

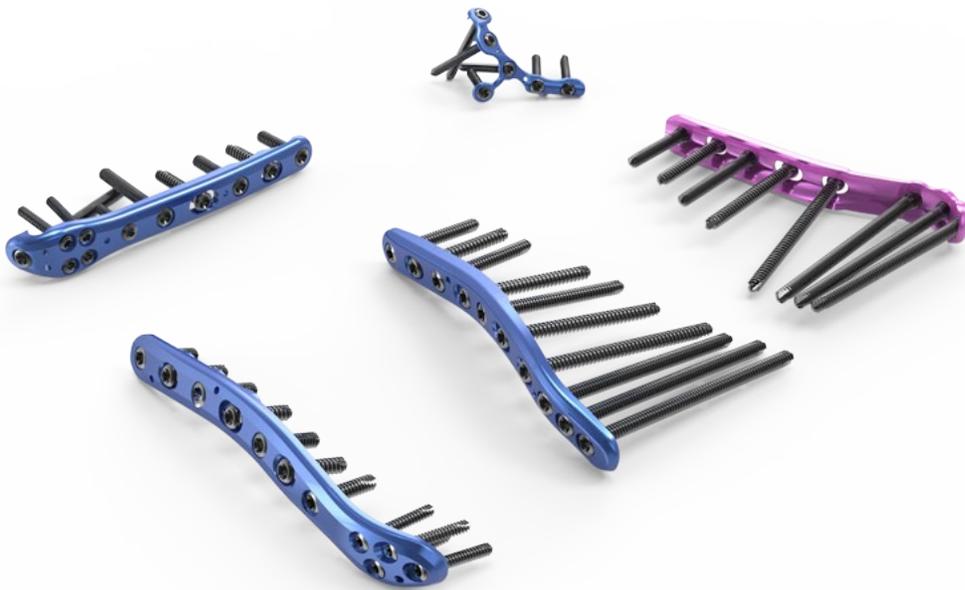
Surgical Technique



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® Elbow Plating System

Designed in conjunction with Shawn W. O’Driscoll, MD, PhD, the Elbow Plating System is engineered to address fractures of the distal humerus, olecranon, and coronoid.

The Elbow Plating System includes precontoured, indication-specific plates and a low-profile Olecranon Plate design with anatomic curvature and instrumentation to aid with plate and screw insertion. This system also includes the Hexalobe Screw System with variable angle Tap-Loc® Technology for the Medial and Lateral Distal Humerus Plates. Acumed offers Posterolateral Plates in addition to Medial and Lateral Distal Humerus Plates to provide multiple plating solutions for elbow fracture management.

Indications for Use:

- ▶ Fractures of the distal humerus, olecranon, and coronoid
- ▶ Osteotomies of the olecranon

| | Definition |
|----------------|---|
| Warning | Indicates critical information about a potential serious outcome to the patient or the user. |
| Caution | Indicates instructions that must be followed in order to ensure the proper use of the device. |
| Note | Indicates information requiring special attention. |

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System Features

Plates and Screws

Olecranon Plates



Coronoid Plates



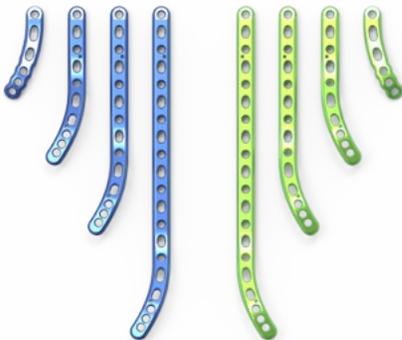
Posterolateral Distal Humerus Plates



Hexalobe Screws



Lateral Column Plates



Medial Column Plates



System Features [continued]

Key Plate Features

- ▶ Plate lengths range from 3-hole to 15-hole (65 mm–100 mm in shaft length)
- ▶ Extended Plates are now offered in two lengths (90 mm and 130 mm)
- ▶ 3-hole plate offers fixation of olecranon osteotomies and fractures where a longer plate is not necessary
- ▶ Left and right specific plates are designed to provide anatomic fit, both proximally and distally along the ulnar shaft

Olecranon Plate



K-wire holes are included in the plates to facilitate provisional plate fixation

Holes in the buttress portion of the plate are designed to allow screws to capture fragments

Coronoid Plate



Posterolateral Distal Humerus Plate

Limited-contact design



Long screws in the Lateral Column Plate are designed to interdigitate with screws from the Medial Column Plate, providing a parallel construct for the stabilization of distal humerus fractures

Medial and Lateral Plates

The Acumed Elbow Plating System was the first to offer precontoured, parallel distal humerus plates.



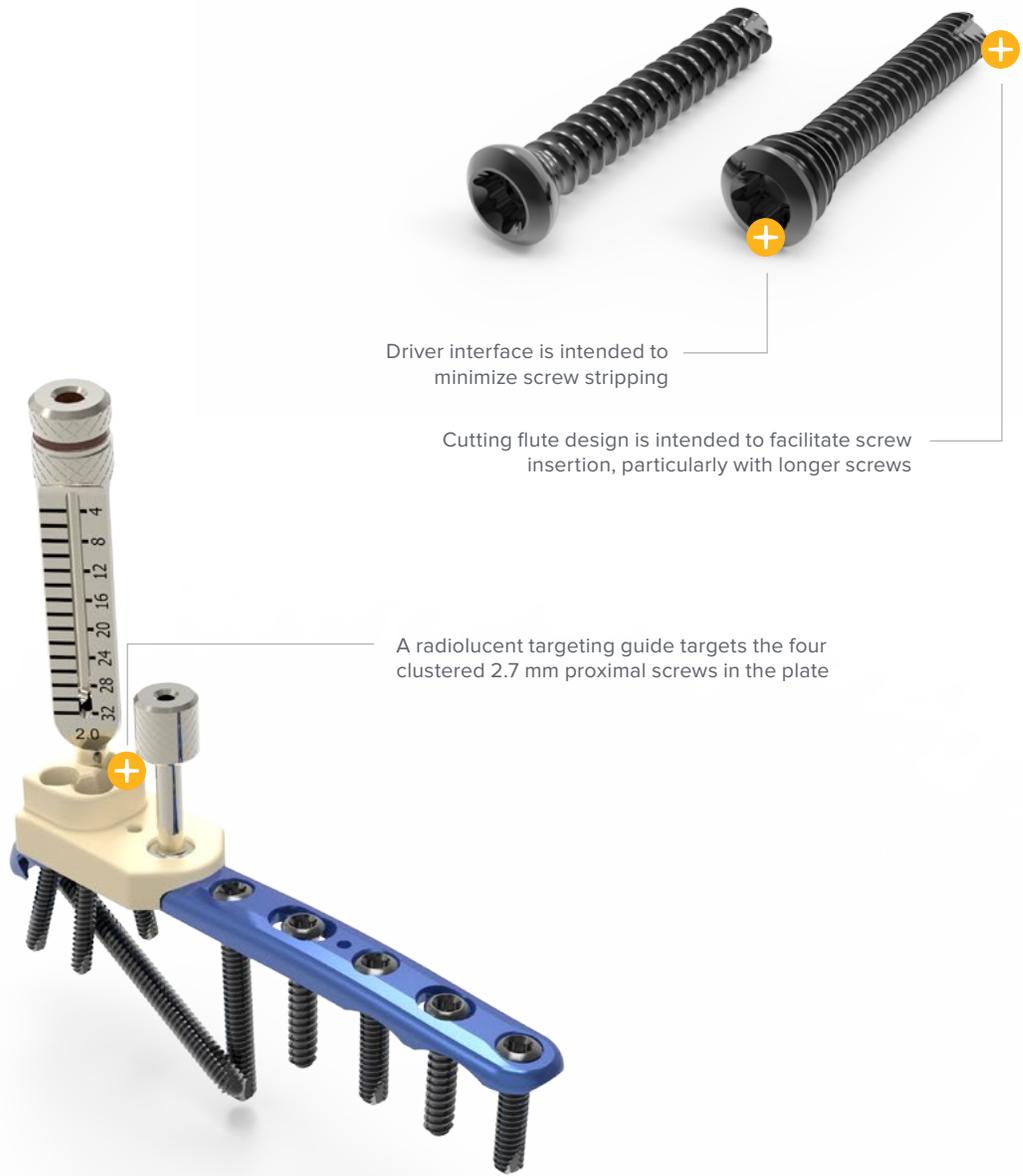
System Features [continued]

