EXPEDİUM® Advance Reduction Derotation System

User Guide

*Representative image only. Please note there are 8 reducers per set.
MR Information
This device has not been evaluated for safety and compatibility in the MR environment.
This device has not been tested for heating or migration in the MR environment.

<table>
<thead>
<tr>
<th>Contents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Overview</strong></td>
<td>Introduction 2</td>
</tr>
<tr>
<td></td>
<td>Features and Benefits 3</td>
</tr>
<tr>
<td><strong>User Guide</strong></td>
<td>Instrument Assembly 4</td>
</tr>
<tr>
<td></td>
<td>Rod Reduction 5</td>
</tr>
<tr>
<td></td>
<td>Derotation Tubes and Frame Attachment 9</td>
</tr>
<tr>
<td></td>
<td>Instrument Disassembly 10</td>
</tr>
<tr>
<td><strong>Product Catalog</strong></td>
<td>Instrument Sets 11</td>
</tr>
<tr>
<td></td>
<td>Instruments 13</td>
</tr>
</tbody>
</table>
Introduction

The EXPEDIUM® Advance Reduction Derotation System is a streamlined instrument set to facilitate rod reduction and/or vertebral body derotation procedures when utilizing the EXPEDIUM® 5.5 Spine System.

The system features a secure Reducer-to-Screw locking feature, streamlined instrument profile, and combined rod reduction and derotation design to eliminate the need for multiple instrument passes.

The EXPEDIUM Advance Reducer is not compatible with the EXPEDIUM VERSE® System.
Features and Benefits

**Hard Stop Ring**
Provides confirmation of 30 mm of rod reduction

**Threaded Reduction**
Allows for 30mm of rod reduction

**Detachment Tabs**
Detaches the EXPEDIUM Advance Reducer from the TOP NOTCH Feature without the need to unthread the Threaded Insert

**Hex Feature**
Allows for attachment of EXPEDIUM Advance Derotation Tubes and a manual handle or power tool

**Locking Collar**
Prevents unintentional disengagement of the EXPEDIUM Advance Reducer from the TOP NOTCH® Feature on the screw head

**Reduction Marker**
Alignment of the black ring with the recessed reduction marker indicates 30 mm of rod reduction

**Recessed Tabs**
Reduces soft tissue and bony impingement during instrument insertion and detachment

**Quick Connect Feature**
Allows for quick connection to the TOP NOTCH Feature of the EXPEDIUM Screw head
The EXPEDIUM Advance Reducer is comprised of three parts: the EXPEDIUM Advance Reducer Body and the Threaded Insert (two-part assembly).

**Step 1**

Start by assembling the two components of the Threaded Insert, as shown (Figure 1).

**Step 2**

Next, grasping the hex end of the Threaded Insert, introduce it into the EXPEDIUM Advance Reducer Body, aligning the small wings of the Threaded Insert with the cut outs inside the Reducer Body. Rotating the Threaded Insert, three full turns, in the clockwise direction will engage the threaded mechanism and translate the component distally (Figure 2).

The instrument is now ready to connect to the TOP NOTCH Feature of the EXPEDIUM Screw head.
Rod Reduction

The EXPEDIUM Advance Reducer attaches to the TOP NOTCH Feature on the EXPEDIUM Screw head.

**Step 1**

Align the distal end of the assembled Reducer with the TOP NOTCH Feature on the screw head (Figure 3) and push down until you hear an audible click (Figure 4).

If the EXPEDIUM Advance Reducer has properly engaged the TOP NOTCH Feature, slight rotational or pulling forces should not disengage the instrument.
Step 2

To prevent accidental detachment of the EXPEDIUM Advance Reducer, turn the locking collar at the proximal end of the Reducer Body until the dimple on the locking collar aligns with the locked padlock symbol (Figure 5).

PRECAUTION: Unless the locking collar is rotated to the locked position, the EXPEDIUM Advance Reducer may disengage from the pedicle screw if detachment tabs are pressed inadvertently.
Step 3

**EXPEDIUM Handle and Power Tool are not provided with the EXPEDIUM Advance Reduction Derotation Instruments.**

Any EXPEDIUM Handle from the EXPEDIUM 5.5 System Instrument Set can be used with the Manual Hex Adapter.

Any Power Tool with a DHS® (Dynamic Hip Screw) Connection can be utilized.

Once the EXPEDIUM Advance Reducer is securely attached to the TOP NOTCH Feature on the EXPEDIUM Screw head, attach the Manual Hex Adapter and Handle or the EXPEDIUM Advance DHS Hex Adapter and Power Tool.

- For manual rod reduction, insert the EXPEDIUM Advance Manual Hex Adapter (Figure 6) into the preferred EXPEDIUM Handle. Place the Handle onto the hex of the Threaded Insert and rotate clockwise to continue reduction (Figure 7).

- For powered rod reduction, insert the EXPEDIUM Advance DHS Hex Adapter into a power tool with a DHS (Dynamic Hip Screw) Connection. Place the Power Tool onto the hex of the Threaded Insert and drive forward to continue reduction.

