ENT Blades and Burs
FOR THE STRAIGHTSHOT® M4 MICRODEBRIDER
# ENT Blades and Burs

## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Generation of Powered ENT Tools</td>
<td>1</td>
</tr>
<tr>
<td>Automated EM Tracking Blades</td>
<td>2-3</td>
</tr>
<tr>
<td>Quadcut® Blades</td>
<td>4</td>
</tr>
<tr>
<td>Straight Sinus Blades</td>
<td>5-6</td>
</tr>
<tr>
<td>Powered Inferior Turbinoplasty Surgical Technique</td>
<td>7</td>
</tr>
<tr>
<td>Curved Sinus Blades</td>
<td>8-10</td>
</tr>
<tr>
<td>Straight Sinus Burs</td>
<td>11</td>
</tr>
<tr>
<td>Modified Lothrop Procedure: Selecting the Best Burs</td>
<td>12</td>
</tr>
<tr>
<td>Papilloma Surgical Technique</td>
<td>13</td>
</tr>
<tr>
<td>Curved Sinus Burs</td>
<td>14-15</td>
</tr>
<tr>
<td>Airway Blades</td>
<td>16-18</td>
</tr>
<tr>
<td>Tonsillectomy and Adenoidectomy Blades</td>
<td>19</td>
</tr>
<tr>
<td>Aesthetic Blades and Burs</td>
<td>20</td>
</tr>
<tr>
<td>IPC® System</td>
<td>22</td>
</tr>
</tbody>
</table>
A Generation of Powered ENT Tools
IPC® (Integrated Power Console) and Straightshot® M4 Microdebrider

This dynamic combination provides:
- The widest range of application-specific blades and burs
- Blade tips that rotate 360°
- Factory-calibrated blades for surgical navigation
- Seamless integration with other Medtronic ENT devices

We offer a broad variety of Straightshot M4 blades and burs for specific applications, including:
- Polypectomy
- Turbinoplasty
- Septoplasty and rhinoplasty
- Ethmoidectomy and sphenoidotomy
- Uncinectomy and maxillary antrostomy
- Trephination of frontal and maxillary sinus
- Tonsils and adenoids
- Choanal atresia
- Larynx and airways
- Microscopy sinus surgery

Visit www.MedtronicENT.com for more information.
Automated EM Tracking Blades

**M4-Rotatable**

### 4.0 mm Tricut® Straight Rotatable Blade with Automated EM Tracking

- **1884080EM**
- 13.0 cm long with straight shaft
- Rotates through 360°
- Offset cutting surface cuts in 3 planes
- Application: ethmoidectomy, sphenoid sinus surgery
- Operating speed: 5,000 rpm, oscillate
- 1 each, irrigation tubing separate

### 4.0 mm RAD® 12 Curved Rotatable Blade with Automated EM Tracking

- **1884012EM**
- 11.0 cm long with curved shaft
- Straightshot® M4 rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: uncincetomy, ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 1 each, irrigation tubing separate

### 4.0 mm RAD® 40 Curved Rotatable Blade with Automated EM Tracking

- **1884006EM**
- 11.0 cm long with curved shaft
- Straightshot M4 rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: uncincetomy, ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 1 each, irrigation tubing separate

### Irrigation Tubing for Blades and Burs

- **1895522**
- For use with IPC® blades and burs
- 5 each

---

*Speeds are suggested rpm (revolutions per minute), operated in oscillation mode for blades and (forward) mode for burs.*

*Measurements are listed in millimeters unless otherwise specified.*
Automated EM Tracking Blades
First and Only Factory-Calibrated Blades for Navigation

The innovative Automated EM Tracking Blades deliver unparalleled convenience and technology integration. They’re the first and only blades that are factory-calibrated for navigation, right out of the box. Attach the blade to the M4 microdebrider and the Fusion® system, and start navigating.

With this latest innovation, we continue to deliver the feature expansion and product integration that you expect from Medtronic.

Unique features include:
· No array, no clamps, no calibration, no waiting
· First and only factory-calibrated blades for navigation
· True “plug and play” is more convenient and efficient

Visit www.MedtronicENT.com for more information.
Quadcut® Blades
Real Relief from Blade Clogging

Powered FESS is an important advancement in surgical treatment, yet some challenges remain. Medtronic engineers continually strive to enhance technology, making surgery better for you and your patients.

*The Innovative Quadcut® Blades Offer:
- Reduced blade clogging over the Tricut® Blades
- Better engagement of ethmoid bone
- Improved precision and reduced collateral tissue damage

---

Test Medium
Oyster and eggshell mixture

MMR (Material Removal Rate)
(Tissue weight / minutes)

Cut Score
Material removed / clogs

- 70% reduction in clogging over the Tricut® Blade
- Approximately 17% additional tissue resection

* Boone JL, Feldt BA, McNally KC, Weitzel EK. Improved function of prototype 4.3-mm Medtronic Quadcut microdebrider blade over standard 4.0-mm Medtronic Tricut microdebrider blade. Int Forum Allergy Rhinol, 2011; 1:196-200

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Data collected from 4.3 mm Quadcut Blade
Straight Sinus Blades
M4-Rotatable

**TRICUT® BLADES**

4.0 mm Tricut® Blade
1884004HR
- 11.0 cm long with straight shaft
- Rotates through 360°
- Offset cutting surface cuts in 3 planes
- Application: ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 5 each with irrigation tubing