Key Screw, Instrumentation, and Tray Features

Screws

- ▶ The 3.0 mm and 3.5 mm screws are offered in lengths from 8 mm–65 mm, providing more options than previous generations
- ▶ 2.7 mm screws with a smaller diameter head allow clustering of screws in selected regions
- ▶ Hexalobe screws are Type II anodized

Instrumentation



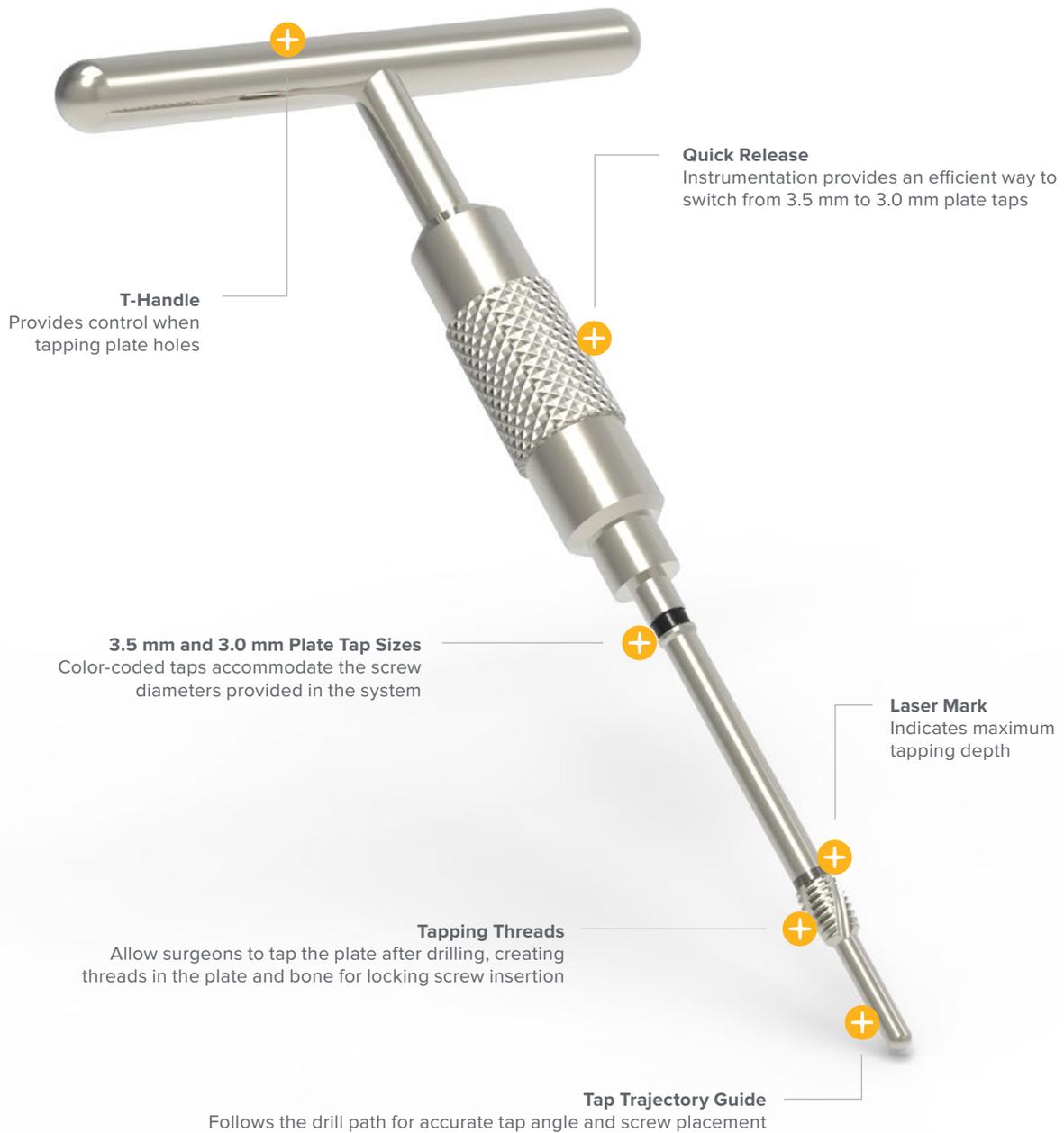
Trays

- ▶ All-metal screw caddy design eliminates the use of plastic. The screw caddy lid is removable for ease of use
- ▶ Retractable handles in the screw caddy are designed to aid in removing the caddy from the tray
- ▶ Windows are on the sides and top of the system tray, so that contents can be viewed without opening and disassembling the tray

System Features [continued]

Tap-Loc® Technology

The Acumed Tap-Loc technology is designed to be used only with the Medial and Lateral Distal Humerus Plates to insert locking screws with up to 20 degrees of angulation.



Instrument Overview



8" Bone Reduction Forceps
(MS-1280)



Bone Reduction Forceps, 5.25
(MS-45300)



Reduction Forceps With Serrated Jaw
(PL-CL04)



Medium Ratcheting Driver Handle
(80-0663)



2.8 mm Drill Guide Cannula
(PL-28CLAMP)



Targeted Drill Guide
(PL-CLAMP)



2.3 mm Drill Guide Cannula
(80-0624)



Plate Holder Assembly
(PL-2030)



Plate Bender, large
(PL-2045)



Offset Drill Guide
(PL-2095)



2.8 mm/3.5 mm Thin Drill Guide
(PL-2196)



2.0 mm/2.3 mm Narrow Drill Guide
(80-0628)



2.8 mm Hexalobe Locking Drill Guide 6–65 mm
(80-0668)



2.3 mm Locking Drill Guide 6–65 mm
(80-0622)



2.0 mm Hexalobe Locking Drill Guide 4–32 mm
(80-0621)



Periosteal Elevator
(MS-46212)



Depth Gauge 6–65 mm
(80-0623)



.035 x 5.75 STT Guide Wire, Titanium
(WT-0906STT)



.062 x 5.75 STT Guide Wire, Titanium
(WT-1606STT)



2.0 mm Quick Release Drill
(80-0318)



15 mm Hohman Retractor
(MS-46827)



Sharp Hook
(PL-CL06)



CO/CA Countersink
(PL-2080)

Instrument Overview [continued]



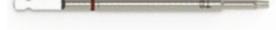
Plate Tap for 3.5 mm Screw
(80-0661)



Plate Tap for 3.0 mm Screw
(80-0659)



T15 Stick Fit Hexalobe Driver
(80-0760)



T8 Stick Fit Hexalobe Driver
(80-0759)



2.3 mm Quick Release Drill
(80-0627)



2.8 mm Quick Release Drill
(80-0387)



Bone Tap for 2.7 mm Hexalobe Screws
(80-0625)



Bone Tap for 3.0 mm Non-locking Screws
(80-0626)



3.5 mm x 5" Quick Release Drill
(MS-DC35)



3.5 mm Cortical Screw Bone Tap
(MS-LTT35)



2.0 mm Depth Probe
(80-0643)



2.3 mm Depth Probe
(80-0664)



Quick Release T-Handle
(MS-T1212)



Olecranon Plate Osteotomy Cutting Jig
(80-0653)



Olecranon Plate Proximal Targeting Guide
(80-0654)



Locking Bolt: M4
(80-0652)



Targeting Guide Locking Bolt: 10-32
(80-2164)



70 mm Tension Band Pin
(30-0098)



90 mm Tension Band Pin
(30-0099)



Tension Band Pin Snapper
(80-0411)



2.0 mm x 9" ST Guide Wire
(WS-2009ST)



.062" x 6" Guide Wire
(WS-1607ST)



.045" x 6" ST Guide Wire
(WS-1106ST)



