper length bur for the guard.
   (b) Ensure the bur lock is in the unlocked position.
   (c) Insert the bur to the safe line or until the bur seats completely if no safe line is observed.
   (d) Lock the bur in place by twisting the bur lock clockwise until the red indicator dots are aligned. Always pull on the bur to ensure bur is fully locked in position.

CAUTION: Never lock the collet without a bur inserted. Damage to the collet may result.

6. To remove the SmartGuard Protector Sleeve, first remove the bur. Grasp the tabs of the SmartGuard Protector Sleeve between the thumb and forefinger and pull.

7. Discard the used SmartGuard Protector Sleeve properly.
2.2.2  Assembly Instructions for the Laminectomy Bur Guard (1375-020)

NOTES:

1. Use the 5092-103 Long Carbide Bur with the 1375-020 Laminectomy Bur Guard.
2. The Laminectomy burs are the only burs that can be inserted prior to placing the appropriate bur guard on the handpiece.

1. Place the handpiece in the “SAFE” position.

2. To install a bur:
   (a) Ensure the bur lock is in the unlocked position.

(b) Insert the laminectomy bur into the handpiece until the bur seats completely.

(c) Lock the bur in place by twisting the bur lock clockwise until the red indicator dots are aligned.

CAUTION: Never lock the collet without a bur inserted. Damage to the collet may result.

3. To install a bur guard:
   (a) Slide the appropriate bur guard over the bur and the end of the handpiece. Ensure it is seated completely. Do not operate the drill without the bur guard completely seated to the nose of the drill.
2.2.3 Assembly Instructions for the 20° (1375-032) and 20° Extra Long (1375-033) Angle Attachments

NOTE: Use only long burs (5092 series) in the 1375-032, 20° Angle Attachment and extra long burs (5093 series) in the 1375-033, 20° Extra Long Angle Attachment.

1. Place the handpiece in the “SAFE” position.

2. To install the attachment:
   (a) Ensure the bur lock is in the unlocked position.

3. Slide the attachment over the end of the drill. Ensure it is seated completely.

4. Lock the attachment in place by twisting the bur lock clockwise until the red indicator dots are aligned.

5. Open the attachment collet by twisting the attachment bur locking ring counterclockwise until the ring is fully open.

6. Insert the bur into the attachment until it is completely seated.

7. Twist the attachment bur locking ring clockwise until the locking ring is in the locked position.
2.2.4 Assembly Instructions for the

• 70° Contra-Angle with Surgical Head (1375-034)
• 70° Contra-Angle with Dental Head (1375-035)
• 90° Angle (1375-036) Attachments

NOTE: Use only short burs (5090 series) and extra short burs (5089 series) with these attachments.

1. Place the handpiece in the “SAFE” position.

2. To install the attachment:
   (a) Ensure the bur lock is in the unlocked position.

3. Place the attachment over the end of the drill. Ensure it is seated completely.

4. Lock the attachment in place by twisting the bur lock clockwise until the red indicator dots are aligned.

5. To insert a bur:
   (a) Place the bur in the opening of the attachment.
   (b) Use the grooved side (the side without the pin) of the bur changer (1375-003) to press the bur firmly in place.

6. To remove a bur:
   (a) Place the side of the bur changer with the pin into the opening at the rear of the attachment.
   (b) Press firmly on the bur changer to push the bur out.
2.3 Handpiece Operation

WARNING: When not in use and prior to connecting or removing attachments and accessories, always place the handpiece in its safe, or off position, if applicable.

NOTES:

1. If a handpiece is placed on a magnetic drape, the controller may display “MAGNETIC FIELD”. The handpiece will be inoperable until the magnet and handpiece are separated. Once separated, the controller will reset after three (3) seconds.

2. Operation of a drill (6020-021, 6021-021) without a bur locked in place is considered a failure mode. If the handpiece is activated for several seconds without a bur in place, the controller will display “STALL, CHECK BUR LOCK”. Operation cannot be initiated until a bur is locked in place and at least five (5) seconds have elapsed without the footswitch or handpiece activation lever being depressed.

3. The handpiece cord may be disconnected from one handpiece and connected to another handpiece, if applicable, without turning off the controller.

4. Handpieces are inoperable if the activation lever or trigger is depressed while connecting the handpiece cord.

2.3.1 Tubing Set Attachment (E9418) for MicroPower Handpieces

The E9418 Tubing Set is used to provide irrigation for blades, bits and burs while using any of the MicroPower drills or saws.

1. To attach the E9418 irrigation tubing set to the MicroPower handpieces:

   (a) Securely press the tubing into the slot of the irrigation handpiece clip (5040-130).

   (b) Attach the clip to the back of the handpiece.

   (c) Snap the handpiece cord clips onto the handpiece cable to secure the tubing.