2.9 mm Silver Bullet® Blade
1884005HRE
- 11.0 cm long with straight shaft
- Rotates through 360°
- Application: ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 1 each with irrigation tubing
- Developed in conjunction with Rodney Lusk, MD

**SERRATED BLADES**

4.0 mm Serrated Blade
1884002HRE
- 11.0 cm with straight shaft
- Rotates through 360°
- Application: ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 1 each with irrigation tubing

2.9 mm Serrated Blade
1883502HRE
- 11.0 cm long with straight shaft
- Rotates through 360°
- Application: ethmoidectomy, sphenoid sinus surgery
- Operating speed: 5,000 rpm, oscillate
- 1 each with irrigation tubing

**SILVER BULLET®**

4.0 mm Silver Bullet® Blade
1884005HRE
- 11.0 cm long with straight shaft
- Rotates through 360°
- Application: ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 1 each with irrigation tubing
- Developed in conjunction with Rodney Lusk, MD

2.9 mm Silver Bullet® Blade
1882940HR
- 11.0 cm long
- Rotates through 360°
- Straight shaft with elevator
- Application: submucosal resection of inferior turbinate
- Operating speed: 3,000 rpm, oscillate
- 5 each with irrigation tubing
- Developed in conjunction with Laurence O’Halloran, MD

**TURBINATE**

2.9 mm Inferior Turbinate Blade
1882905HRE
- 11.0 cm long
- Rotates through 360°
- Application: choanal atresia
- Operating speed: 5,000 rpm, oscillate
- 1 each with irrigation tubing
- Developed in conjunction with Rodney Lusk, MD

2.0 mm Inferior Turbinate Blade
1882040HR
- 11.0 cm long
- Rotates through 360°
- Straight shaft with elevator
- Application: submucosal resection of inferior turbinate
- Operating speed: 3,000 rpm oscillate
- 5 each with irrigation tubing
- Developed in conjunction with Laurence O’Halloran, MD

2.0 mm Tricut® Blade
1882040HR
- 11.0 cm long with straight shaft
- Rotates through 360°
- Offset cutting surface cuts in 3 planes
- Application: pediatric sinus surgery
- Operating speed: 5,000 rpm, oscillate
- 1 each with irrigation tubing
Straight Sinus Blades
Non-Rotatable

TRICUT® BLADES

4.0 mm Tricut® Blade
1884004
- 11.0 cm long with straight shaft
- Offset cutting surface cuts in 3 planes
- Application: ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 5 each with irrigation tubing

3.5 mm Tricut® Blade
1883504
- 11.0 cm long with straight shaft
- Offset cutting surface cuts in 3 planes
- Application: ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 5 each with irrigation tubing

2.9 mm Tricut® Blade
1882904
- 11.0 cm long with straight shaft
- Offset cutting surface cuts in 3 planes
- Application: pediatric sinus surgery
- Operating speed: 5,000 rpm, oscillate
- 5 each with irrigation tubing

SERRATED BLADES

4.0 mm Serrated Blade
1884002
- 11.0 cm long with straight shaft
- Application: ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 5 each with irrigation tubing

3.5 mm Serrated Blade
1883502
- 11.0 cm long with straight shaft
- Application: ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 5 each with irrigation tubing

2.9 mm Serrated Blade
1882902
- 11.0 cm long with straight shaft
- Application: pediatric sinus surgery
- Operating speed: 5,000 rpm, oscillate
- 5 each with irrigation tubing

SILVER BULLET® BLADES

4.0 mm Silver Bullet® Blade
1884005
- 11.0 cm long with straight shaft
- Application: ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 5 each with irrigation tubing
- Developed in conjunction with Rodney Lusk, MD

2.9 mm Silver Bullet® Blade
1882905
- 11.0 cm long with straight shaft
- Application: choanal atresia
- Operating speed: 5,000 rpm, oscillate
- 5 each with irrigation tubing
- Developed in conjunction with Rodney Lusk, MD

INFERIOR TURBINATE

2.9 mm Inferior Turbine Blade
1882940
- 11.0 cm long
- Straight shaft with elevator
- Application: submucosal resection of inferior turbinate
- Operating speed: 60-3,000 rpm, oscillate
- 5 each with irrigation tubing
- Developed in conjunction with Laurence O’Halloran, MD

2.9 mm Inferior Turbine Blade
1882040
- 11.0 cm long
- Straight shaft with elevator
- Application: submucosal resection of inferior turbinate
- Operating speed: 60-3,000 rpm, oscillate
- 5 each with irrigation tubing
- Developed in conjunction with Laurence O’Halloran, MD

Speeds are suggested rpm (revolutions per minute), operated in oscillation mode for blades and (forward) mode for burs.
Measurements are listed in millimeters unless otherwise specified.
Chronic inferior turbinate hypertrophy is a common cause of nasal obstruction that can have significant effects on quality of life. Minimally invasive surgical technologies have evolved to address this condition, including laser, radiofrequency (RF), and microdebrider methods.

