Description of the Implants

Specifically designed for anatomical reconstruction of articular proximal humerus fractures.

**Anatomical Shoulder Fracture Head**
- Anatomically designed proximal portion
- The proximal volume of the prosthesis is optimized to restore normal humeral anatomy to a selected head size
- Round shaped heads
- Special tuberosity groove
- Bone fits anatomically below the head
- Design aids in prevention of impingement and tears

**Anatomical Shoulder Fracture Base-Plate**
- For stable anchoring of the tuberosities to the stem
- Increase primary stability
- Provides resistance to tuberosity movement
- Increased surface area for contact with tuberosities

**Anatomical Shoulder Fracture Stem**
- The base-plate has a special medial clearance in order to preserve remaining humeral bone
- Extra rough-blasted proximal surface with fracture spikes specially developed for proximal humeral bone
- Material: Optimized material composition, Ti-Alloy, CoCr, with a long-term historical experience
- Allows for cemented or non-cemented use

**Indications**
The Anatomical Shoulder™ Fracture System is intended for use in prosthetic replacement of the proximal humerus and the glenoid articular surface of the scapula during total-, hemi- and fracture shoulder arthroplasty in treatment of the following:
- Complex 2 and 3 part fractures of the proximal humerus with subluxation of the head fragment;
- Complex 2 and 3 part fractures of the proximal humerus with loosening of the spongiosa in the head fragment;
- Complex 2 and 3 part fractures of the proximal humerus with additional cross split of the head fragment;
- Fracture instability after nonsurgical treatment of 2 and 3 fragment proximal humerus fractures;
- Renduosarticular revision of the humeral head;
- Posttraumatic arthritis of the humeral head/facet.

The Anatomical Shoulder Fracture stem is intended for cerclage or tension use.

**Effective Medial Base-Plate Design**
- The base-plate has a special medial clearance in order to preserve remaining humeral bone

**Surface**
- Extra rough-blasted proximal surface with fracture spikes specially developed for proximal humeral bone
- Smooth-blasted distal surface
- Material: Optimized material composition, Ti-Alloy, CoCr, with a long-term historical experience
- Allows for cemented or non-cemented use

**Base Plate Suture Holes**
- Due to the position of the fracture suture holes, an unobstructed superimposition of the greater and lesser tuberosities below the head will allow the original anatomy to be restored.
- Fracture suture holes optimized for secure fixation
- Stem removal suture manufactured to provide smooth surface for suture contact/paving
- Additional lateral hole for optional suture support

**Fracture Spikes**
- Extra medial base-plate for stable anchoring of the tuberosities to the stem
- Increased primary stability
- Provides resistance to tuberosity movement
- Increased surface area for contact with tuberosities

**Distal Anchoring Safety**
- 3 grooves for rotational stability, press-fit or cemented
- The two lateral grooves are for defined orientation
- Tapered stem design, for stem removal and homogeneous distribution of forces

**Right and Left Option**
- In respect to the shoulder anatomy, physiology, and the greater and lesser tuberosities
- Allows for variation adjustment to match patient anatomy

**Convertible to an Anatomical Shoulder Inverse/Reverse System, without Stem Removal**
- Such revision might be necessary in case of a severe rotator cuff tear. This may simplify revision surgery since the need to remove a well-fixed stem is eliminated.
Description of the Implants

Specifically designed for anatomical reconstruction of cruciate proximal humeral fractures.