2. There are several irrigation tip configurations that allow irrigation with a specific handpiece (See “4.4.1 Handpieces, Attachments and Accessories” on page 37). Attach the appropriate irrigation tip to the tubing and the handpiece.
2.3.2 Medium Speed Drill (6020-021/6021-021) Attachments and Accessories

CAUTION: Do not operate the MicroPower Medium Speed Drill without the proper bur guard attached and the collet locked. Damage may result.

1. Prior to connecting any attachment or accessory, or while the handpiece is not in use, place the “SAFE/RUN” Slide in the “SAFE” position.

2. To attach bur guards, attachments and burs reference information on pages 8 to 12.

3. To operate the handpiece after the guard and bur are attached:
   (a) Place the “SAFE/RUN” Slide in the “RUN” position.

4. To change operating speeds, reference “2.5 Handpiece Cord Button Operation” on page 23.

Without any user input selections each handpiece will initially operate at its default setting.

(b) Depress the handpiece Activation Lever or the preferred footswitch pedal.
2.3.3 MicroPower Saws

2.3.3.1 Reciprocating Saw (6020-023 / 6021-023) Operation

NOTE: Use only Hall 5053 series flat or round shanked blades.

1. To insert a blade:
   a) Place the “SAFE/RUN” Slide in the “SAFE” position.
   b) Twist the blade locking collar counterclockwise and insert the shank of the blade into the collet. Ensure the blade is fully seated.
   c) Twist the blade lock collar clockwise and tighten securely.

2. Round shank blades can be seated at any position within a 360° range.

3. Verify the blade is securely tightened by briefly activating the handpiece. To activate the handpiece:
   a) Place the “SAFE/RUN” Slide in the “RUN” position.
   b) Depress the handpiece Activation Lever or appropriate footswitch pedal.
   c) Place the handpiece back in the “SAFE” position.
   d) Retighten the blade locking collar.
4. To change operating speeds, reference “2.5 Handpiece Cord Button Operation” on page 23.

5. To remove blades:
   (a) Place the “SAFE/RUN” Slide in the “SAFE” position.
   (b) Twist the blade lock collar counterclockwise and remove the blade.

---

2.3.3.2 Sagittal Saw Operation (6020-022 / 6021-022)

**NOTE:** Use only Hall 5023 series blades.

**CAUTION:** The blade collet lock mechanism must be completely closed to ensure the blade is held firmly in place.

1. To attach blades:
   (a) Place the “SAFE/RUN” Slide in the “SAFE” position.
   (b) Depress the collet lock mechanism to open the collet. Position the blade on the pins inside the collet.
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(c) Depress the opposite side of the hand-piece collet area to lock the blade into position.

(d) Blades may be positioned at 45° intervals within a 180° arc.

2. Verify the blade is securely attached by activating the handpiece. To activate the handpiece:

(a) Place the “SAFE/RUN” Slide in the “RUN” position.

(b) Depress the handpiece Activation Lever or appropriate footswitch pedal.

3. To change operating speeds, reference “2.5 Handpiece Cord Button Operation” on page 23.

4. To remove saw blades:

(a) Place the “SAFE/RUN” Slide in the “SAFE” position.

(b) Depress the collet lock mechanism and remove the blade.
2.3.3.3 Oscillating Saw Operation (6020-024 / 6021-024)

NOTE: Use only Hall 5023 series blades.

1. To attach saw blades:
   
   (a) Place the “SAFE/RUN” Slide in the “SAFE” position.

   (b) Ensure the blade lock collar is in the open position until the arrows are no longer aligned.

   (c) Position the blade on the pins inside the collet.

   (d) Twist the blade lock collar and align the arrows in the “LOCK” position to secure the blade.

   CAUTION: The blade lock collar must be completely closed to ensure the blade is held firmly in place.

2. Blades may be positioned at 45° intervals within a 360° circumference of the collet.

3. Verify the blade is securely attached by briefly activating the handpiece.
4. To activate the handpiece:
   (a) Place the “SAFE/RUN” Slide in the “RUN” position.
   (b) Depress the handpiece Activation Lever or appropriate footswitch pedal.

5. Retighten the blade lock collar.

6. To change operating speeds, reference “2.5 Handpiece Cord Button Operation” on page 23.

7. To remove saw blades:
   (a) Place the “SAFE/RUN” Slide in the “SAFE” position.
   (b) Twist the blade lock collar until the arrows are no longer aligned in the “LOCK” position and remove the blade.

2.3.3.4 Removing the Detachable Handpiece Activation Lever

CAUTIONS:

1. Before attempting to remove the detachable Handpiece Activation Lever, ALWAYS place the “SAFE/RUN” Slide in the “SAFE” position.