**Compared to RF Methods, Our Inferior Turbinate Blade**
- Offers significant and long-term results with one treatment
- Results in significantly reduced postoperative complications
- Helps achieve the goals of volumetric reduction
- Helps avoid unpredictable thermal damage to surrounding tissue

**Study Results**

**VAS Scores after Inferior Turbinoplasty with Microdebrider-Assisted Surgery**

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Pre-op</th>
<th>6 months post-op</th>
<th>1 year post-op</th>
<th>2 years post-op</th>
<th>3 years post-op</th>
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</thead>
<tbody>
<tr>
<td>VAS scores</td>
<td>1.55 (±0.81)</td>
<td></td>
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</tbody>
</table>

**Surgical Technique**

The primary goal of turbinate surgery is volumetric reduction of submucosal vascular stromal tissue with preservation of overlying respiratory epithelium (Fig. 01). This mucosa is essential to proper turbinate function, such as warming and humidifying inspired air and mucociliary clearance.

Inferior turbinoplasty with the Straightshot M4 is a minimally invasive technique, typically requiring just one 2.0 mm or 2.9 mm incision into the anterior portion of the turbinate (Fig. 02).

The physician inserts the IT Blade beneath the mucosal layer. After creating a submucosal dissection plane with the blade’s elevator tip, remove the intervening stromal tissue (Fig. 03-04).

The underlying turbinate bone is not removed and the overlying mucosa is also preserved. This technique reduces the size of the inferior turbinate with no damage to the functional mucosal tissue, such as blanching or crusting.

Once the turbinoplasty has been completed, the turbinate can be outfractured using standard techniques.

However, none of the patients in the three studies referenced on this page received an outfracture, and these patients experienced excellent long-term results.

At the surgeon’s discretion, Merocel® packing may be used for the first 24 hours. Studies suggest its value in eliminating postoperative bleeding, including the Liu and Chen studies.

**Nota Bene:** The technique description herein and the use of instructions for the related procedures are made available by Medtronic ENT to the healthcare professional to illustrate the author’s suggested treatment for the uncomplicated patient. In the final analysis, the preferred treatment is that which, in the healthcare professional’s judgment, addresses the needs of the individual patient.
Curved Sinus Blades
M4-Rotatable

**RAD® 12 BLADES**

4.0 mm RAD® 12 Blade 1884012HR
- 11.0 cm long with curved shaft
- Straightshot M4 rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: uncinctomy, ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 5 each, irrigation tubing separate

3.5 mm RAD® 12 Blade 1883512HRE
- 11.0 cm long with curved shaft
- Straightshot M4 rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: uncinctomy, ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 1 each, irrigation tubing separate

**SKIMMER® BLADE**

2.9 mm Skimmer® Angle-Tip Blade 1882979HRE
- 13.0 cm long double-curved blade
- Application: pituitary tumor resection
- Operating speed: 60-500 rpm
- Low-profile distal bend: 15°
- 1 each with irrigation tubing

**RAD® 40 BLADES**

4.0 mm RAD® 40 Blade 1884006HR
- 11.0 cm long with curved shaft
- Straightshot M4 rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: uncinctomy, ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 5 each, irrigation tubing separate

3.5 mm RAD® 40 Blade 1883506HRE
- 11.0 cm long with curved shaft
- Straightshot M4 rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: uncinctomy, ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 1 each, irrigation tubing separate

**RAD® 60 BLADES**

4.0 mm RAD® 60 Blade 1884016HR
- 11.0 cm long with curved shaft
- Straightshot M4 rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: frontal sinus surgery
- Operating speed: 5,000 rpm, oscillate
- 5 each, irrigation tubing separate

3.5 mm RAD® 60 Blade 1883516HRE
- 11.0 cm long with curved shaft
- Straightshot M4 rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: frontal sinus surgery
- Operating speed: 5,000 rpm, oscillate
- 1 each, irrigation tubing separate

**RAD® 90 BLADE**

3.5 mm RAD® 90 Blade 1883519HR
- 11.0 cm long with curved shaft
- Straightshot M4 rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: maxillary polypectomy, frontal sinusotomy
- Operating speed: 2,000-3,000 rpm, oscillate
- 3 each, irrigation tubing separate

The Straightshot® M4 Microdebrider and 360° rotating RAD® 90 blade allow optimum access to maxillary polyps and the frontal recess.
Curved Sinus Blades

Key-Rotatable *

3.5 mm RAD® 12 Blade
1883514RT
- 11.0 cm long with curved shaft
- Key rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: uncinectomy, ethmoidectomy
- Operating speed: 3,000 rpm, oscillate
- 3 each, irrigation tubing separate

3.5 mm RAD® 40 Blade
1883507RT
- 11.0 cm long with curved shaft
- Key rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: uncinectomy, ethmoidectomy
- Operating speed: 5,000 rpm, oscillate
- 3 each, irrigation tubing separate

3.5 mm RAD® 60 Blade
1883516RT
- 11.0 cm long with curved shaft
- Key rotates blade tip 360° without shaft rotation
- Offset cutting surface cuts in 3 planes
- Application: frontal sinus surgery
- Operating speed: 5,000 rpm, oscillate
- 3 each, irrigation tubing separate

Irrigation Tubing for Blades and Burs
1895522
- For use with IPC® blades and burs
- 5 each

The Straightshot® Magnum II
With Key-Rotatable Blades

*For use with Straightshot® Magnum II
Speeds are suggested rpm (revolutions per minute), operated in oscillation mode for blades and (forward) mode for burs.
Measurements are listed in millimeters unless otherwise specified.