- **Anatomical Shoulder Fracture Base-Plate**: 6 different versions, each baseplate, head and screw combination delivered sterile in one box.
  - Right 40R, 44R, 48R
  - Left 40L, 44L, 48L

- **Anatomical Shoulder Fracture Stem**: 12 different versions, each stem delivered sterile in one box.
  - Stem lengths: Short 130 mm, Long 170 mm, Longest 200 mm.
  - Stem sizes: 7, 9, 11, 13

**Anatomical Design**
- Anatomically designed proximal portion
- The proximal volume of the prosthesis is optimized to restore normal humeral anatomy by a selected head size
- Anatomic shape of the head
- Special anatomically grown threads
- Round shaped heads
- Bone fits anatomically below the head
- Special anatomy aids in prevention of impingement and tears

**Anatomical Shoulder Fracture Stem**
- Effective Medial Base-Plate Design
  - The base-plate has a special medial clearance in order to preserve remaining humeral bone
- Fracture Spikes
  - For stable anchoring of the tuberosities to the stem
  - Increase primary stability
  - Provides resistance to tuberosity movement
  - Increased surface area for contact with tuberosities

**Surface**
- Extra rough blasted proximal surface with fracture spikes specially developed for proximal Humeral bone
- Smooth-machined distal surface
- Material: Optimized material combination, Ti Alloy, CoCr, with a long term historical experience in bone and cement fixation
- Allows for cemented or non-cemented use

**Indications**

The Anatomical Shoulder™ Fracture System is intended for use in prosthesis replacement of the proximal humerus and the glenoid articular surface of the scapula during total-, hemi- and fracture shoulder arthroplasty in treatment of the following:
- Complex 2 and 3 part fractures of the proximal humerus with subluxation of the headfragment,
- Complex 2 and 3 part fractures of the proximal humerus with additional extra split of the head fragment,
- Fracture instability after osteosynthesis of 2 and 3 fragments of the proximal humerus,
- Restorable revisions of the humeral head,
- Restorable revisions after internal fixation of impingement and tears

**Base Plate Suture Holes**
- Due to the position of the Fracture suture holes, an unaltered expansion of the greater and lesser tuberosities below the head, respecting the cortical anatomy is possible
- Fracture suture holes optimized for secure fixation
- Tapered stem design manufactured to provide smooth surface for natural contact/paving
- Additional lateral hole for optional suture support

**Stem Suture Holes**
- To provide final stable fixation of the tuberosities to the Anatomical Shoulder Fracture Stem
- One medial, one lateral
- Medial hole for congruence effect around tuberosities

**Tuberosity Groove**
- Distal Anchoring Safety
  - 3 grooves for rotational stability, press-fit or cemented
  - The two lateral grooves are for defined orientation
  - Tapered stem design, for stem removal and homogeneous distribution of forces

**Right and Left Option**
- In respect to the shoulder anatomy, physiology, and the greater and lesser tuberosities
- Allows for version adjustment to match patient anatomy

**Convertible to an Anatomical Shoulder Inverse/Reverse System, without Stem Removal**
- Such revision might be necessary in case of a severe rotator cuff tear. This may simplify revision surgery since the need to remove a well-fixed stem is eliminated

**Tuberosity Groove**
- Effective Medial Base-Plate Design
  - The base-plate has a special medial clearance in order to preserve remaining humeral bone
- Fracture Spikes
  - For stable anchoring of the tuberosities to the stem
  - Increase primary stability
  - Provides resistance to tuberosity movement
  - Increased surface area for contact with tuberosities

**Surface**
- Extra rough blasted proximal surface with fracture spikes specially developed for proximal Humeral bone
- Smooth-machined distal surface
- Material: Optimized material combination, Ti Alloy, CoCr, with a long term historical experience in bone and cement fixation
- Allows for cemented or non-cemented use

**Indications**

The Anatomical Shoulder™ Fracture System is intended for use in prosthetic replacement of the proximal humerus and the glenoid articular surface of the scapula during total-, hemi- and fracture shoulder arthroplasty in treatment of the following:
- Complex 3 and 4 part fractures of the proximal humerus with subluxation of the headfragment,
- Complex 3 and 4 part fractures of the proximal humerus with loosening of the spongiosa in the head fragment,
- Complex 3 and 4 part fractures of the proximal humerus with additional cross split of the head fragment,
- Fracture instability after osteosynthesis of 2 and 3 fragments of the proximal humerus,
- Restorable revisions of the humeral head,
- Restorable revisions after internal fixation of impingement and tears