Plate Tack
(PL-PTACK)

Surgical Technique Overview

Olecranon Plate Surgical Technique

Fracture Reduction and Plate Placement



Provisional Wire Placement



Nonlocking Distal Screw Placement



Proximal Locking Screw Placement



Olecranon Osteotomy Cutting Jig Surgical Technique

Provisional Fixation



Pre-Drill Screw Holes



Create Osteotomy

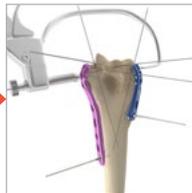


Distal Humerus Plates Surgical Technique

Articular Fragment Reduction



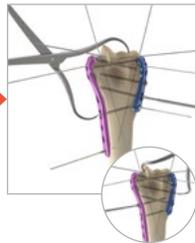
Plate Placement and Provisional Fixation



Screw Placement



Compress Column



**Fracture Site
Compression**



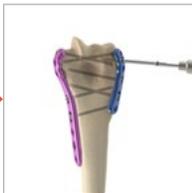
**Final Screw
Placement**



**Postoperative
Protocol**



**Tap Distal Plate
Holes**



**Insert Distal
Screws**



**Insert Proximal
Locking Screws**

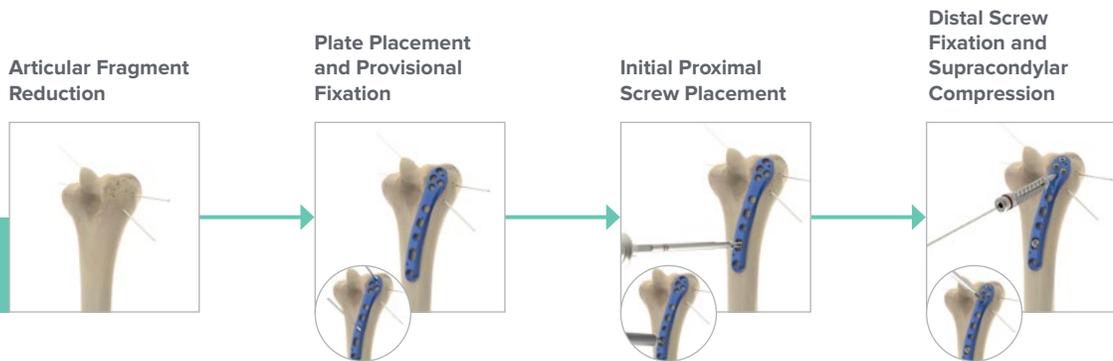


**Postoperative
Protocol**

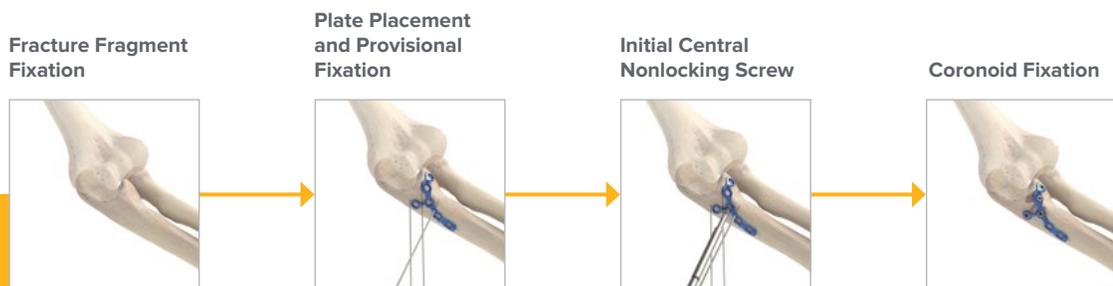


Surgical Technique Overview [continued]

Posterolateral Plate Surgical Technique



Coronoid Plates Surgical Technique



Insert Proximal Locking Screws



Postoperative Protocol



Insert Remaining Locking Screws



Postoperative Protocol



Olecranon Plate Surgical Technique

Shawn W. O’Driscoll, MD, PhD

Figure 1



Technical Objectives for Locking Olecranon Plates:

- ▶ Each screw should be as long as possible
- ▶ Locking screws should interlock to provide a stable “fixed angle” structure inside the bone fragment
- ▶ Plate should buttress against anterior pull of elbow flexors
- ▶ Plate should provide stable fixation of the ulnar shaft
- ▶ Plate should be applied with compression across the fracture
- ▶ Plate must be strong and stiff enough to resist bending before union occurs

1 Fracture Reduction and Plate Placement

Attach the Olecranon Plate Proximal Targeting Guide (80-0654) to the Olecranon Plate (70-03XX) with the Locking Bolt: M4 (80-0652). Flex the elbow 90 degrees, reduce the fracture, and apply the plate. The prongs in the proximal end of the plate should penetrate the triceps tendon and provide provisional fixation. These prongs are not intended to compress the tendon and a gap between the plate and the bone should be visible on X-ray.

Note: Plates designed for use on the left arm are blue. Plates designed for use on the right arm are green.

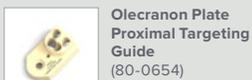
Note: Using the Extended Olecranon Plate (70-03XX) requires splitting the triceps tendon.

Figure 2



2 Provisional Wire Placement

If a locking screw is to be utilized in the most proximal hole of the plate, thread the 2.3 mm Locking Drill Guide 6–65 mm (80-0622) into the plate hole. A 2.0 mm x 9" ST K-wire (WS-2009ST) is drilled through the locking drill guide and across the fracture site, penetrating the anterior metaphyseal cortex. Do not remove this wire until Step 6. Alternatively, two .062" x 6" K-wires (WS-1607ST) can be placed across the fracture, one on each side of the plate.



Olecranon Plate Proximal Targeting Guide (80-0654)



Olecranon Plate (70-03XX)



Locking Bolt: M4 (80-0652)



2.3 mm Locking Drill Guide 6–65 mm (80-0622)



2.0 mm x 9" ST Guide Wire (WS-2009ST)
Also used as a K-wire



.062" x 6" Guide Wire (WS-1607ST)
Also used as a K-wire

Olecranon Plate Surgical Technique [continued]

3 Nonlocking Distal Screw Placement

With provisional reduction confirmed, drill with the 2.8 mm Quick Release Drill (80-0387) through a slotted hole, distal to the fracture site and into the ulnar shaft. Use the Depth Gauge 6–65 mm (80-0623) to measure for screw length. Connect the T15 Stick Fit Hexalobe Driver (80-0760) to the Medium Ratcheting Driver Handle (80-0663) and insert the appropriate 3.5 mm Nonlocking Hexalobe Screw (30-02XX). Tighten the screw partially to allow for later compression. A 3.5 mm Cortical Screw Bone Tap (MS-LTT35) is available for patients with dense bone.

Note: When implanting the Narrow 5-Hole Olecranon Plates (70-0316 or 70-0317), only the 2.7 mm locking and nonlocking hexalobe screws and associated instrumentation may be used throughout all plate holes.

Note: 3.0 mm or 3.5 mm Nonlocking Hexalobe Screws (30-03XX or 30-02XX) can be used in the shaft of the plate.



Figure 3

| Screw Diameter | Drill Diameter |
|----------------|----------------|
| 2.7 mm | 2.0 mm |
| 3.0 mm | 2.3 mm |
| 3.5 mm | 2.8 mm |

4 Proximal Locking Screw Placement

To insert two 2.7 mm locking hexalobe screws (30-03XX) into the proximal holes on either side of the 2.0 mm wire, begin by threading the 2.0 mm Locking Drill Guide 4–32 mm (80-0621) through the proximal targeting guide and into the most proximal locking holes. While drilling with the 2.0 mm Quick Release Drill (80-0318), be sure not to exit the bone. Drill depth may be read directly off the laser line on the drill through the locking drill guide or with the 2.0 mm Depth Probe (80-0643). To insert the appropriate 2.7 mm locking hexalobe screw, connect the T8 Stick Fit Hexalobe Driver (80-0759) to the Medium Ratcheting Driver Handle (80-0663).