Curved Sinus Blades
Non-Rotatable

**RAD® 12 BLADE**

<table>
<thead>
<tr>
<th>4.0 mm RAD® 12 Blade</th>
<th>1884012</th>
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<tbody>
<tr>
<td>· 11.0 cm long with curved shaft</td>
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<tr>
<td>· Offset cutting surface cuts in 3 planes</td>
<td></td>
</tr>
<tr>
<td>· Application: uncinctomy, ethmoidectomy</td>
<td></td>
</tr>
<tr>
<td>· Operating speed: 5,000 rpm, oscillate</td>
<td></td>
</tr>
<tr>
<td>· 5 each, irrigation tubing separate</td>
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**RAD® 40 BLADE**

<table>
<thead>
<tr>
<th>4.0 mm RAD® 40 Blade</th>
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<tbody>
<tr>
<td>· 11.0 cm long with curved shaft</td>
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<td>· Offset cutting surface cuts in 3 planes</td>
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<tr>
<td>· Application: uncinctomy, ethmoidectomy</td>
<td></td>
</tr>
<tr>
<td>· Operating speed: 5,000 rpm, oscillate</td>
<td></td>
</tr>
<tr>
<td>· 5 each, irrigation tubing separate</td>
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**RAD® 60 BLADE**

<table>
<thead>
<tr>
<th>4.0 mm RAD® 60 Blade</th>
<th>1884016</th>
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<tbody>
<tr>
<td>· 11.0 cm long with curved shaft</td>
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<td>· Offset cutting surface cuts in 3 planes</td>
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</tr>
<tr>
<td>· Application: frontal sinus surgery</td>
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</tr>
<tr>
<td>· Operating speed: 5,000 rpm, oscillate</td>
<td></td>
</tr>
<tr>
<td>· 5 each, irrigation tubing separate</td>
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**RAD® 60 BLADE**

<table>
<thead>
<tr>
<th>2.9 mm RAD® 60 Blade</th>
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<td>· 11.0 cm long with curved shaft</td>
<td></td>
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<tr>
<td>· Offset cutting surface cuts in 3 planes</td>
<td></td>
</tr>
<tr>
<td>· Same inner lumen as wider 3.5 mm blades</td>
<td></td>
</tr>
<tr>
<td>· Application: frontal sinus surgery</td>
<td></td>
</tr>
<tr>
<td>· Operating speed: 1,500 rpm, oscillate</td>
<td></td>
</tr>
<tr>
<td>· 3 each, irrigation tubing separate</td>
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**RAD® 120 BLADE**

<table>
<thead>
<tr>
<th>3.5 mm RAD® 60 Blade</th>
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<tbody>
<tr>
<td>· 11.0 cm long with curved shaft</td>
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<td>· Offset cutting surface cuts in 3 planes</td>
<td></td>
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<tr>
<td>· Application: frontal sinus surgery</td>
<td></td>
</tr>
<tr>
<td>· Operating speed: 5,000 rpm, oscillate</td>
<td></td>
</tr>
<tr>
<td>· 3 each, irrigation tubing separate</td>
<td></td>
</tr>
<tr>
<td>· Developed in conjunction with William Bolger, MD</td>
<td></td>
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</tbody>
</table>

**3.5 mm RAD® 12 Blade**

| 1883514 |
|-----------------------|---------|
| · 11.0 cm long with curved shaft | |
| · Offset cutting surface cuts in 3 planes | |
| · Application: uncinctomy, ethmoidectomy | |
| · Operating speed: 5,000 rpm, oscillate | |
| · 5 each, irrigation tubing separate | |

**3.5 mm RAD® 40 Blade**

| 1883507 |
|-----------------------|---------|
| · 11.0 cm long with curved shaft | |
| · Offset cutting surface cuts in 3 planes | |
| · Application: uncinctomy, ethmoidectomy | |
| · Operating speed: 5,000 rpm, oscillate | |
| · 3 each, irrigation tubing separate | |

**3.5 mm RAD® 120 Blade**

| 1883517 |
|-----------------------|---------|
| · 11.0 cm long with curved shaft | |
| · Tapered tip to allow maximum bend angle | |
| · Application: maxillary polypectomy | |
| · Operating speed: 1,500-3,000 rpm, oscillate | |
| · 3 each, irrigation tubing separate | |

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Speeds are suggested rpm (revolutions per minute), operated in oscillation mode for blades and (forward) mode for burs.

Measurements are listed in millimeters unless otherwise specified.
Straight Sinus Burs

**OVAL BUR**

3.2 mm Oval Bur, High-Speed
1883264HS
- 12.5 cm long with straight shaft
- Cannulated suction bur tip
- Application: sinus drilling
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate

**ROUND BURS**

4.5 mm Round Bur, High-Speed
1884560HS
- 12.5 cm long with straight shaft
- Cannulated suction bur tip
- Application: sphenoid drilling
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate

3.2 mm Round Bur, High-Speed
1883262HS
- 12.5 cm long with straight shaft
- Cannulated suction bur tip
- Application: sinus drilling
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate

2.9 mm Pediatric Round Bur
1882960
- 10.0 cm long with straight shaft
- Application: choanal atresia
- Operating speed: up to 5,000 rpm (forward)
- 5 each, irrigation tubing separate

**ROUTER BUR**

4.5 mm Aggressive Router Bur, High-Speed
1884562HS
- 12.5 cm long with straight shaft
- Cannulated suction bur tip
- Application: sinus drilling
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate

**DRILL**

2.0 mm Drill
1882900
- Operating speed: 6,000 rpm (forward)
- Irrigation tubing separate

**SINUS BUR SETS**

Mini-Trephination Set
The complete set includes:
- 1882900, 2.0 mm Drill
- 1892001, Drill Guide
- 1892002, Guide Pin
- 1892003, Irrigation Cannula
- 3717005, Instrument Tray (not shown)
- Irrigation tubing separate
- Developed in conjunction with Barry Schaitkin, MD

Maxillary Trephination Set
Allows trephination through anterior face of the maxillary sinus while helping to reduce damage to dental nerve tissue.
*The complete set includes:*
- 1886301, Endoscope Sheath with Elevator, 4.0 mm
  Endoscope sheath helps deflect soft tissue and nerves during identification of drill site and guide placement
- 1893001, Maxillary Trephination Drill Guide, 5.0 mm
  Drill guide is irrigated
- 1884501, Maxillary Trephination Drill Bit, 5.0 mm
- 1893007, Maxillary Trephination Instrument Tray (not shown)
- Operating speed: 12,000 rpm (forward)
- Irrigation tubing separate
- Developed in conjunction with PJ Wormald, MD

*For use with the M4 only
Speeds are suggested rpm (revolutions per minute), operated in oscillation mode for blades and (forward) mode for burs.
Measurements are listed in millimeters unless otherwise specified.
Selecting the Best Bur for the Job

*Modified Lothrop Procedure*

One of the most technically challenging procedures for the rhinologist is the modified Lothrop procedure, where the frontal sinus nasal floor is removed endoscopically from lacrimal bone to lacrimal bone, including the interfrontal sinus septum and a portion of the nasal bony septum that adjoins the frontal sinus floor.

Choosing the right bur includes choosing the proper angle as well as its shape and aggressiveness. The RAD® 55 Curved Sinus and the RAD® Frontal Finesse Burs provide an elongated fluted geometry that can drill inferiorly to superiorly into the nasal crest, which can then be extended laterally in a controlled manner (Figures 01 and 02). The 70° Tapered Diamond Bur can assist in extending the frontal sinus laterally, in a superior to inferior fashion (Figure 03).

Higher frontal sinus cell partitions or osteomas may exist in patients’ anatomy that need to removed. This type of work would require a longer working length, thus the 70°, 5.0 mm ASB Diamond Bur may be the best option for this type of procedure.

*For the complete surgical technique, please contact your Medtronic ENT representative.*
Papilloma Surgical Technique
Using Angled Skimmer® Blades for Papilloma Excision

The microdebrider has emerged as a preferred modality of papilloma excision. The Skimmer® Laryngeal Blade was specifically designed for delicate removal of papillomas near the vocal fold while minimizing damage to the epithelium (Figure 01).

Surgical Technique

The ability to successfully excise papillomas while avoiding collateral epithelial damage to the vocal fold serves as a model to the surgical management of papilloma. The recurrent nature of papilloma with resultant numerous surgeries often leads to progressive scarring and poor voice outcomes that may be prevented by the ability to avoid injury to normal tissues with the microdebrider.

Even for bulky disease associated with airway obstruction, the Skimmer blade rapidly removes papilloma in a controlled fashion (Figure 02). In the setting of acute distress, a single controlled pass can rapidly relieve airway obstruction and ensure that the child has a secure airway. Subsequently, a complete excision can be completed in the manner described above (Figure 03).

The development of longer Tricut® blades, coupled with the ability to rotate the blade housing, allows access to the distal airway down to the mainstem bronchi for papilloma removal (Figure 04). A Tricut blade is safe for use in the distal airway as the tracheal and bronchial mucosa is less susceptible to injury than the vocal fold epithelium. In patients with tracheostomies, a useful approach is to pass the blade through the stoma while directly visualizing the blade with a transoral endoscope.

Caution: Careful attention to the transition from papilloma to vocal fold epithelium is requisite. Particular concern is at the region of the anterior commissure where consideration of a staged resection is prudent. Bleeding is generally minimal and self-limited. If visualization becomes compromised, a pledget soaked with a vasoconstrictive agent invariably controls bleeding and allows the surgery to proceed.
**ASB CUTTING BUR**

4.0 mm Anterior Skull Base Cutting Bur, 15°

- 15.0 cm long
- Application: Removal of bone in and around sphenoid, sella, clivus, and pterygoid plate
- Operating speed: up to 12,000 rpm (forward)
- 1 each, irrigation tubing separate
- Developed in conjunction with PJ Wormald, MD, and Aldo Stamm, MD

**ASB DIAMOND BURS**

5.0 mm Anterior Skull Base Diamond Bur, 15°

- 15.0 cm long
- Application: Removal of bone in and around sphenoid, sella, clivus, and pterygoid plate
- Operating speed: up to 12,000 rpm (forward)
- 1 each, irrigation tubing separate
- Developed in conjunction with PJ Wormald, MD, and Aldo Stamm, MD

3.2 mm Anterior Skull Base Diamond Bur, 15°

- 15.0 cm long
- Application: Removal of bone in and around sphenoid, sella, clivus, and pterygoid plate
- Operating speed: up to 12,000 rpm (forward)
- 1 each, irrigation tubing separate
- Developed in conjunction with PJ Wormald, MD, and Aldo Stamm, MD

