1 **ASSESS A/P AND LATERAL RADIOGRAPHS**

Decide if impaction grafting and struts are necessary.

2 **PREPARE IMPACTION/INJECTION ASSEMBLY**

Cut the Impactor Sleeve to the length of the deficient canal. Select an implant length that extends at least one inch beyond the deficiency and is one inch longer than the Impactor Sleeve. Then cut the Cement Nozzle at least one inch longer than the length of the implant.

3 **INSERT ASSEMBLY INTO CANAL**

Insert the Cement Nozzle through the Impactor Sleeve to the end of the nozzle. Insert the Cement Restrictor onto the tip of the Cement Nozzle, which extends past the Impactor Sleeve.

Note the length the Cement Nozzle extends past the Impactor Sleeve. Then insert the assembly into the humeral canal so the distal end of the Impactor Sleeve is even with the capitulum.

4 **IMPACT MORSELIZED BONE CHIPS INTO HUMERAL CANAL**

Insert morselized bone chips into the humeral canal and use the appropriate impactors to impact the graft circumferentially around the Impactor Sleeve up to the confines of the cortex.

**Suggested Impactor Use:**

- **Cylindrical Impactor:** Used to level off bone graft at the top of the canal. The flat end compresses bone downward and provides an even bone graft surface prior to cementing.
- **Straight Impactor:** Used to fill in small areas with bone graft. The straight end primarily compresses bone downward into small voids and can be used deep within the canal or at the top surface.
- **Tapered Impactor:** Used initially to impact bone deep in the canal. The tapered end compresses bone downward and outward.

5 **DELIVER BONE CEMENT**

Connect the Cement Nozzle to the cement cartridge or Universal Adaptor. Deploy the Cement Restrictor by extruding low viscosity cement into the canal. Withdraw the Cement Nozzle two inches so that the tip is even with the Impactor Sleeve proximally. Then slowly withdraw the Impactor Sleeve and Cement Nozzle in unison until the canal is completely full of cement. Insert the humeral component according to the surgical technique. A bone graft should be placed behind the anterior flange.

**Note:** The restrictor is not intended to pressurize the cement. Pressurization of the cement will move the Cement Restrictor deeper into the canal, thus lengthening the cement column.

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Prod. No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>32-8105-038-00</td>
<td>Coonrad/Morrey Elbow Cement Restrictor w/ Nozzle</td>
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<tr>
<td>31-8106-038-00</td>
<td>Straight Impactor</td>
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<tr>
<td>31-8106-039-00</td>
<td>Tapered Impactor</td>
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<tr>
<td>31-8106-041-00</td>
<td>Cylindrical Impactor</td>
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<tr>
<td>31-8106-042-00</td>
<td>Impactor Sleeve</td>
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<tr>
<td>31-8106-043-00</td>
<td>Universal Adaptor</td>
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</table>

Please refer to package insert for complete product information, including contraindications, warnings, precautions, and adverse effects.

Contact your Zimmer Representative or visit us at www.zimmer.com.