2. Always remove the detachable Activation Lever when operating the handpiece with a footswitch.

3. The handpiece and footswitch operate on a first come, first served basis. If the handpiece is activated with the footswitch, the handpiece activation lever is inoperative until the footswitch pedal is released, and vice versa.

1. To remove the handpiece detachable Activation Lever:
   (a) Place the “SAFE/RUN” Slide in the “SAFE” position.
   (b) Twist the blade lock collar until the arrows are no longer aligned in the “LOCK” position and remove the blade.
(b) Depress the ribbed portion of the detachable Activation Lever. Push towards the "SAFE/RUN" Slide until it disengages from the handpiece.

2. To reattach the handpiece Activation Lever:
   (a) Insert the Lever pins into the grooves and reverse the above steps.
2.4 Footswitch Operation

WARNINGS:
1. To avoid unintentional handpiece activation, unplug the footswitch when using a levered handpiece. When the footswitch is attached to the controller it will remain active.
2. The handpiece and footswitch operate on a first come, first served basis. If the handpiece is activated with the footswitch, the handpiece activation lever is inoperative until the footswitch pedal is released, and vice versa.
3. Always remove the detachable handpiece activation lever when operating the handpiece with a footswitch. Accidental activation of the handpiece may occur.

2.4.1 Operation of the 2-Pedal Footswitch (5020-053)

Operation of the footswitch when using a MicroPower Medium Speed Drill (6020-021):
1. Depress the right pedal to activate the handpiece in the forward direction.

NOTE: There is no oscillate mode with these drills.

Operation of the footswitch when using a MicroPower Oscillating Saw (6020-024), Reciprocating Saw (6020-023), or Sagittal Saw (6020-022):
1. Depress either the left or right pedal to activate the handpiece.

NOTE: There is no oscillate or reverse mode for these saws.
2.4.2 Operation of the 3-Pedal Footswitch (C9863)

Operation of the footswitch when using a MicroPower Medium Speed Drill (6020-021):

1. Depress the right pedal to activate the handpiece in the forward direction.

2. Depress the left pedal to activate the handpiece in the reverse direction.

NOTE: The center pedal is inoperative using these handpieces.

Operation of the footswitch when using a MicroPower Oscillating Saw (6020-024), Reciprocating Saw (6020-023), or Sagittal Saw (6020-022):

NOTE: There is no oscillate or reverse mode for these saws.

1. Depress either the left or right pedal to activate the handpiece.

2. The center pedal is inoperative using these handpieces.
2.5 Handpiece Cord Button Operation

The Advantage, PowerPro and E9000 Controllers allow the user complete system control from within the sterile field. Speed settings can be changed using the handpiece cord button.

1. To enter the Speed menu, press the handpiece cord button either two or three times, quickly.
   (a) Pressing the handpiece cord button twice allows the user to decrease the operating speed.
   (b) Pressing the handpiece cord button three times allows the user to increase the operating speed.

2. After entering the Speed menu the attached handpiece I.D. will display along with the current operating speed (the speed will be blinking). Press the handpiece cord button to change speed. The Speed menu will scroll until the minimum or maximum speeds are reached.

3. When the desired speed is reached, stop pressing the button. After a few seconds the speed menu will time out. The handpiece is now ready for use.

Handpiece Speed Adjustment

To enter the menu options to adjust the handpiece speed, press the handpiece cord button two or three times.

<table>
<thead>
<tr>
<th>Text Display Mode</th>
<th>Graphics Display Mode (PowerPro controller and Advantage controller, Port 3 Only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The menu will default to the speed menu and display the attached handpiece and the current speed setting.</td>
<td></td>
</tr>
<tr>
<td>“MEDIUM SPEED” “###K RPM”</td>
<td>25K RPM</td>
</tr>
<tr>
<td>“###” is blinking</td>
<td>30K RPM</td>
</tr>
<tr>
<td>Press the handpiece cord button until the desired speed is displayed. Stop pressing the button.</td>
<td></td>
</tr>
</tbody>
</table>
2.6 Handpiece Default Settings

<table>
<thead>
<tr>
<th>Handpiece</th>
<th>Default Speed</th>
<th>Irrigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium Speed Drill (6020-021, 6021-021)</td>
<td>25,000 rpm</td>
<td>Off</td>
</tr>
<tr>
<td>Reciprocating Saw (6020-023, 6021-023)</td>
<td>100%</td>
<td>Off</td>
</tr>
<tr>
<td>Sagittal Saw (6020-022, 6021-022)</td>
<td>100%</td>
<td>Off</td>
</tr>
<tr>
<td>Oscillating Saw (6020-024, 6021-024)</td>
<td>100%</td>
<td>Off</td>
</tr>
</tbody>
</table>

3.0 MAINTENANCE

This section explains the importance of keeping your MicroPower handpieces and attachments well maintained. It contains a maintenance schedule to assist you in determining the maintenance interval requirements of your instruments.