3.2 mm Anterior Skull Base Diamond Bur, 40°

- 15.0 cm long
- Application: Removal of bone in and around sphenoid, sella, clivus, and pterygoid plate
- Operating speed: up to 12,000 rpm (forward)
- 1 each, irrigation tubing separate
- Developed in conjunction with PJ Wormald, MD, and Aldo Stamm, MD

2.9 mm Skimmer® Angle-Tip Blade

- 13.0 cm long double-curved blade
- Application: pituitary tumor resection
- Operating speed: 60-500 rpm
- Low-profile distal bend: 15°
- 1 each with irrigation tubing

**SKIMMER® BLADE**

5.0 mm Anterior Skull Base Diamond Bur, 70°

- 13.0 cm long
- Application: Removal of frontal sinus septations and osteomas above the level of frontal recess
- Operating speed: up to 12,000 rpm (forward)
- 1 each, irrigation tubing separate
- Developed in conjunction with PJ Wormald, MD, and Aldo Stamm, MD
Curved Sinus Burs
(continued)

**TAPERED DIAMOND BURS**

### 4.0 mm Choanal Atresia Bur, High-Speed
1883673HS
- 13.0 cm long with curved shaft
- Cannulated suction bur tip
- Application: removal of vomer
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate
- Developed in conjunction with Gary Josephson, MD

### 4.0 mm Tapered Diamond Bur, High-Speed
1883672HS
- 13.0 cm long with curved shaft
- Cannulated suction bur tip
- Application: frontal sinusotomy
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate
- Developed in conjunction with David Kennedy, MD

**ROUNDED DIAMOND BUR**

### 5.0 mm Curved Round Diamond Bur, High-Speed
1885061HS
- 12.5 cm long with curved shaft
- Cannulated suction bur tip
- Application: trans-sphenoidal surgery
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate
- Developed in conjunction with David Kennedy, MD

### 3.2 mm Septoplasty Bur, High-Speed
1883212HS
- 11.0 cm long with curved shaft
- Cannulated suction bur tip
- Application: removal of bony and cartilaginous septal deviations
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate
- Developed in conjunction with Donald Leopold, MD, and Eileen Raynor, MD

**DCR BURS**

### 4.0 mm Curved DCR Bur, High-Speed
1884068HS
- 13.0 cm long with curved shaft
- Application: endoscopic drilling of lacrimal bone
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate
- Developed in conjunction with Michael Mercandetti, MD

### 2.5 mm Curved Diamond DCR Bur, High-Speed
1882569HS
- 11.0 cm long with curved shaft
- Cannulated suction bur tip
- Application: endoscopic drilling of lacrimal bone
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate
- Developed in conjunction with PJ Wormald, MD

### 3.0 mm RAD® Frontal Finesse Bur, High-Speed
1883070HS
- 13.0 cm long with curved shaft
- 8 flutes
- Cannulated suction bur tip
- Application: frontal sinus drilling
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate
- Developed in conjunction with Donald Leopold, MD

**RAD® BURS**

### 3.6 mm RAD® 55 Curved Bur, High-Speed
1883670HS
- 13.0 cm long with curved shaft
- Cannulated suction bur tip
- Application: frontal sinus drilling
- Operating speed: up to 12,000 rpm (forward)
- 3 each, irrigation tubing separate

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Speeds are suggested rpm (revolutions per minute), operated in oscillation mode for blades and (forward) mode for burs.

Measurements are listed in millimeters unless otherwise specified.
2.9 mm Skimmer® Angle-Tip Blade  
1882979HRE
- 15°
- Application: papilloma and tumor removal, laryngomalacia, and pediatric
- Operating speed: 60-500 rpm
- 1 each with irrigation tubing

2.9 mm Skimmer® Angle-Tip Blade  
1882925HRE
- 15°
- Application: papilloma removal, laryngomalacia, and trans-sphenoidal hypophysectomy
- Operating speed: 60-500 rpm
- 1 each with irrigation tubing

2.9 mm Skimmer® Angle-Tip Blade  
1882924HRE
- 15°
- Application: papilloma removal, laryngomalacia, and trans-sphenoidal hypophysectomy
- Operating speed: 60-500 rpm
- 1 each with irrigation tubing

4.0 mm Tricut® Angle-Tip Laryngeal Blade  
1884030HRE
- 15°
- Application: tumor debulking and granulation tissue removal
- Operating speed: 500-1,200 rpm
- 1 each with irrigation tubing

4.0 mm Tricut® Angle-Tip Subglottic Blade  
1884031HRE
- 15°
- Application: tracheal stenosis, tumor debulking, and granulation tissue removal
- Operating speed: 500-1,200 rpm

4.0 mm Tricut® Angle-Tip Tracheal Blade  
1884033HRE
- 15°
- Application: debulking tracheal papilloma and lesions, tumor debulking, and granulation tissue removal
- Operating speed: 500-1,200 rpm

4.0 mm Tricut® Angle-Tip Bronchial Blade  
1884035HRE
- 15°
- Application: debulking bronchial papilloma and lesions, tumor debulking, and granulation tissue removal
- Operating speed: 500-1,200 rpm
## Airway Blades