Note: When using the T8 driver, care should be taken not to overtighten the screw or apply more torque than necessary to seat the locking screw into the plate. Screws should be tightened by hand and not under power.



Figure 4



Olecranon Plate Surgical Technique [continued]

Figure 5



5 Fracture Site Compression

If the selected plate length has two or more compression slots, the fracture site is compressed in the following manner. Insert a 3.5 mm Nonlocking Hexalobe Screw (30-02XX) in dynamic compression mode into a distal slot along the ulnar shaft using the Offset Drill Guide (PL-2095). The proximal shaft screw must be slightly loosened to allow for compression. If a longer plate is used and further compression is required, partially insert another nonlocking screw into a distal slot in dynamic compression mode and then loosen the first two screws to allow for plate movement.

Figure 6



6 Final Screw Placement

Remove the 2.0 mm K-wire from the most proximal plate hole. Thread the 2.8 mm Hexalobe Locking Drill Guide 6–65 mm (80-0668) into that hole and use the 2.8 mm Quick Release Drill (80-0387) in the path of the wire. Measure for screw length with the Depth Gauge 6–65 mm (80-0623) and insert the appropriately sized 3.5 mm Locking Hexalobe Screw (30-02XX).

If a 3.0 mm Locking Hexalobe Screw (30-02XX) is desired, the 2.3 mm Hexalobe Locking Drill Guide 6–65 mm (80-0622) and 2.3 mm Quick Release Drill (80-0627) are utilized. The remaining locking screws are then inserted at the surgeon's discretion.



3.5 mm Nonlocking Hexalobe Screw (30-02XX)



Offset Drill Guide (PL-2095)



2.8 mm Hexalobe Locking Drill Guide 6–65 mm (80-0668)



2.8 mm Quick Release Drill (80-0387)



Depth Gauge 6–65 mm (80-0623)



3.5 mm Locking Hexalobe Screw (30-02XX)



3.0 mm Locking Hexalobe Screw (30-02XX)



2.3 mm Hexalobe Locking Drill Guide 6–65 mm (80-0622)



2.3 mm Quick Release Drill (80-0627)

Olecranon Plate Surgical Technique [continued]

7 Postoperative Protocol

Note: The following protocol may be replaced with an alternative protocol at the performing surgeon's discretion.

Immediately after closure, the elbow is placed in a bulky non-compressive Jones dressing with an anterior plaster slab to maintain the elbow in extension. The initial rehabilitation is planned according to the extent of soft-tissue damage. When the fracture is associated with severe soft-tissue damage, the extremity is kept immobilized with the elbow in extension for three to seven days postoperatively. If the fracture is closed and there is no severe swelling or fracture blisters, the Jones dressing is removed after two days and an elastic non-constrictive sleeve is applied over an absorbent dressing placed on the wound. A physical therapy program including active and passive motion is then initiated.

8 Optional: Implant Removal Instructions

To remove an Olecranon Plate, use a T15 Stick Fit Hexalobe Driver (80-0760) to remove all 3.5 and 3.0 mm screws and a T8 Stick Fit Hexalobe Driver (80-0759) for all 2.7 mm screws in conjunction with a Quick Release T-Handle (MS-T1212) before extracting the plate. Referencing the Screw Removal Brochure (SPF10-00) may aid in implant extraction if difficulty is experienced.



Figure 7



Figure 8



T15 Stick Fit
Hexalobe Driver
(80-0760)



T8 Stick Fit
Hexalobe Driver
(80-0759)



Quick Release
T-Handle
(MS-T1212)

Olecranon Plate Osteotomy Cutting Jig Surgical Technique

Shawn W. O’Driscoll, MD, PhD

Figure 9



1 Provisional Fixation

Place the Olecranon Plate Osteotomy Cutting Jig (80-0653) onto the proximal portion of the olecranon with the elbow flexed at 90 degrees. The jig is designed to sit on top of the triceps tendon. Secure the jig provisionally by placing a Plate Tack (PL-PTACK) into the plate tack holes in the jig. A .062" x 6" K-wire (WS-1607ST) may also be placed in the small K-wire hole between the cutting slots.

Figure 10



2 Pre-Drill Screw Holes

The Olecranon Plate Osteotomy Cutting Jig (80-0653) allows pre-drilling of the screw holes that will be used with subsequent placement of the Olecranon Plate (70-03XX). Use a 2.8 mm Quick Release Drill (80-0387) to drill the slot for future placement of a 3.5 mm Nonlocking Hexalobe Screw (30-02XX). The 2.0 mm Quick Release Drill (80-0318) is utilized to drill the two smaller, proximal holes for future placement of the 2.7 mm Locking Hexalobe Screws (30-03XX).

Figure 11



Olecranon Plate Osteotomy Cutting Jig (80-0653)



Plate Tack (PL-PTACK)



.062" x 6" Guide Wire (WS-1607ST)
Also used as a K-wire



Olecranon Plate (70-03XX)



2.8 mm Quick Release Drill (80-0387)



3.5 mm Nonlocking Hexalobe Screw (30-02XX)



2.0 mm Quick Release Drill (80-0318)



2.7 mm Locking Hexalobe Screw (30-03XX)

Olecranon Plate Osteotomy Cutting Jig Surgical Technique [continued]

3 Create Osteotomy

Select the cutting slot that provides the most optimal position for the chevron osteotomy. Using a thin-bladed oscillating saw (.025" in thickness) (80-0739-S, 80-0740-S or 80-2017-S), create an osteotomy about one third of the way through the olecranon. Remove the Olecranon Plate Osteotomy Cutting Jig (80-0653). Use the oscillating saw to join the two sides of the provisional cut. A thin-bladed osteotome is used to complete the osteotomy.



Figure 12



Figure 13



Figure 14



Osteotomy Saw
Blade Hub Style L
(80-0739-S)



Osteotomy Saw
Blade Hub Style S
(80-0740-S)



Osteotomy Saw
Blade Hub Style DS
(80-2017-S)



Olecranon Plate
Osteotomy
Cutting Jig
(80-0653)

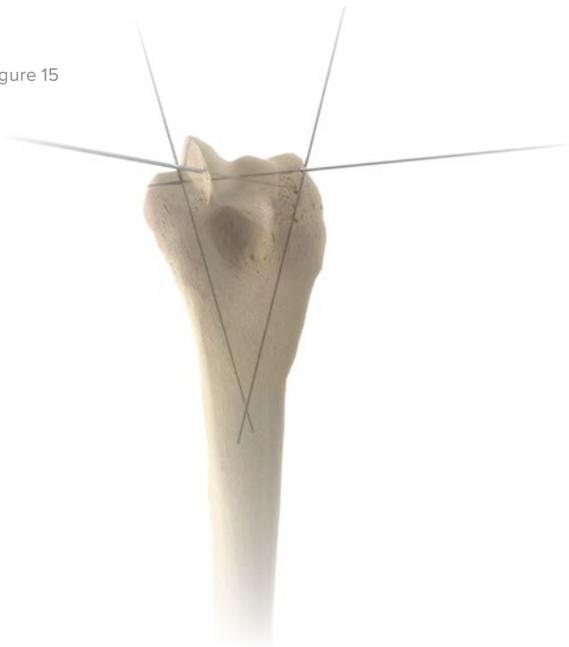
Distal Humerus Plates Surgical Technique

Shawn W. O'Driscoll, MD, PhD

Technical Objectives Checklist:

- ▶ Every screw should pass through a plate
- ▶ Each screw engages a fragment on the opposite side that is also attached to a plate
- ▶ Each screw should be as long as possible
- ▶ Each screw should engage as many fragments as possible
- ▶ The screws in the distal fragments should lock together by interdigitation, creating a “fixed angle” structure
- ▶ Plates should be applied such that compression is achieved at the supracondylar level for both columns
- ▶ Plates must be strong and stiff enough to resist breaking or bending before union occurs

Figure 15



1 Articular Fragment Reduction

The articular fragments, which tend to be rotated toward each other in the axial plane, are reduced anatomically and provisionally held with two .045" x 6" ST K-wires (WS-1106ST). One or two strategically placed wires can then be used to provisionally hold the distal fragments in alignment with the humeral shaft.

