Acumed® is a global leader of innovative orthopaedic and medical solutions. We are dedicated to developing products, service methods, and approaches that improve patient care.

**Acumed® Bone Graft Harvesting System**

The Acumed Bone Graft Harvesting System facilitates safe, rapid harvest of morselized autogenous cancellous graft from the iliac crest, distal radius, and distal femur through a small skin incision.

The system is designed to minimize the patient's discomfort and harvest site morbidity. This compact bone graft harvesting system is designed to be easy to use and includes four drill size options, a power adapter fitting, a starting punch, and a removal key.

**Indications for Use:**

These instruments harvest cancellous bone material from the iliac crest, distal radius, and distal femur and are used in conjunction with another surgical procedure such as bone grafting.

<table>
<thead>
<tr>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Warning</strong></td>
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<tr>
<td><strong>Caution</strong></td>
</tr>
<tr>
<td><strong>Note</strong></td>
</tr>
</tbody>
</table>
# Table of Contents

- System Features .................................................. 2
- Instrument Overview ............................................. 3
- Surgical Technique Overview .................................. 4
- Surgical Techniques ............................................... 6
  - Anterior Ilium Crest Surgical Technique .................. 6
  - Posterior Ilium Crest Surgical Technique .................. 9
  - Distal Radius Surgical Technique ............................ 12
- Ordering Information .............................................. 15
System Features

Hudson Fitting Adaptor
Allows drill to be mounted

Bone Graft Extractor
The bone graft removal paddle is engineered to remove the graft from the inside of the drill

Bone Graft Punch
The punch is designed to create a starting point for the drill

3 cm Line
Indicates drill depth

Cutting Drill
Each revolution of the drill cuts new cancellous material and loads it into the body of the trephine

Removal Key
The key disconnects the bone graft drill from the adapter

<table>
<thead>
<tr>
<th>Volume</th>
<th>cc (per pass)</th>
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<tbody>
<tr>
<td>6 mm Bone Graft Drill</td>
<td>0.5 cc</td>
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<tr>
<td>8 mm Bone Graft Drill</td>
<td>0.9 cc</td>
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<tr>
<td>10 mm Bone Graft Drill</td>
<td>1.6 cc</td>
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<tr>
<td>12 mm Bone Graft Drill</td>
<td>2.5 cc</td>
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Instrument Overview

Hudson Fitting Adaptor (BG-8040)

Jacobs Chuck Adaptor (BG-8044)

Graft Removal Paddle Assembly (BG-8060)

6 mm Graft Removal Paddle Assembly (BG-8064)

Bone Graft Punch (BG-8080)

Removal Key (BG-8050)

Optional Instruments

Bone Graft Ratcheting T-Handle (BG-8043)

7 mm Bone Graft Drill Assembly (PL-BG07)
Surgical Technique Overview

Anterior Ilium Crest Surgical Technique

Posterior Ilium Crest Surgical Technique

Distal Radius Surgical Technique
Anterior Ilium Crest Surgical Technique

1 Incision and Dissection
Entry point is through a 2 cm incision located over the iliac crest, at least 3 cm posterior to the anterior superior iliac crest (ASIS). The lateral femoral cutaneous nerve is usually located within the inguinal ligament or within 2 cm dorsolateral to the ASIS in most adults. However, the nerve may take a different course over the crest up to 5 cm dorsolateral to the ASIS.

After incising the skin and subcutaneous layers, sharply incise the white fascial confluence of the gluteal/tensor and abdominal musculature over the iliac crest and the periosteum. Use a periosteal elevator to perform a limited subperiosteal dissection over the crest. Then introduce small Hohmann-type retractors to facilitate exposure and help identify the center of the crest. Use an elevator or retractors to probe the orientation of the ilium, so that the trephine can be accurately directed between the inner and outer tables of the ilium.

2 Instrument Assembly and Harvest Site Preparation
Using the Bone Graft Punch (BG-8080) and a mallet, make a starting hole at the desired entry point (Figure 2). Insert the appropriate size trephine into the Hudson Fitting Adaptor (BG-8040), rotating it clockwise until it locks (figures 3 and 4). Attach this assembly to a drill or the Bone Graft Ratcheting T-Handle (BG-8043).

Note: A Hudson or Jacobs Adaptor will be needed to mount the trephine.

Caution: Ensure that the snap ring is present and not damaged.
3 Harvest Autologous Bone Graft

Beginning at low speed, drill the trephine into the desired entry point until the device fully engages the bone (Figure 5). The morsel size can be varied by the drill speed and rate of insertion. Advance the trephine to the laser-etched ring on the instrument (Figure 6) and then withdraw the instrument from the bone (Figure 7).
4 Removal of Bone Graft From Harvester

Detach the trephine from the adaptor using the Removal Key (BG-8050), which is inserted through the holes in the trephine and rotated (figures 8 and 9). Use the Graft Removal Paddle Assembly (BG-8060), inserted in the pointed end of the trephine, to expel the graft from the open end of the trephine (figures 10 and 11).

**Note:** Additional graft may be harvested through the same entrance hole in the iliac crest by redirecting the trephine in a radial pattern from the original hole.

**Caution:** The 6 mm Graft Removal Paddle Assembly (BG-8064) may be used only with the 6 mm drill (BG-8006-S).

5 Backfill Harvest Site (Optional)

Exposure of bleeding surface from a large void left behind may lead to hematoma. If desired, a bone void filler can be used to backfill the graft harvest site.
Posterior Ilium Crest Surgical Technique

1 Incision and Dissection
Entry point is through a midline incision via the subcutaneous plane or from a separate oblique incision. (Figure 1). The dissection should not extend toward the superior cluneal nerves which cross approximately 8 cm superolaterally to the posterior superior iliac spine. Perform a limited subperiosteal dissection to permit entry of the selected Acumed trephine.