### Non-Rotatable

<table>
<thead>
<tr>
<th>Blade Type</th>
<th>Length</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>SKIMMER® BLADES</strong></td>
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</tbody>
</table>
| **2.9 mm Skimmer® Angle-Tip Blade** | 1882925 | - 27 cm long double-curved blade  
- Inner suction path is the same as larger curved blade  
- Application: recurrent respiratory papilloma (RRP) removal and trans-sphenoidal hypophysectomy  
- Operating speed: 60-500 rpm  
- Low-profile distal bend: 15°  
- 3 each with irrigation tubing  
- Developed in conjunction with Craig Derkay, MD, and David Darrow, MD |
| **3.5 mm Skimmer® Angle-Tip Blade** | 1883523 | - 22.5 cm long double-curved blade  
- Application: recurrent respiratory papilloma (RRP) removal and trans-sphenoidal hypophysectomy  
- Operating speed: 60-500 rpm  
- Low-profile distal bend: 15°  
- 3 each with irrigation tubing  
- Developed in conjunction with Charles Myer, III, MD; Paul Wilging, MD; Brian Wiatrak, MD; Paul Flint, MD; David Parsons, MD; and John Little, MD |
| **4.0 mm Skimmer® Angle-Tip Laryngeal Blade** | 1884023 | - 27.5 cm long double-curved blade  
- Application: recurrent respiratory papilloma (RRP) removal and trans-sphenoidal hypophysectomy  
- Operating speed: 60-500 rpm  
- Low-profile distal bend: 15°  
- 3 each with irrigation tubing  
- Developed in conjunction with Charles Myer, III, MD; Paul Wilging, MD; Brian Wiatrak, MD; Paul Flint, MD; David Parsons, MD; and John Little, MD |
| **3.5 mm Skimmer® Angle-Tip Subglottic Blade** | 1883524 | - 27.5 cm long double-curved blade  
- Application: recurrent respiratory papilloma (RRP) removal and trans-sphenoidal hypophysectomy  
- Operating speed: 60-500 rpm  
- Low-profile distal bend: 15°  
- 3 each with irrigation tubing  
- Developed in conjunction with Charles Myer, III, MD; Paul Wilging, MD; Brian Wiatrak, MD; Paul Flint, MD; David Parsons, MD; and John Little, MD |
| **4.0 mm Skimmer® Angle-Tip Subglottic Blade** | 1884024 | - 27.5 cm long double-curved blade  
- Application: recurrent respiratory papilloma (RRP) removal and trans-sphenoidal hypophysectomy  
- Operating speed: 60-500 rpm  
- Low-profile distal bend: 15°  
- 3 each with irrigation tubing  
- Developed in conjunction with Charles Myer, III, MD; Paul Wilging, MD; Brian Wiatrak, MD; Paul Flint, MD; David Parsons, MD; and John Little, MD |

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<tbody>
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<td><strong>TRICUT® BLADES</strong></td>
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</tbody>
</table>
| **4.0 mm Tricut® Angle-Tip Laryngeal Blade** | 1884030 | - 22.5 cm long double-curved blade  
- Application: tumor debulking  
- Operating speed: 1,500 rpm  
- 3 each with irrigation tubing  
- Developed in conjunction with Paul Flint, MD, and John Little, MD |
| **4.0 mm Tricut® Angle-Tip Subglottic Blade** | 1884031 | - 27.5 cm long double-curved blade  
- Application: tracheal stenosis  
- Operating speed: 1,500 rpm  
- 3 each with irrigation tubing  |
| **4.0 mm Tricut® Straight-Tip Laryngeal Blade** | 1884020 | - 22.5 cm long  
- Straight tip with curve at handpiece  
- Application: debulking of RRP lesions  
- Operating speed: 1,200 rpm  
- 3 each with irrigation tubing  
- Developed in conjunction with Paul Flint, MD, and John Little, MD |
**Airway Blades**

*Non-Rotatable (continued)*

### Serrated Blades

**4.0 mm Serrated Angle-Tip Tracheal Blade**
- 1884033
- 37.0 cm long
- Angled tip allows better visibility with endoscopy
- Application: debulking distal RRP and tracheal lesions
- Operating speed: 1,200 rpm
- 1 each with irrigation tubing
- Developed in conjunction with Paul Flint, MD

### Serrated Blades

**2.9 mm Serrated Angle-Tip Blade**
- 1882936E
- 18.0 cm long double-curved blade
- Application: papilloma and hemangioma removal
- Operating speed: 500-1,500 rpm
- 1 each with irrigation tubing

**2.9 mm Serrated Angle-Tip Blade**
- 1882937E
- 22.0 cm long double-curved blade
- Application: papilloma and hemangioma removal
- Operating speed: 500-1,500 rpm
- 1 each with irrigation tubing

### Tracheal Blade

**4.0 mm Straight Tracheal Blade**
- 1884032
- 37.0 cm long
- Straight tip to allow access through smaller diameter bronchoscope
- Application: debulking distal RRP and tracheal lesions
- Operating speed: 1,200 rpm
- 1 each with irrigation tubing
- Developed in conjunction with Paul Flint, MD, and John Little, MD

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*Speeds are suggested rpm (revolutions per minute), operated in oscillation mode for blades and (forward) mode for burs.*

*Measurements are listed in millimeters unless otherwise specified.*
Tonsillectomy and Adenoidectomy Blades

For clinical applications, the IPC® Powered T&A Blade Set for the PITA™ Technique offers significant advantages to most patients. With interchangeable 12° and 40° outer cutting tubes, you can remove adenoids and tonsils in the traditional order.