Regular and proper maintenance of your MicroPower handpieces and attachments are the best way to protect your investment. It is essential that you have your powered surgical instruments serviced as scheduled so as to retain their optimum performance and reliability, which will reward you with safer, less problematic product performance over time. The following maintenance schedule specifies which instruments need attention and how often you should have them serviced.

The service and time intervals shown in the maintenance schedule assume you will use the instruments as indicated in this manual, including proper day-to-day operation, cleaning, and sterilization. Proper care and handling of the instruments on a day-to-day basis are extremely important to ensure safe and efficient operation.

Your authorized ConMed Linvatec service department is the most knowledgeable about the MicroPower System instruments and will provide competent and efficient service. Service at ConMed Linvatec at the indicated service intervals is mandatory to keep your product warranties in effect. Any services and/or repairs done by any unauthorized repair facility may result in reduced performance of the instruments or instrument failure.
**Table 2: Maintenance Schedule**

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Product Description</th>
<th>(Months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6020-021</td>
<td>MicroPower Medium Speed Drill (Removable Lever)</td>
<td>•</td>
</tr>
<tr>
<td>6020-022</td>
<td>MicroPower Sagittal Saw (Removable Lever)</td>
<td>•</td>
</tr>
<tr>
<td>6020-023</td>
<td>MicroPower Reciprocating Saw (Removable Lever)</td>
<td>•</td>
</tr>
<tr>
<td>6020-024</td>
<td>MicroPower Oscillating Saw (Removable Lever)</td>
<td>•</td>
</tr>
<tr>
<td>6021-021</td>
<td>MicroPower Medium Speed Drill (Permanent Lever)</td>
<td>•</td>
</tr>
<tr>
<td>6021-022</td>
<td>MicroPower Sagittal Saw (Permanent Lever)</td>
<td>•</td>
</tr>
<tr>
<td>6021-023</td>
<td>MicroPower Reciprocating Saw (Permanent Lever)</td>
<td>•</td>
</tr>
<tr>
<td>6021-024</td>
<td>MicroPower Oscillating Saw (Permanent Lever)</td>
<td>•</td>
</tr>
<tr>
<td>1375-032</td>
<td>20° Angle Attachment</td>
<td>•</td>
</tr>
<tr>
<td>1375-033</td>
<td>Extra-Long 20° Angle Attachment</td>
<td>•</td>
</tr>
<tr>
<td>1375-034</td>
<td>70° Contra Angle Attachment w/ Dental Head</td>
<td>•</td>
</tr>
<tr>
<td>1375-035</td>
<td>70° Contra Angle Attachment w/ Surgical Head</td>
<td>•</td>
</tr>
<tr>
<td>1375-036</td>
<td>90° Angle Attachment</td>
<td>•</td>
</tr>
<tr>
<td><strong>Guards</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1375-012</td>
<td>MicroPower Medium Bur Guard</td>
<td>•</td>
</tr>
<tr>
<td>1375-011</td>
<td>MicroPower Long Bur Guard</td>
<td>•</td>
</tr>
<tr>
<td>1375-023</td>
<td>MicroPower Cloward Extra-Long Bur Guard</td>
<td>•</td>
</tr>
<tr>
<td>1375-020</td>
<td>MicroPower Laminectomy Guard</td>
<td>•</td>
</tr>
<tr>
<td>1387-022</td>
<td>MicroPower Tissue Retractor Guard</td>
<td>•</td>
</tr>
</tbody>
</table>

**WARNING:** Failure to follow the maintenance schedule above could result in reduced instrument performance or overheating of the handpiece or attachment. In addition, heavy use of the handpiece exceeding the recommended duty cycle can cause the handpiece to overheat. Refer to “4.0 TECHNICAL SPECIFICATIONS and ACCESSORIES” on page 34 for the associated handpiece duty cycle. Overheating can lead to possible burn injury to the patient or medical personnel. Rotation of handpiece usage per day will assist with proper performance.
3.1 Cleaning and Sterilizing

3.1.1 Cleaning Precautions

1. Follow universal precautions for protective apparel when handling and cleaning contaminated instruments.

2. Dispose of all non-reusable tubing sets, irrigation tips, burs, saw blades and bits properly after use.

3. Do not lubricate any handpieces.

4. ConMed Linvatec does not recommend immersing any of our handpieces, as this may affect long-term reliability.

5. The use of bleach, chlorine-based, or sodium hydroxide based liquid or chemical disinfectants, detergents, enzymatic cleaners, or soaps may cause degradation of the aluminum coating on the outside of our handpieces.