Note: Place the wires holding the articular fragments close to the subchondral level to avoid interference with later screw placement, and away from where the plates will be placed on the lateral and medial columns.



0.045" x 6" ST
Guide Wire
(WS-1106ST)
Also used as a K-wire

Distal Humerus Plates Surgical Technique [continued]

2 Plate Placement and Provisional Fixation

The selected Medial and Lateral Distal Humerus Plates (PL-LEMXX and PL-LELXXX) are placed and held apposed to the distal humerus, while one 2.0 mm x 9" ST Guide Wire (WS-2009ST) is inserted through hole #2 (numbered from distal to proximal) of each plate through the epicondyles and across the distal fragments to maintain provisional fixation. These 2.0 mm wires are left in place until Step 7 to aid in placing the locking screws in the distal fragments.

Note: The Medial and Lateral Distal Humerus Plates are designed to accept 3.0 mm and 3.5 mm hexalobe screws. If using 3.0 mm screws, use the 2.3 mm Quick Release Drill (80-0627) and the 2.3 mm Locking Drill Guide, 6–65 mm (80-0622). If using 3.5 mm screws, use the 2.8 mm Quick Release Drill (80-0387) and the 2.8 mm Hexalobe Locking Drill Guide, 6–65 mm (80-0668).

Note: The 2.7 mm hexalobe screws have a smaller head diameter and should NOT be used with the Medial and Lateral Distal Humerus Plates.

Note: The Medial Plates are not left and right specific and are all fuchsia in color. The Lateral Plates are green for use on a right arm and blue for use on a left arm.

3 Initial Proximal Screw Placement

With provisional reduction confirmed, drill through a proximal slotted hole along the shaft of the plate with the 2.8 mm Quick Release Drill (80-0387) and measure for depth with the Depth Gauge 6–65 mm (80-0623). Connect the T15 Stick Fit Hexalobe Driver (80-0760) to the Medium Ratcheting Driver Handle (80-0663) and insert the appropriate length of 3.5 mm Nonlocking Hexalobe Screw (30-02XX). Tighten the screw partially, allowing some freedom for the plate to move proximally during compression in later steps.

The undersurface of each plate is tubular in the metaphyseal and diaphyseal regions, so the screw in the slotted hole only needs to be tightened slightly to provide provisional fixation of the entire distal humerus.

Note: The 3.5 mm Cortical Screw Bone Tap (MS-LTT35) is available for patients with dense bone.

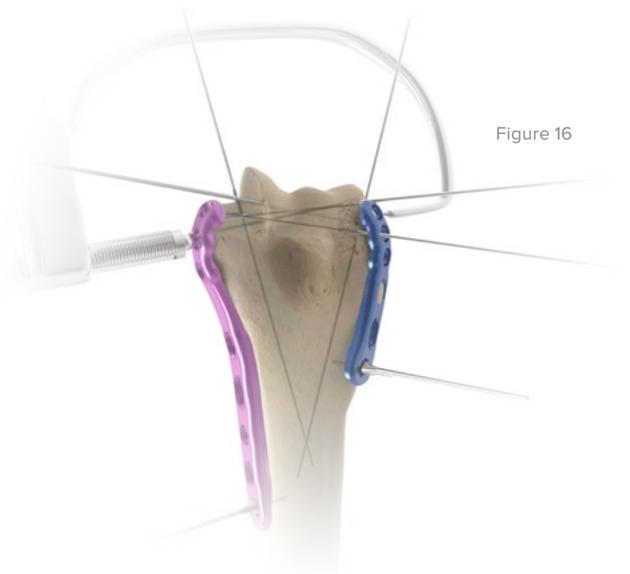


Figure 16

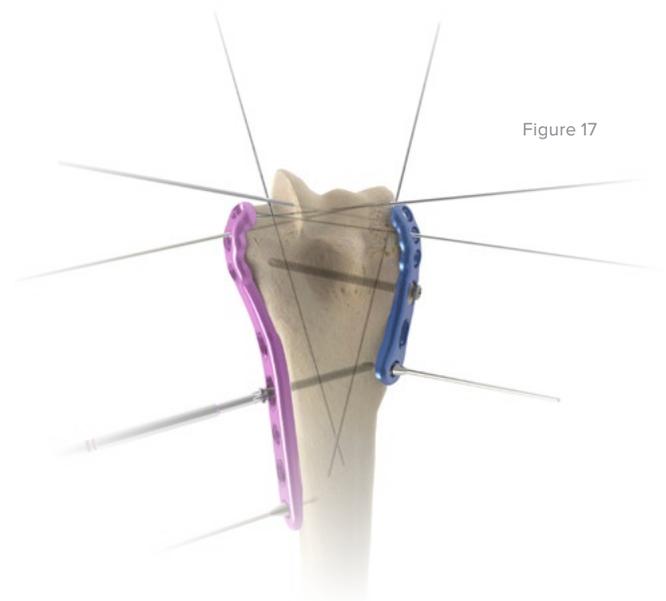
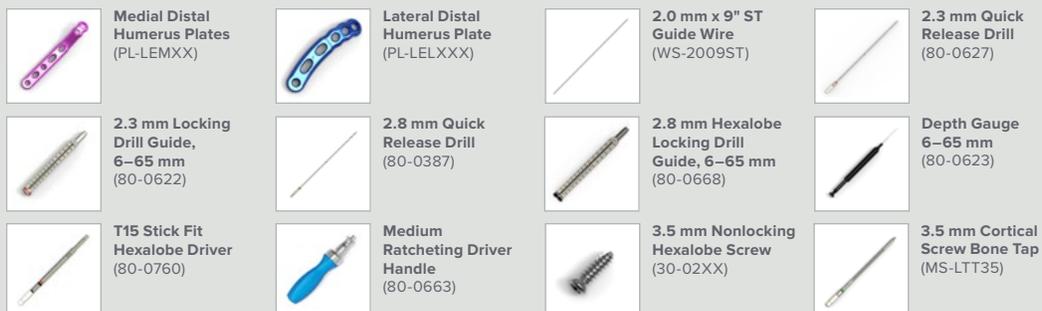


Figure 17



Distal Humerus Plates Surgical Technique [continued]

| Screw Diameter | Drill Diameter |
|----------------|----------------|
| 3.0 mm | 2.3 mm |
| 3.5 mm | 2.8 mm |

Figure 18

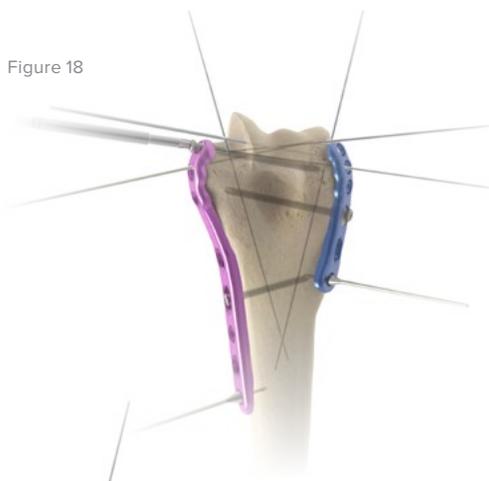


Figure 19

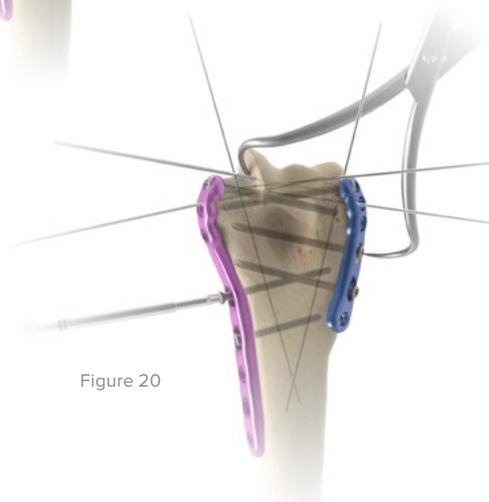
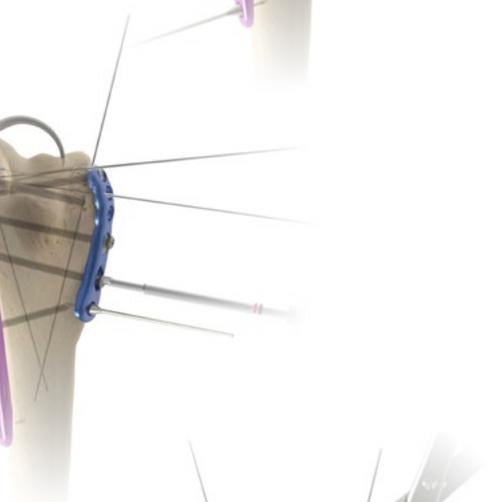