**Base Plate Suture Holes**
- Due to the position of the Fracture suture holes, an unaltered expansion of the greater and lesser tuberosities below the head, respecting the cortical anatomy is possible
- Fracture suture holes optimized for secure fixation
- Tapered stem design manufactured to provide smooth surface for natural contact/paving
- Additional lateral hole for optional suture support

**Stem Suture Holes**
- To provide final stable fixation of the tuberosities to the Anatomical Shoulder Fracture Stem
- One medial, one lateral
- Medial hole for congruence effect around tuberosities

**Right and Left Option**
- In respect to the shoulder anatomy, physiology, and the greater and lesser tuberosities
- Allows for version adjustment to match patient anatomy

**Convertible to an Anatomical Shoulder Inverse/Reverse System, without Stem Removal**
- Such revision might be necessary in case of a severe rotator cuff tear. This may simplify revision surgery since the need to remove a well-fixed stem is eliminated
Description of the Implants

Specifically designed for anatomical reconstruction of articular proximal humerus fractures.

**Anatomical Shoulder Fracture Stem**
- **12 different versions**, each stem delivered sterile in one box.
- **Right** 7, 9, 11, 13, 14 mm
- **Left** 7, 9, 11, 13, 14 mm

**Anatomical Shoulder Fracture Base-Plate and Screw**
- **6 different versions**, each baseplate, head and screw combination delivered sterile in one box.
- **Right** 40R, 44R, 48R
- **Left** 40L, 44L, 48L

**Anatomical Design**
- Anatomically designed proximal portion
- The proximal volume of the prosthesis is optimized to restore normal humeral anatomy by a selected head size
- Retroclined neck
- Speech tetrahedron
- Arthritis from area below the head
- Design aids in prevention of impingement and tears

**Tuberosity Groove**
- **Distal Anchoring Safety**
  - 3 grooves for rotational stability, press-fit or cemented
  - The two lateral grooves are for defined orientation
  - Tapered stem design, for stem removal and homogeneous distribution of forces

**Extra Rough Blasted Proximal Surface**
- Extra rough blasted proximal surface with friction spikes specially developed for proximal humeral bone
- Smooth blasted distal surface
- Material: Optimized material composition, Ti-Alloy, D03, with a long term biological experience
- Allows for cemented or non-cemented use

**Surface**
- Extra rough blasted proximal surface with friction spikes specially developed for proximal humeral bone
- Smooth blasted distal surface
- Material: Optimized material composition, Ti-Alloy, D03, with a long term biological experience
- Allows for cemented or non-cemented use

**Effective Medial Base-Plate Design**
- The base-plate has a special medial clearance in order to preserve remaining humeral bone
- Fracture Spikes
  - For stable anchoring of the tuberosities to the stem
  - Increase primary stability
  - Provides resistance to tuberosity movement
  - Increased surface area for contact with tuberosity

**Fracture Spikes**
- For stable anchoring of the tuberosities to the stem
- Increase primary stability
- Provides resistance to tuberosity movement
- Increased surface area for contact with tuberosity

**Fracture Spikes**
- **Bone Anchoring Safety**
  - 3 grooves for rotational stability, press-fit or cemented
  - The two lateral grooves are for defined orientation
  - Tapered stem design, for stem removal and homogeneous distribution of forces

**Right and Left Option**
- In respect to the shoulder anatomy, physiology, and the greater and lesser tuberosities
- Allows for version adjustment to match patient anatomy

**Base Plate Suture Holes**
- Due to the position of the fracture suture holes, an unarticulated separation of the greater and lesser tuberosity below the head, preventing the original anatomy is possible
- Fracture suture holes optimized for secure fixation
- Fracture suture holes manufactured to provide smooth surface for suture contact/passing
- Additional lateral hole for optional suture support