**Benefits of Powered Adenoidectomy**
- More precise tissue removal
- Lowered recurrence rate of otitis media compared to other techniques

**Benefits of Powered Intracapsular Tonsillectomy**
- Reduces postoperative bleeding and dehydration
- Less postoperative pain
- Quicker patient recovery compared to traditional Bovie techniques

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**4.5 mm RADenoid® Adult Blade**
- 13.0 cm long with curved 45° blade
- Application: adenoidectomy
- Allows better access into the choana
- Operating speed: 1,500 rpm
- 5 each, irrigation tubing separate
- Designed in conjunction with Max April, MD, and J. Lindhe Guarisco, MD

**4.0 mm RADenoid® Blade**
- 11.0 cm long with curved 40° blade
- Application: adenoidectomy
- Operating speed: 1,500 rpm
- 5 each, irrigation tubing separate
- Designed in conjunction with Max April, MD, and J. Lindhe Guarisco, MD

**4.0 mm Tonsillectomy Blade**
- 11.0 cm
- 12° blade
- Application: intracapsular tonsillectomy
- Operating speed: 1,500 rpm
- 5 each, irrigation tubing separate
- Designed in conjunction with Max April, MD, and J. Lindhe Guarisco, MD

**Powered T&A Blade Set**
- 13.0 cm
- Removable inner cutting tube
- 40° outer blade designed for powered adenoidectomy
- 12° outer blade designed for powered intracapsular tonsillectomy
- Operating speed: 1,500 rpm
- 5 each, irrigation tubing separate
- Developed in conjunction with Peter J. Koltai, MD
Aesthetic Blades and Burs

**FEATHERTOUCH® RASPS**

**FeatherTouch® Suction Rasp Tip (Coarse)**
1992208
- 8.4 cm
- Coarse tip
- Operating speed: 3,000-5,000 rpm (forward)
- Suction integrated into rasp face
- Used with FeatherTouch Converter (1922005) and suction tubing (1895524)
- Application: rhinoplasty, dorsal hump reduction
- 2 each, irrigation tubing separate
- Developed in conjunction with Ted Cook, MD; M. Eugene Tardy, MD; and Dan Becker, MD

**FeatherTouch® Suction Rasp Tip (Fine)**
1992210
- 8.4 cm
- Fine tip
- Operating speed: 3,000-5,000 rpm (forward)
- Suction integrated into rasp face
- Used with FeatherTouch Converter (1922005) and suction tubing (1895524)
- Application: rhinoplasty, dorsal hump reduction
- 2 each, irrigation tubing separate
- Developed in conjunction with Ted Cook, MD; M. Eugene Tardy, MD; and Dan Becker, MD

**FeatherTouch® Suction Tubing (not pictured)**
1895524
- For use with FeatherTouch Suction Rasp Tip
- 10 each

**OTHER**

**Micro-Planer® Blade**
1884010
- 11.0 cm
- Application: submental soft tissue removal
- Operating speed: 1,000-2,000 rpm, oscillate
- 5 each, irrigation tubing separate
- Developed in conjunction with Ted Cook, MD

**Tardy MicroBur®**
1883260
- 10.0 cm
- Application: rhinoplasty
- Operating speed: 3,000-5,000 rpm (forward)
- 5 each, irrigation tubing separate
- Developed in conjunction with M. Eugene Tardy, MD

**HydroBrader® Irrigating/Aspirating Dermabrader**
1922100
- Coarse grit
- Application: dermabrasion
- Operating speed: 3,500-5,000 rpm (forward)
- 3 each, irrigation tubing separate

**RhinoBur® Rhinoplasty Bur**
1884566
- 10.0 cm
- Application: rhinoplasty
- Operating speed: 4,000-6,000 rpm (forward)
- 3 each, irrigation tubing separate
- Developed in conjunction with Dean Toriumi, MD

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Speeds are suggested rpm (revolutions per minute), operated in oscillation mode for blades and (forward) mode for burs.

Measurements are listed in millimeters unless otherwise specified.

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**RhinoBur® Rhinoplasty Bur**
- Sculpts the bony dorsum with finesse and control
- Particularly useful in revision cases and patients with thin nasal skin
- Allows spot burring to correct localized irregularities
References


Integrated Power Console (IPC®) System

- The innovative IPC® system is the only ENT powered surgery system with the widest range of application-specific handpieces and accessories
- With fingertip control on the Straightshot® M4, the blade tip rotates 360° independently of the shaft

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1898001

IPC® Power Cords
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Standard, North America, 3.0 M
1897821
Standard, North America, 6.0 M
1895821
UK/ireland, 240 V, 2.5 M
1895824
UK/ireland, 6.0 M
1895822
Continental Europe, 230 V, 2.5 M
1895825
Continental Europe, 6.0 M
1895823
Japan

* Select a Power Cord and a System Manual

PC® System Manuals
1898851
English Only
1898851A
EL, EN, ES, FR, PT
1898851B
DE, EN, FR, IT, NL
1898851C
DA, EN, FI, NO, SV
1898851D
CS, EN, HU, PL, TR
1898851E
EN, RU (CD only)

IPC® System Multifunction Footpedal
1898430
Basket
1897510
Cart
1898600

Straightshot® M4 Microdebrider
1898200T

Straightshot® M4 Instrument Tray
1898400

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