Figure 20

4 Nonlocking Distal Screw Placement

Drill and insert the appropriate lengths of 3.5 mm Nonlocking Hexalobe Screws (30-02XX) through hole #1 on both the medial and lateral side. The Targeted Drill Guide (PL-CLAMP) cannot be used in hole #1 of the Locking Medial Plate (PL-LEMXX) if the angle of the nonlocking screw exceeds 20°. After drilling, measure depth and insert the appropriate length 3.5 mm nonlocking hexalobe screw.

The 3.0 mm Nonlocking Hexalobe Screws (30-03XX) may be used to enable more screws to be placed in the distal fragments to provide stability.

5 Compress Lateral Column

Using the 8" Bone Reduction Forceps (MS-1280) to provide interfragmentary compression across the fracture at the supracondylar level, the lateral column is first fixed. A 3.5 mm Nonlocking Hexalobe Screw (30-02XX) is inserted in the Locking Lateral Plate (PL-LELXXX) in dynamic compression mode in a slotted hole proximal to the fracture site using the Offset Drill Guide (PL-2095). Tightening this screw further increases interfragmentary compression at the supracondylar level to the point of causing some distraction at the medial supracondylar ridge. The .045" wires used for provisional fixation may be removed at this point.

6 Compress Medial Column

The medial column is compressed in a similar manner using the 8" Bone Reduction Forceps (MS-1280). Insert a 3.5 mm Nonlocking Hexalobe Screw (30-02XX) into a slotted hole proximal to the fracture site in the Locking Medial Plate (PL-LEMXX). The screw should be inserted in a dynamic compression mode. If the plates are slightly under-contoured, they can be compressed against the metaphysis with a large bone clamp, giving further supracondylar compression. Remove the 2.0 mm wires that were inserted in Step 2.



3.5 mm Nonlocking Hexalobe Screw (30-02XX)



Targeted Drill Guide (PL-CLAMP)



Locking Medial Plate (PL-LEMXX)



3.0 mm Nonlocking Hexalobe Screw (30-03XX)



8" Bone Reduction Forceps (MS-1280)



Locking Lateral Plate (PL-LELXXX)



Offset Drill Guide (PL-2095)

Distal Humerus Plates Surgical Technique [continued]

7 Tap Distal Plate Holes

Note: This is an optional step. Please follow Step 7 if locking screws are desired in the distal plate holes. If nonlocking screws are preferred, please continue to Step 8.

To tap the distal plate holes for a 3.5 mm Locking Hexalobe Screw (30-02XX), use the 2.8 mm Quick Release Drill (80-0387). Measure drill depth with the Depth Gauge 6–65 mm (80-0623) to determine screw length. Connect the Plate Tap for 3.5 mm Screws (80-0661) to the Quick Release T-Handle (MS-T1212) and tap the plate. The front end of the tap will act as a guide to aid the locking screw in following the correct trajectory. Turning the tap one-half turn at a time, tap the plate, taking care not to insert the tap further than the start of the laser line on the tap threads (see Tapping Instructions below). The T-Handle should only be used with the plate taps and not for locking or nonlocking screw insertion. The proximal slotted holes are NOT to be tapped.

Use of Plate Taps

The taps are single-surgery use only and should be discarded after each surgery or if the tap becomes dull or unusable during surgery.

Caution:

- ▶ Tapping a plate using a plate tap will generate titanium debris that should be removed. Failure to remove the plate debris can cause, among other complications, inflammation, cartilage damage, and patient discomfort
- ▶ Do not tap a slot
- ▶ Do not re-tap a hole (use a nonlocking screw)
- ▶ Tap by hand, not under power
- ▶ The angle of the tapped hole must not exceed 20 degrees
- ▶ If resistance increases while using a tap, discard the tap immediately. The tap may break due to excessive torque or levering and care should be taken to avoid such conditions. If the tap breaks, carefully remove all tap pieces

Note:

- ▶ Irrigate hole prior to tapping
- ▶ Do not tap deeper than the start of the laser line
- ▶ Clean debris from tap after tapping each hole

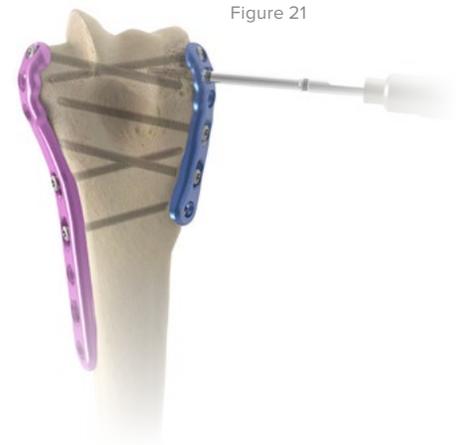


Figure 21



3.5 mm Locking Hexalobe Screw (30-02XX)



2.8 mm Quick Release Drill (80-0387)



Depth Gauge 6–65 mm (80-0623)



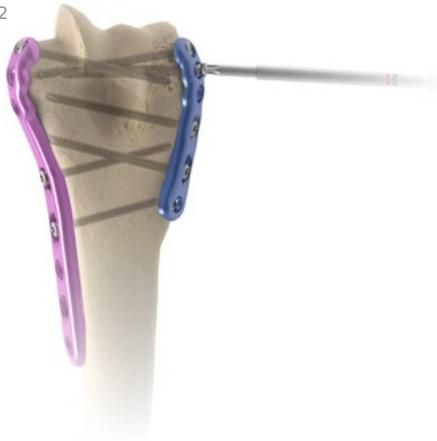
Plate Tap for 3.5 mm Screws (80-0661)



Quick Release T-Handle (MS-T1212)

Distal Humerus Plates Surgical Technique [continued]

Figure 22



8 Insert Distal Screws

Insert the appropriate length of 3.0 or 3.5 mm Locking Hexalobe Screws (30-02XX) for tapped plate holes or 3.0 or 3.5 mm Nonlocking Hexalobe Screws (30-03XX or 30-02XX) for untapped plate holes.

Note: Care should be taken not to overtighten the screw.

The #3 holes on both the Medial and Lateral Plates are optional. If these holes are used, be sure to use locking screws if locking screws have already been inserted in previous steps.

Figure 23

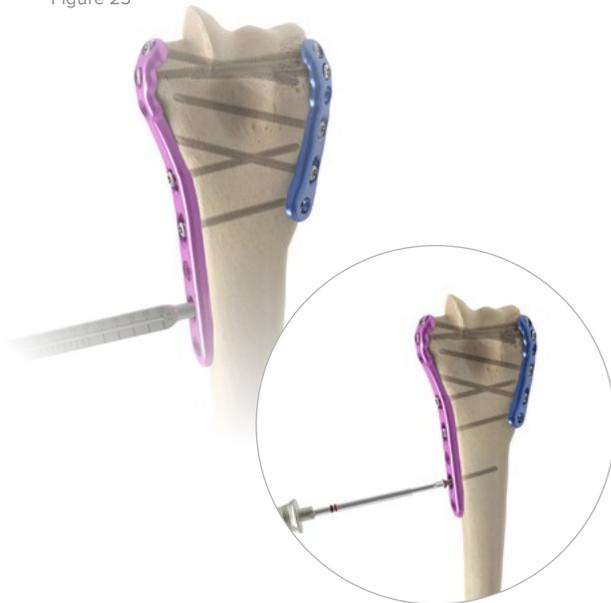


Figure 24

9 Insert Proximal Locking Screws

The remaining locking shaft screws may be inserted at the surgeon's discretion. Note that the plate holes in the humeral shaft are pre-threaded for fixed-angle screws. Thread the 2.8 mm Hexalobe Locking Drill Guide 6–65 mm (80-0668) into the locking plate holes and drill using the 2.8 mm Quick Release Drill (80-0387). Drill depth may be read directly off of the laser line on the drill or with the 2.3 mm Depth Probe (80-0664). Insert the appropriate length of 3.5 mm Locking Hexalobe Screws (30-02XX).