Care should be taken not to direct the trephine inferior to the level of the posterior superior iliac spine to prevent inadvertent entry into the greater sciatic notch and injury to the superior gluteal vessels or sciatic nerve. The sacro-iliac joint should also be avoided.

2 Instrument Assembly and Harvest Site Preparation
Using the Bone Graft Punch (BG-8080) and a mallet, make a starting hole at the desired entry point (Figure 2). Insert the appropriate size trephine into the Hudson Fitting Adaptor (BG-8040), rotating it clockwise until it locks (figures 3 and 4). Attach this assembly to a drill or the Bone Graft Ratcheting T-Handle (BG-8043).

Note: A Hudson or Jacobs Adaptor will be needed to mount the trephine.

Caution: Ensure that the snap ring is present and not damaged.
3 Harvest Autologous Bone Graft

Beginning at low speed, drill the trephine into the desired entry point until the device fully engages the bone (Figure 5). The morsel size can be varied by the drill speed and rate of insertion. Advance the trephine to the laser-etched ring on the instrument (Figure 6) and then withdraw the instrument from the bone (Figure 7).
4 **Removal of Bone Graft From Harvester**

Detach the trephine from the adaptor using the Removal Key (BG-8050), which is inserted through the holes in the trephine and rotated (figures 8 and 9). Use the Graft Removal Paddle Assembly (BG-8060), inserted in the pointed end of the trephine, to expel the graft from the open end of the trephine (figures 10 and 11).

**Note:** Additional graft may be harvested through the same entrance hole in the iliac crest by redirecting the trephine in a radial pattern from the original hole.

**Caution:** The 6 mm Graft Removal Paddle Assembly (BG-8064) may be used only with the 6 mm drill (BG-8006-S).

5 **Backfill Harvest Site (Optional)**

Exposure of bleeding surface from a large void left behind may lead to hematoma. If desired, a bone void filler can be used to backfill the graft harvest site.
Distal Radius Surgical Technique

1 **Incision and Dissection**

A tourniquet is recommended to minimize bleeding. The distal radius may be approached from the dorsal or radial side, depending upon the surgeon’s preference.

Entry point is through a 2 cm incision between the second and third dorsal compartment, approximately 1—2 cm proximal to the dorsal lip of the radius (Figure 1). Incise the fascia proximal to the extensor retinaculum. The incision can be extended into the proximal portion of the retinaculum if needed. Retract the extensor carpi radialis brevis and extensor carpi radialis longus tendons to expose the dorsal cortex of the radius.

2 **Instrument Assembly and Harvest Site Preparation**

Using the Bone Graft Punch (BG-8080) and a mallet, make a starting hole at the desired entry point (Figure 2). Insert the appropriate size trephine into the Hudson Fitting Adaptor (BG-8040), rotating it clockwise until it locks (figures 3 and 4), and attach this assembly to a drill or the Bone Graft Ratcheting T-Handle (BG-8043).

**Note:** A Hudson or Jacobs Adaptor will be needed to mount the trephine.

**Caution:** Ensure that the snap ring is present and not damaged.
Distal Radius Surgical Technique [continued]

3 Harvest Autologous Bone Graft

Beginning at low speed, drill the trephine into the desired entry point until the device fully engages the bone (Figure 5). The morsel size can be varied by the drill speed and rate of insertion. Advance the trephine to the laser-etched ring on the instrument (Figure 6) and then withdraw the instrument from the bone (Figure 7).
4 Removal of Bone Graft From Harvester

Detach the trephine from the adaptor using the Removal Key (BG-8050), which is inserted through the holes in the trephine and rotated (figures 8 and 9). Use the Graft Removal Paddle Assembly (BG-8060), inserted in the pointed end of the trephine, to expel the graft from the open end of the trephine (figures 10 and 11).

**Note:** Additional graft may be harvested through the same entrance hole in the distal radius by redirecting the trephine in a radial pattern from the original hole.

**Caution:** The 6 mm Graft Removal Paddle Assembly (BG-8064) may be used only with the 6 mm drill (BG-8006-S).

5 Backfill Harvest Site (Optional)

Exposure of bleeding surface from a large void left behind may lead to hematoma. If desired, a bone void filler can be used to backfill the graft harvest site.
# Ordering Information

<table>
<thead>
<tr>
<th>Components</th>
<th>Sterile</th>
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<tbody>
<tr>
<td><strong>Instrumentation</strong></td>
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<tr>
<td>Jacobs Chuck Adaptor</td>
<td>6 mm Bone Graft Drill</td>
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<td>Hudson Fitting Adaptor</td>
<td>8 mm Bone Graft Drill</td>
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<tr>
<td>Graft Removal Paddle Assembly</td>
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<td>BG-8010-S</td>
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<td>Optional Components</td>
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<tr>
<td><strong>Instrumentation</strong></td>
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</tr>
<tr>
<td>Bone Graft Ratcheting T-Handle</td>
<td>6 mm Bone Graft Drill</td>
</tr>
<tr>
<td>7 mm Bone Graft Drill Assembly</td>
<td>8 mm Bone Graft Drill</td>
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</tbody>
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*Note:* To learn more about the full line of Acumed innovative surgical solutions, please contact your authorized Acumed distributor, call 888.627.9957, or visit www.acumed.net.
References

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