6. Never clean equipment in an ultrasonic cleaner or a combination washer/sterilizer.

3.1.2 Handpiece Cleaning Instructions

Clean handpieces and attachments as soon as possible after use.

1. Remove all attachments and accessories (i.e., saw blades, burs) from the handpiece prior to cleaning. For handpieces with detachable levers, remove the Activation Lever (Reference “2.3.3.4 Removing the Detachable Handpiece Activation Lever” on page 19 for removal information).

2. Disconnect the handpiece cord from the controller prior to cleaning.

3. Ensure the handpiece cord is securely fastened to the handpiece during cleaning.

4. With the nose of the handpiece facing downward, thoroughly scrub the handpiece, handpiece cord, attachments, and activation lever, if applicable, with a clean, soft brush dampened with a mild, pH-balanced detergent cleaner of your choice. Remove all traces of blood, debris and stains. Remove cleaning solution under running water. Do Not immerse handpiece.

5. Manipulate all moving parts of the handpiece and attachments to ensure all debris is removed. If not, continue cleaning until all debris is removed.
6. Keeping the nose of the handpiece pointed downward, rinse under running water to remove all traces of soap. Rinse all attachments likewise.

7. Flush all surfaces free of tap water with distilled water to prevent metal discoloration.

8. Gently shake the equipment free of water and wipe the surfaces with a clean, lint-free towel.

3.1.3 Attachment Lubricating Instructions

CAUTION: Only the angle attachments (1375-032, -033, -034, -035 and -036) are to be lubricated. Do not lubricate any handpieces or other attachments.

NOTES:

1. Attachments must be cleaned prior to lubrication.

2. Use only Pana Spray Attachment Lubricant (1375-037).

WARNING: The spray container is pressurized and the contents are flammable (contains LP gas). Do not expose can to temperatures exceeding 40°C (104°F). Do not puncture or burn can, even when empty. Do not spray on or near open flames or incandescent material.

1. Before using, shake the can well. Read all the information and instructions on the spray can label.

2. If the spray nozzle is not attached, securely attach it to the spray can dispenser.

3. Completely insert the spray nozzle in the bottom of the attachment.

4. With the can in an upright position, depress the button and spray the lubricant for one to two seconds or until lubricant is flowing from the attachment. Wipe any excess lubricant from the attachment.

5. After lubrication is complete, connect the attachment to the handpiece and operate for approximately 5 seconds.
3.1.4 Sterilization Information

Steam sterilization is safe and effective and has no contraindications for its use in sterilizing powered surgical handpieces, attachments and accessories.

3.1.4.1 Sterilization Warnings, Precautions and Notes

WARNING: The use of disinfecting solutions for an exterior instrument wipe will not sterilize the equipment.

1. Do not sterilize equipment with Ethylene Oxide (EtO).


3. Do not sterilize handpieces in cold sterilants like CIDEX.

4. **Do Not** “Peel Pack” handpieces or attachments for sterilization. Sterilization in a sealed pouch traps moisture which, over time, can cause internal corrosion of the handpiece.

5. ALWAYS lubricate the appropriate attachments *prior* to sterilization. See “3.1.3 Attachment Lubricating Instructions” on page 27.

6. **Do not** run handpieces while warm. Allow adequate time for cooling prior to surgery. **Do not immerse** in liquid or cover with a damp cloth to cool. Cool by exposure to room temperature.

NOTES:

1. The following guidelines do not guarantee that the device is sterile after the procedure. Your institution is still responsible for the normal sterility assurance validation.

2. Additional drying time may be required for complete heat and moisture dissipation. Operation of a handpiece that is not completely cool or dry may decrease performance and/or reliability.

3. Sterilization validation is based on AAMI guidelines (Association for the Advancement of Medical Instrumentation).
All handpieces and attachments may be processed in a pre-vacuum steam sterilizer (Steam Pre-vacuum) or in a gravity (downward) displacement sterilizer (Steam Gravity). Place handpiece(s), handpiece cord(s), and/or attachments/accessories in an appropriate instrument tray or a fully perforated, wrapped container, when applicable. Follow the recommended minimum sterilization exposure times listed on the following pages.