The Hard Stop Ring (proximal ring on the Threaded Insert) will indicate 30 mm of rod reduction when it is seated flush with the Reducer Body and will act as a Hard Stop (Figure 8). As a secondary indicator of 30 mm rod reduction, the black ring on the Threaded Insert will align with the Reduction Marker recesses mid-way down the EXPEDIUM Advance Reducer Body (Figure 8).

Step 4

Once rod reduction is complete, remove the Manual Hex Adapter or EXPEDIUM Advance DHS Hex Adapter from the EXPEDIUM Advance Reducer.

**PRECAUTION:** If power is utilized, the Reducer may jerk to a stop when the Hard Stop Ring is reached. This could cause wrist strain or injury.
Step 5a | No Derotation
To maintain reduction, insert a Single Innie Set Screw through the EXPEDIUM Advance Reducer, utilizing the Short Set Screw Inserter, and tighten (Figure 9).

Step 5b | Derotation
If derotation is required, leave the EXPEDIUM Advance Reducer in place and proceed to Derotation Tube attachment instructions (please refer to page 9 in this guide).

If derotation is not required, the EXPEDIUM Advance Reducer can be detached.

Step 6
The EXPEDIUM Advance Reducer can be removed from the TOP NOTCH Feature by turning the locking collar counterclockwise to the unlocked position and depressing the tabs on the side of the EXPEDIUM Advance Reducer Body (Figure 10).

PRECAUTION: The EXPEDIUM Advance Reducer will not disengage from the TOP NOTCH Feature unless the locking collar is in the unlocked position. If the locking collar is in the unlocked position and the Reducer will not disengage, unthread the Reducer slightly to remove force from the rod.
EXPEDIUM Advance Derotation Tubes can directly attach to the EXPEDIUM Advance Reducer.

**Step 1**
To attach, ensure the collet on the distal end of the Derotation Tube is retracted.

Place the Derotation Tube over the hex of the Threaded Insert and push down the collet to lock (Figure 11).

A Single Innie Set Screw can be delivered through the EXPEDIUM Advance Reducer with the Derotation Tube attached utilizing the Long Set Screw Inserter.

If required, an EXPEDIUM Handle and Manual Hex Adapter or Power Tool and DHS Hex Adapter can be placed on the Derotation Tube to assist with Vertebral Body Derotation.

**Optional Step**
The EXPEDIUM Derotation Frame can be attached to the EXPEDIUM Advance Derotation Tubes for en bloc or segmental derotation (Figure 12).

**PRECAUTION:** VIPER® System Frames are not compatible with the EXPEDIUM Advance Derotation Tubes.
Once the EXPEDIUM Advance Reducer is detached from the TOP NOTCH Feature on the EXPEDIUM Screw head, it must be disassembled for cleaning.

**Step 1**

To disassemble, rotate the Threaded Insert counterclockwise until it disengages from the EXPEDIUM Advance Reducer Body (Figure 13).

**Step 2**

Disassemble the two components of the Threaded Insert by pulling on the proximal and distal end to separate (Figure 14).
## Reduction Derotation Instruments

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<td>2797-22-930</td>
<td>EXPEDIUM® Advance Reducer Body</td>
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<td>2797-22-940</td>
<td>EXPEDIUM® Advance Derotation Tube</td>
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<td>3</td>
<td>2797-22-950</td>
<td>EXPEDIUM® Advance Manual Hex Adapter</td>
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<td>EXPEDIUM® Advance DHS Hex Adapter</td>
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<td>2797-22-956</td>
<td>EXPEDIUM® Advance Set Screw Inserter, Short</td>
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</table>

* This tray has two levels. Additional Reducers and Derotation Tubes are stored on the lower level.
** The Short Set Screw Inserter is stored underneath the Long set Screw Inserter.
## Derotation Frame Instruments (Optional)

<table>
<thead>
<tr>
<th>Number</th>
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<td>2</td>
<td>2797-88-960</td>
<td>Derotation Frame Handle</td>
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<td>3</td>
<td>2797-88-955</td>
<td>Derotation Frame</td>
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</tr>
</tbody>
</table>
Instruments

**EXPEDIUM Advance Reducer**
2797-22-930  EXPEDIUM® Advance Reducer Body

**Derotation Tube**
2797-22-940  EXPEDIUM® Advance Derotation Tube

**Adapters**
2797-22-945  EXPEDIUM® Advance DHS® Hex Adapter

2797-22-950  EXPEDIUM® Advance Manual Hex Adapter
## Instruments

### Set Screw Inserter
- **2797-22-955**  EXPEDIUM® Advance Set Screw Inserter, Long

![Set Screw Inserter](image)

- **2797-22-956**  EXPEDIUM® Advance Set Screw Inserter, Short

![Set Screw Inserter](image)

### Derotation Frame
- **2797-88-965**  Modular Clamp

![Derotation Frame](image)

- **2797-88-960**  Frame Handle

![Derotation Frame](image)

- **2797-88-955**  Quick Stick Frame

![Derotation Frame](image)
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