**Stem Suture Holes**
- To provide final stable fixation of the tuberosity to the Anatomical Shoulder Fracture Stem
  - One medial, one lateral
  - Medial hole for cortical effect around tuberosities

**Convertible to an Anatomical Shoulder Inverse/Reverse System, without Stem Removal**
- Such revision might be necessary in case of a severe rotator cuff tear. This may simplify revision surgery since the need to remove a well-fixed stem in electrodically

**Indications**

The Anatomical Shoulder™ Fracture System is intended for use in prosthetic replacement of the proximal humerus and the glenoid articular surface of the scapula during total-, half- and fracture shoulder arthroplasty in treatment of the following:

- Complex 3 and 4 part fractures of the proximal humerus with subluxation of the head fragment;
- Complex 3 and 4 part fractures of the proximal humerus with loosening of the spongiosa in the head fragment;
- Complex 3 and 4 part fractures of the proximal humerus with additional cross split of the head fragment;
- Fracture instability after osteosynthesis of 3 and 4 fragments of the proximal humerus;
- Retroclination of the proximal humerus.

The Anatomical Shoulder Fracture stem is intended for cemented or cementless use.

**Anatomical Shoulder Fracture System**

**Indications**

The Anatomical Shoulder™ Fracture System is intended for use in prosthetic replacement of the proximal humerus and the glenoid articular surface of the scapula during total-, hemi- and fracture shoulder arthroplasty in treatment of the following:

- Complex 3 and 4 part fractures of the proximal humerus with subluxation of the head fragment;
- Complex 3 and 4 part fractures of the proximal humerus with loosening of the spongiosa in the head fragment;
- Complex 3 and 4 part fractures of the proximal humerus with additional cross split of the head fragment;
- Fracture instability after osteosynthesis of 3 and 4 fragments of the proximal humerus;
- Retroclination of the proximal humerus.

The Anatomical Shoulder Fracture stem is intended for cemented or cementless use.
## Implants for Anatomical Shoulder Fracture System

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<tr>
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<tr>
<td>01.04227.485</td>
<td>ANSH 800 Anatomical Shoulder Fracture Implants Complete</td>
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<td>ANSH 500 Anatomical Shoulder Fracture Implants Complete</td>
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## Instruments for Anatomical Shoulder Fracture System

### Standard Instrument Kits for Anatomical Shoulder System

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<td>AW930010</td>
<td>Pegged Glenoid Retention Case 1</td>
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<tr>
<td>AW931911</td>
<td>Pegged Glenoid Retention Case 2</td>
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<tr>
<td>AW930008</td>
<td>Removable Head Retention Case 1</td>
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<tr>
<td>AW931910</td>
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<tr>
<td>AW930007</td>
<td>Swivel/Removable Retention Case</td>
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</table>

### Fracture System

- **Anatomical Shoulder**
  - **Humeral Stem Fx 13-130mm**
  - **Anatomical Shoulder Fracture Instruments Complete**
  - **Humeral Stem Fx 12-130mm**
  - **Humeral Stem Fx 9-130mm**
  - **Humeral Stem Fx 11-130mm**
  - **Humeral Stem Fx 10-130mm**
  - **Humeral Stem Fx 7-130mm**
  - **Humeral Stem Fx 11-200mm**
  - **Humeral Stem Fx 9-200mm**
- **Humeral Head Fx, Right ø48mm**
  - **Keeled Glenoid Instrument Case 5**
- **Humeral Head Fx, Left ø44mm**
- **Humeral Head Fx, Right ø40mm**
- **Humeral Head Fx, Left ø40mm**
- **Torque Wrench for Humeral Head**
- **Humeral Stem Fx 8-130mm**
- **Inverse/Reverse Instrument Case**
- **Humeral Stem Fx 13-200mm**
- **Anatomical Shoulder Fracture Humeral Heads**
- **Anatomical Shoulder Humeral Fracture Stems Long Cemented/Uncemented**
- **Anatomical Shoulder Humeral Fracture Stems 130mm Cemented/Uncemented**

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