Recommended minimum sterilization exposure times are as follows:

### Table 3: Sterilization Parameters

<table>
<thead>
<tr>
<th>Sterilization Type</th>
<th>Recommended Temperature</th>
<th>Recommended Minimum Exposure Time</th>
<th>Dry Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Steam Pre-vacuum</strong></td>
<td>270-279°F (132-137°C)</td>
<td>4 minutes</td>
<td>10 minutes minimum</td>
</tr>
<tr>
<td><strong>Steam Gravity</strong></td>
<td>270-279°F (132-137°C)</td>
<td>35 minutes</td>
<td>10 minutes minimum</td>
</tr>
</tbody>
</table>

**Sterilization parameters for sterilizing MicroPower handpieces in the PRO6000 Sterilization Tray.**

<table>
<thead>
<tr>
<th>Sterilization Type</th>
<th>Recommended Temperature</th>
<th>Recommended Minimum Exposure Time</th>
<th>Dry Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Steam Pre-vacuum</strong></td>
<td>270-279°F (132-137°C)</td>
<td>4 minutes</td>
<td>10 minutes minimum</td>
</tr>
<tr>
<td><strong>Steam Gravity</strong></td>
<td>270-279°F (132-137°C)</td>
<td>35 minutes</td>
<td>10 minutes minimum</td>
</tr>
</tbody>
</table>

**Sterilization parameters for sterilizing individual MicroPower handpieces (6020-021, -022, -023, -024, 6021-021, -022, -023, -024); associated attachments; and handpiece cords, individually wrapped, without a sterilization tray.**

<table>
<thead>
<tr>
<th>Sterilization Type</th>
<th>Recommended Temperature</th>
<th>Recommended Minimum Exposure Time</th>
<th>Dry Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Steam Pre-vacuum</strong></td>
<td>270-279°F (132-137°C)</td>
<td>3 minutes</td>
<td>8 minutes minimum *</td>
</tr>
<tr>
<td><strong>Steam Gravity</strong></td>
<td>270-279°F (132-137°C)</td>
<td>10 minutes</td>
<td>8 minutes minimum *</td>
</tr>
<tr>
<td><strong>Steam Gravity</strong></td>
<td>250-254°F (121-123°C)</td>
<td>50 minutes</td>
<td>8 minutes minimum *</td>
</tr>
</tbody>
</table>

* CAUTION: An eight (8) minute minimum dry cycle must be run on all handpieces, guards and attachments every time the product is sterilized. Failure to use a dry cycle on the products may lead to reduced product performance or premature product failure. Operation of a handpiece that is not completely cool or dry may decrease performance and/or reliability.
## 3.2 Troubleshooting

### Table 4: Troubleshooting

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handpiece does not operate.</td>
<td>♦ Handpiece cord not connected securely. ♦ Handpiece cord and/or button faulty. ♦ Handpiece faulty. ♦ If using a footswitch, cord not connected securely. ♦ Footswitch cord or footswitch faulty. ♦ Handpiece safety is in the safe, or off position. ♦ Twist collet not in the fully locked position.</td>
<td>♦ Securely connect handpiece cord to handpiece and controller. ♦ Replace handpiece cord. ♦ Return for service. ♦ Securely connect footswitch cord to controller receptacle. ♦ Return for service. ♦ Move safety to the appropriate operating position. ♦ Twist collet to the fully locked position.</td>
</tr>
<tr>
<td>Handpiece overheats</td>
<td>♦ Worn bearings in the bur guard.</td>
<td>♦ Reference “3.3 Bur Guard Testing Procedure” on page 31. If resistance is noticed, return bur guard for service. If no resistance is noticed, return for service. ♦ Resterilize handpiece according to sterilization parameters and drying times, reference “3.1.4 Sterilization Information” on page 28.</td>
</tr>
<tr>
<td>“Magnetic Field”</td>
<td>♦ The handpiece is in close proximity to a magnetic drape. ♦ Removable activation lever partially connected. ♦ Faulty handpiece.</td>
<td>♦ Remove the handpiece from the magnetic drape area. Wait five seconds before restarting. ♦ Completely connect the activation lever (See “2.3.3.4 Removing the Detachable Handpiece Activation Lever” on page 19). ♦ Return handpiece to ConMed Linvatec for service.</td>
</tr>
</tbody>
</table>

![N S] is displayed on the controller.
3.3 Bur Guard Testing Procedure

NOTE: Bur and neuro guards are to be returned to the factory or a ConMed Linvatec authorized service facility for routine maintenance every six (6) months.

3.3.1 Bur and Neuro Guard Testing

NOTE: This test excludes the Medium Bur Guard, 1375-012.

1. Prior to testing, remove the guard from the handpiece.

2. Check for worn bearings:
   (a) Insert a bur into the nose of the guard.
   (b) While holding the bur, spin the guard. The guard should spin freely around the bur shaft without resistance.
   (c) Attach the guard and bur to the drill.
   (d) Operate the handpiece for at least 30 seconds. Stop the handpiece and carefully feel the end of the guard where the guard encases the shaft of the bur for overheating. If overheating is noticed, return the guard for service.

3.3.2 Medium Bur Guard (1375-012) Testing

1. Prior to testing, remove the guard from the handpiece.

2. Check for worn bearings:
   (a) Insert a bur into the nose of the guard.
   (b) While holding the bur, spin the guard. The guard should spin freely around the bur shaft without resistance.