3.0 mm Locking Hexalobe Screw (30-02XX)



3.5 mm Locking Hexalobe Screw (30-02XX)



3.0 mm Nonlocking Hexalobe Screw (30-03XX)



3.5 mm Nonlocking Hexalobe Screw (30-02XX)



2.8 mm Hexalobe Locking Drill Guide 6–65 mm (80-0668)



2.8 mm Quick Release Drill (80-0387)



2.3 mm Depth Probe (80-0664)

Distal Humerus Plates Surgical Technique [continued]

10 Postoperative Protocol

Note: The following protocol may be replaced with an alternative protocol at the performing surgeon's discretion.

Immediately after closure, the elbow is placed in a bulky non-compressive Jones dressing with an anterior plaster slab to maintain the elbow in extension. The initial rehabilitation is planned according to the extent of soft-tissue damage. When the fracture is associated with severe soft-tissue damage, the extremity is kept immobilized with the elbow in extension for three to seven days postoperatively. If the fracture is closed and there is no severe swelling or fracture blisters, the Jones dressing is removed after two days and an elastic non-constrictive sleeve is applied over an absorbent dressing placed on the wound. A physical therapy program including active and passive motion is then initiated.



Figure 25

11 Optional: Implant Removal Instructions

To remove a Medial or Lateral Plate, use a T15 Stick Fit Hexalobe Driver (80-0760) and a Quick Release T-Handle (MS-T1212) to remove all screws before extracting the plate. Referencing the Screw Removal Brochure (SPF10-00) may aid in implant extraction if difficulty is experienced.



T15 Stick Fit
Hexalobe Driver
(80-0760)



Quick Release
T-Handle
(MS-T1212)

Posterolateral Plate Surgical Technique

Shawn W. O’Driscoll, MD, PhD

Figure 26



Figure 27

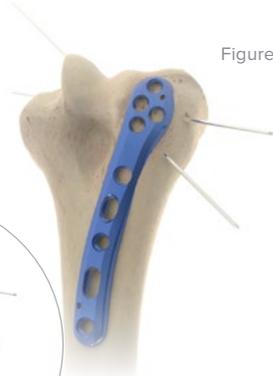


Figure 28



Figure 29

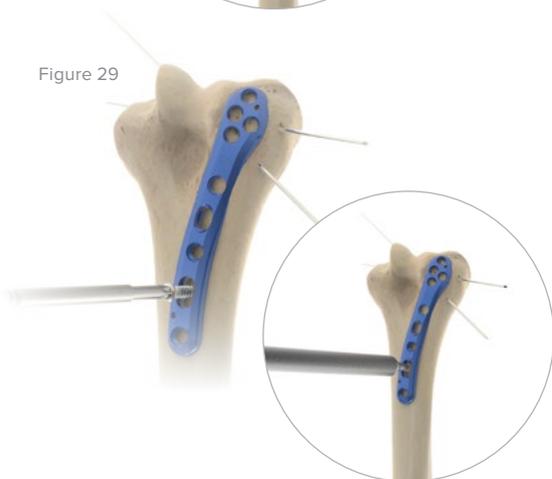


Figure 30

1 Articular Fragment Reduction

Following exposure, the articular fragments are reduced anatomically and provisionally held using .045" x 6" ST Guide Wires (WS-1106ST), functioning as K-wires. The Bone Reduction Forceps, 5.25 (MS-45300) and the 8" Bone Reduction Forceps (MS-1280) are provided in the system to aid in fracture reduction.

Note: Place the wires holding the articular fragments close to the subchondral level to avoid interference with later screw placement, and away from where the plates will be placed on the posterolateral column.

2 Plate Placement and Provisional Fixation

Apply the selected Posterolateral Plate (70-03XX) to the bone. K-wire holes are included on the plate for provisional fixation and accept .062" x 6" Guide Wires (WS-1607ST). Plate Tacks (PL-PTACK) may also be used through the plate holes to aid in provisional fixation.

Note: Plates designed for use on the left arm are blue. Plates designed for use on the right arm are green.

3 Initial Proximal Screw Placement

With provisional reduction confirmed, drill with the 2.8 mm Quick Release Drill (80-0387), measure depth with the Depth Gauge 6–65 mm (80-0623), and insert a 3.5 mm Nonlocking Hexalobe Screw (30-02XX) through the slotted hole that is located proximally on the plate. Connect the T15 Stick Fit Hexalobe Driver (80-0760) to the Medium Ratcheting Driver Handle (80-0663) and insert the screw.

Note: Bone taps are provided and recommended for patients with dense bone.

Note: If a 3.0 mm Nonlocking Hexalobe Screw (30-03XX) is preferred, use the 2.3 mm Quick Release Drill (80-0627).

| Screw Diameter | Drill Diameter |
|----------------|----------------|
| 2.7 mm | 2.0 mm |
| 3.0 mm | 2.3 mm |
| 3.5 mm | 2.8 mm |



Posterolateral Plate Surgical Technique [continued]

4 Distal Screw Fixation and Supracondylar Compression

The three most-distal locking screws are inserted first by threading the 2.0 mm Hexalobe Locking Drill Guide 4–32 mm (80-0621) into one of the three most-distal plate holes. Select the 2.0 mm Quick Release Drill (80-0318) and drill to the desired depth through the 2.0 mm locking drill guide. Drill depth may be read directly off the laser band on the drill or with a 2.0 mm Depth Probe (80-0643). The most-proximal of the four distal screws may be inserted for additional fixation of the distal fragments (shown in the illustration).

Connect the T8 Stick Fit Hexalobe Driver (80-0759) to the Medium Ratcheting Driver Handle (80-0663) and insert a 2.7 mm Locking Hexalobe Screw (30-03XX) until it is fully seated in the plate. Repeat this step for the remaining distal screws.

Note: Care should be taken not to overtighten the locking screws.

To achieve supracondylar compression, the screw in the slotted hole should be loosened and the fracture compressed at the supracondylar level.

Note: To assist in threading the 2.0 mm Locking Drill Guide into the distal locking holes, an optional Posterolateral Distal Humerus Targeting Guide is an available optional part. Choose the Posterolateral Distal Humerus Targeting Guide Left (80-2143) for a left plate or the Posterolateral Distal Humerus Targeting Guide Right (80-2144) for a right plate. Place the appropriate guide over the distal locking holes and secure in place with the Targeting Guide Locking Bolt: 10-32 (80-2164). The locking bolt is designed to be inserted through the locking bolt hole on the guide, which is the most proximal hole.