3. Attach the bur guard to the Medium Speed Drill.

4. Prior to installing a bur, attach a SmartGuard Protector Sleeve (1375-112). Reference the associated insert that comes packaged with the SmartGuard for additional information.

NOTES:
• SmartGuard Protector Sleeves are designed to be attached to the Medium Bur Guard during surgical applications. They are intended to be used as a heat-sensing and insulating device that changes color from PURPLE (SAFE to use bur guard) to PINK (REPLACE bur guard) to indicate over-heating of the attached bur guard.
• Overheating might occur if bearings are worn or are not kept clean. If overheating occurs while a SmartGuard Protector Sleeve is attached to the Medium Bur Guard, the SmartGuard Protector Sleeve will change color from PURPLE to PINK. Immediately discontinue use of the bur guard to prevent possible injury to the patient and/or operator. Replace the bur guard and return original bur guard for service.

• Under prolonged use or intense cutting, the tip of the SmartGuard Protector Sleeve may turn pink while the rest of the sleeve retains its purple color. If more than 50% of the SmartGuard Protector Sleeve turns pink, discontinue use immediately to prevent possible injury to the patient and/or operator. Replace the bur guard and return original bur guard for service.

5. To attach a SmartGuard Protector Sleeve:
   (a) Remove the SmartGuard Protector Sleeve from its sterile packaging within the sterile field.
   (b) Press-fit the SmartGuard Protector Sleeve onto the end of the associated bur guard until fully seated (see figure below).
   (c) After the SmartGuard Protector Sleeve is attached, install a bur.

6. To install a bur:
   (a) Select a proper length bur for the guard.
   (b) Ensure the bur lock is in the unlocked position.
   (c) Insert the bur to the safe line or until the bur seats completely if no safe line is observed.
   (d) Lock the bur in place by twisting the bur lock clockwise until the red indicator dots are aligned. Always pull on the bur to ensure bur is fully locked in position.

CAUTION: Never lock the collet without a bur inserted. Damage to the collet may result.
7. Operate the handpiece for at least 30 seconds. Stop the handpiece and carefully feel the end of the guard where the guard encases the shaft of the bur for overheating. If overheating is noticed, return the guard for service. Or, if the SmartGuard Protector Sleeve changes color from PURPLE to PINK, immediately discontinue use of the bur guard. Replace the bur guard and return original bur guard for service.

8. To remove the SmartGuard Protector Sleeve, first remove the bur. Grasp the tabs of the SmartGuard Protector Sleeve between the thumb and forefinger and pull.

9. Discard the used SmartGuard Protector Sleeve properly.
4.0 TECHNICAL SPECIFICATIONS and ACCESSORIES

4.1 System Environmental Requirements

Operating:

- Ambient Operating Temperature: +50°F to 104°F (+10°C to +40°C)
- Relative Humidity: 30% to 75%
- Atmospheric Pressure: 700 hPa to 1060 hPa

Transport and Storage:

- Ambient Temperature: -40°F to 158°F (-40°C to +70°C)
- Relative Humidity: 10% to 100% including condensation
- Atmospheric Pressure: 500 hPa to 1060 hPa

4.2 Handpiece Cord (MC5057)

- Cord Length: Approx. 12 ft. (3.6 m)
- Weight: 10.9 oz. (309 g)
### 4.3 Handpieces

**MicroPower Medium Speed Drill (6020-021, 6021-021)**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Speed:</td>
<td>25,000 rpm</td>
</tr>
<tr>
<td>Speed Settings:</td>
<td>1,000 to 25,000 rpm (nominal) in 2,000 rpm increments</td>
</tr>
<tr>
<td>Default Speed:</td>
<td>25,000 rpm</td>
</tr>
<tr>
<td>Torque:</td>
<td>6 in. oz.</td>
</tr>
<tr>
<td>Bur Pull Out Force:</td>
<td>Exceeds 12.0 lbs. (5.4 kg)</td>
</tr>
<tr>
<td>Length:</td>
<td>4.86 in. (12.3 cm)</td>
</tr>
<tr>
<td>Diameter:</td>
<td>0.70 in. (1.8 cm)</td>
</tr>
<tr>
<td>Weight:</td>
<td>7 oz. (196 g)</td>
</tr>
<tr>
<td>Material:</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

**MicroPower Sagittal Saw (6020-022, 6021-022)**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Speed:</td>
<td>20,000 rpm</td>
</tr>
<tr>
<td>Speed Settings:</td>
<td>20 - 100% (20,000 cpm) in 10% increments</td>
</tr>
<tr>
<td>Stroke:</td>
<td>4° arc</td>
</tr>
<tr>
<td>Length:</td>
<td>6.64 in. (16.9 cm)</td>
</tr>
<tr>
<td>Diameter:</td>
<td>1.0 in. (2.54 cm)</td>
</tr>
<tr>
<td>Weight:</td>
<td>6.9 oz. (195 g)</td>
</tr>
<tr>
<td>Material:</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

**MicroPower Reciprocating Saw (6020-023, 6021-023)**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Speed:</td>
<td>17,000 rpm</td>
</tr>
<tr>
<td>Speed Settings:</td>
<td>20 - 100% (17,000 cpm) in 10% increments</td>
</tr>
<tr>
<td>Stroke:</td>
<td>1/10 in. (2.54 mm)</td>
</tr>
<tr>
<td>Length:</td>
<td>8.17 in. (20.8 cm)</td>
</tr>
<tr>
<td>Diameter:</td>
<td>0.75 in. (1.9 cm)</td>
</tr>
<tr>
<td>Weight:</td>
<td>8 oz. (208 g)</td>
</tr>
<tr>
<td>Material:</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>
**MicroPower Oscillating Saw (6020-024, 6021-024)**

- **Max Speed:** 25,000 rpm
- **Speed Settings:** 20 - 100% (25,000 cpm) in 10% increments
- **Stroke:** 8° arc
- **Length:** 7.37 in. (18.7 cm)
- **Diameter:** 1.5 in. (3.8 cm)
- **Weight:** 8 oz. (208 g)
- **Material:** Stainless Steel

**Table 5: Duty Cycles**

<table>
<thead>
<tr>
<th>Description</th>
<th>Duty Cycle at 25°C Ambient</th>
</tr>
</thead>
<tbody>
<tr>
<td>MicroPower Medium Speed Drill (6020-021, 6021-021)</td>
<td>2 minutes ON, 3 minutes OFF.</td>
</tr>
<tr>
<td>MicroPower Sagittal Saw (6020-022, 6021-022)</td>
<td>30 seconds ON/OFF for 6 cycles, then wait 30 minutes.</td>
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<tr>
<td>MicroPower Reciprocating Saw (6020-023, 6021-023)</td>
<td>30 seconds ON/OFF for 4 cycles, then wait 30 minutes.</td>
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<tr>
<td>MicroPower Oscillating Saw (6020-024, 6021-024)</td>
<td>30 seconds ON/OFF for 4 cycles, then wait 30 minutes.</td>
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### 4.4 Accessories

#### 4.4.1 Handpieces, Attachments and Accessories

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<thead>
<tr>
<th>REF</th>
<th>Description</th>
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<tbody>
<tr>
<td></td>
<td><strong>Handpieces and Footswitches</strong></td>
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<tr>
<td>6020-021</td>
<td>MicroPower Medium Speed Drill, Detachable Lever</td>
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<tr>
<td>6020-022</td>
<td>MicroPower Sagittal Saw, Detachable Lever</td>
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<td>6021-021</td>
<td>MicroPower Medium Speed Drill, Permanent Lever</td>
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<td>6021-024</td>
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<tr>
<td>5020-053</td>
<td>Two Pedal Footswitch</td>
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<td>Three Pedal Footswitch</td>
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<td>MC5057</td>
<td>Handpiece Cord</td>
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<td><strong>MicroPower Guards &amp; Attachments</strong></td>
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<tr>
<td>1375-012</td>
<td>Medium Bur Guard</td>
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<td>1375-011</td>
<td>Long Bur Guard</td>
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<td>1375-023</td>
<td>Cloward Extra Long Bur Guard</td>
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<tr>
<td>1375-032</td>
<td>20° Angle Attachment</td>
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<td>1375-033</td>
<td>XL 20° Angle Attachment</td>
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<tr>
<td>1375-035</td>
<td>70° Contra Angle Attachment w/Surgical Head</td>
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<tr>
<td>1375-036</td>
<td>90° Angle Attachment</td>
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<td>1375-020</td>
<td>Laminectomy Guard</td>
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<td>1387-022</td>
<td>Tissue Retractor Guard</td>
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<td>1375-034</td>
<td>70° Contra Angle Attachment w/Dental Head</td>
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<td>5020-057</td>
<td>Replacement Safety Slide</td>
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<td>Handpiece Replacement Lever</td>
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<td>Bur Rack</td>
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<td>Cleaning Brush</td>
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<td>5040-130</td>
<td>Reusable Irrigation Handpiece Clip</td>
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<td>5040-200</td>
<td>Reusable Medium Bur Tip</td>
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<tr>
<td>5040-201</td>
<td>Reusable External 70° &amp; 90° Angle Tip</td>
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<td>Reusable Internal 70° &amp; 90° Angle Tip</td>
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<td>Reusable Sagittal Saw Tip</td>
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<td>5040-208</td>
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<td>Advantage Console</td>
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