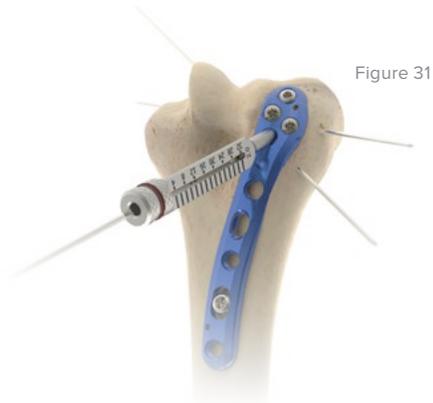


Figure 31

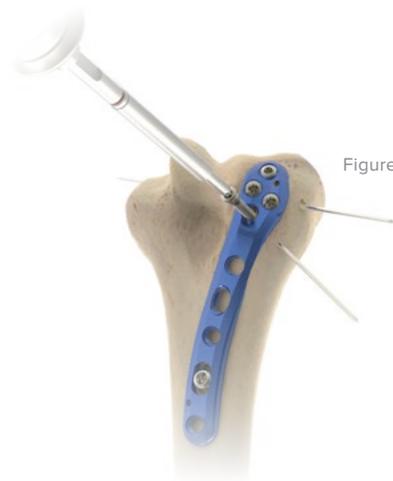


Figure 32



2.0 mm Hexalobe Locking Drill Guide 4–32 mm (80-0621)



2.0 mm Quick Release Drill (80-0318)



2.0 mm Depth Probe (80-0643)



T8 Stick Fit Hexalobe Driver (80-0759)



Medium Ratcheting Driver Handle (80-0663)



2.7 mm Locking Hexalobe Screw (30-03XX)



Posterolateral Distal Humerus Targeting Guide Left (80-2143)



Posterolateral Distal Humerus Targeting Guide Right (80-2144)



Targeting Guide Locking Bolt: 10-32 (80-2164)

Posterolateral Plate Surgical Technique [continued]



Figure 33

Figure 34



Figure 35

5 Insert Proximal Locking Screws

The remaining locking shaft screws may be inserted at the surgeon's discretion. To insert the 3.5 mm Locking Hexalobe Screws (30-02XX) along the shaft, thread the 2.8 mm Hexalobe Locking Drill Guide 6–65 mm (80-0668) into the locking hole and drill using the 2.8 mm Quick Release Drill (80-0387). Drill depth may be read directly off the laser band on the drill or with the 2.3 mm Depth Probe (80-0664). Insert the appropriate length of 3.5 mm locking hexalobe screws.

6 Postoperative Protocol

Note: The following protocol may be replaced with an alternative protocol at the performing surgeon's discretion.

Immediately after closure, the elbow is placed in a bulky noncompressive Jones dressing with an anterior plaster slab to maintain the elbow in extension, and the upper extremity is elevated. The arm should be brought down from the elevated position frequently enough (perhaps once per hour) to minimize the likelihood of compartment syndrome. The initial rehabilitation is planned according to the extent of soft-tissue damage. When the fracture is associated with severe soft-tissue damage, the extremity is kept immobilized and elevated with the elbow in extension for three to seven days postoperatively. If the fracture is closed and there is no severe swelling or fracture blisters, the Jones dressing is removed after three days and an elastic non-constrictive sleeve is applied over an absorbent dressing placed on the wound. A physical therapy program including active and passive motion is then initiated.

7 Optional: Implant Removal Instructions

To remove a Medial or Lateral Plate, use a T15 Stick Fit Hexalobe Driver (80-0760) and a Quick Release T-Handle (MS-T1212) to remove all screws before extracting the plate. Referencing the Screw Removal Brochure (SPF10-00) may aid in implant extraction if difficulty is experienced.



3.5 mm Locking Hexalobe Screw (30-02XX)



2.8 mm Hexalobe Locking Drill Guide 6–65 mm (80-0668)



2.8 mm Quick Release Drill (80-0387)



2.3 mm Depth Probe (80-0664)



T15 Stick Fit Hexalobe Driver (80-0760)



Quick Release T-Handle (MS-T1212)

Coronoid Plates Surgical Technique

Shawn W. O'Driscoll, MD, PhD

1 Fracture Fragment Fixation

Expose the coronoid and ridge of the ulna through an anteromedial approach. Reduce and provisionally hold the fragments with smooth .045" x 6" ST Guide Wires (WS-1106ST) functioning as K-wires.



Figure 36

2 Plate Placement and Provisional Fixation

Apply the Coronoid Plate (70-041X) so that the two prongs on the proximal section grasp and buttress the anteromedial facet of the coronoid. If the sublime tubercle, on which the anterior bundle of the medial collateral ligament (MCL) inserts, is also fractured (Anteromedial Subtype III fracture), the offset screw hole should sit over that fragment for proper screw position. The distal portion of the plate should extend along the ridge on the anteromedial side of the ulna. Several .045" K-wires may be used for provisional plate fixation through the K-wire holes in the plate.

Note: Use caution when handling the plate as it has sharp prongs. Repeated and excessive bending may damage the plate, causing it to not fit or function as intended.

Note: Plates designed for use on the left arm are blue. Plates designed for use on the right arm are green.



Figure 37

| Screw Diameter | Drill Diameter |
|----------------|----------------|
| 2.7 mm | 2.0 mm |



.045" x 6" ST
Guide Wire
(WS-1106ST)
Also used as a K-wire



Coronoid Plate
(70-041X)

Coronoid Plates Surgical Technique [continued]

Figure 38



3 Initial Central Nonlocking Screw

The first screw inserted is a 2.7 mm Nonlocking Hexalobe Screw (30-03XX) into hole #1, which is the “central” plate hole. Drill using the 2.0 mm Quick Release Drill (80-0318) and measure for the screw length using the Depth Gauge 6–65 mm (80-0623). Connect the T8 Stick Fit Hexalobe Driver (80-0759) to the Medium Ratcheting Driver Handle (80-0663) and insert the screw. When determining the screw lengths, make sure to compensate for any expected plate deformation if the bend does not fully seat the plate against the bone. As the screw is tightened, the plate will flex and contour to the bone. If the outer proximal hole begins to bend outward, tighten this first screw only partially, insert the most proximal screw, then go back to fully seat the central screw. Seating this screw may also cause the prongs on the proximal portion of the plate to buttress the coronoid and further compress the plate to the bone.

Note: Tapping the bone prior to screw insertion with the Bone Tap for 2.7 mm Hexalobe Screws (80-0625) may be needed for patients with dense bone (see Tapping Instructions on page 21).

Figure 39



4 Coronoid Fixation

To fill the proximal 2.7 mm nonlocking hexalobe screw holes (holes #2 and #3), use the same technique as in Step 3. The offset screw hole, #4, is optional and can be filled with a nonlocking screw if the fracture extends to the sublime tubercle. As these nonlocking screws are inserted, the plate will continue to contour to the bone.

Note: If K-wires were inserted for provisional fixation, they should be removed prior to drilling and inserting screws into the proximal portion of the plate.

Note: Use of fluoroscopy is recommended to verify the trajectory of the nonlocking screws to ensure they avoid the articular surface.



2.7 mm Nonlocking Hexalobe Screw (30-03XX)



2.0 mm Quick Release Drill (80-0318)



Depth Gauge 6–65 mm (80-0623)



T8 Stick Fit Hexalobe Driver (80-0759)



Medium Ratcheting Driver Handle (80-0663)



Bone Tap for 2.7 mm Hexalobe Screws (80-0625)

Coronoid Plates Surgical Technique [continued]

5 Insert Remaining Locking Screws

To insert the 2.7 mm Nonlocking Hexalobe Screws (30-03XX), thread the 2.0 mm Locking Drill Guide (80-0621) into each distal plate hole (#5 and #6) and drill with the 2.0 mm Quick Release Drill (80-0318). Insert the locking screws with the T8 Stick Fit Hexalobe Driver (80-0759) and the Medium Ratcheting Driver Handle (80-0663). Nonlocking screws can be used at the surgeon's discretion.

Note: Care should be taken not to overtighten the screws or apply excess torque on the driver.



Figure 40

6 Postoperative Protocol

Note: The following protocol may be replaced with an alternative protocol at the performing surgeon's discretion.

Immediately after closure, the elbow is placed in a bulky non-compressive Jones dressing with an anterior plaster slab to maintain the elbow in a relatively extended position and the upper extremity is kept elevated for three days, bringing it down from the elevated position each hour for 5–10 minutes to permit adequate perfusion. The initial rehabilitation is planned according to the stability of the elbow, the security of fracture fixation, and the extent of soft-tissue damage.



Figure 41

7 Optional: Implant Removal Instructions

To remove a Coronoid Plate, use a T8 Stick Fit Hexalobe Driver (80-0759) and a Quick Release T-Handle (MS-T1212) to remove all screws before extracting the plate. Referencing the Screw Removal Brochure (SPF10-00) may aid in implant extraction if difficulty is experienced.



Ordering Information

Tray Components

Distal Humerus Plates

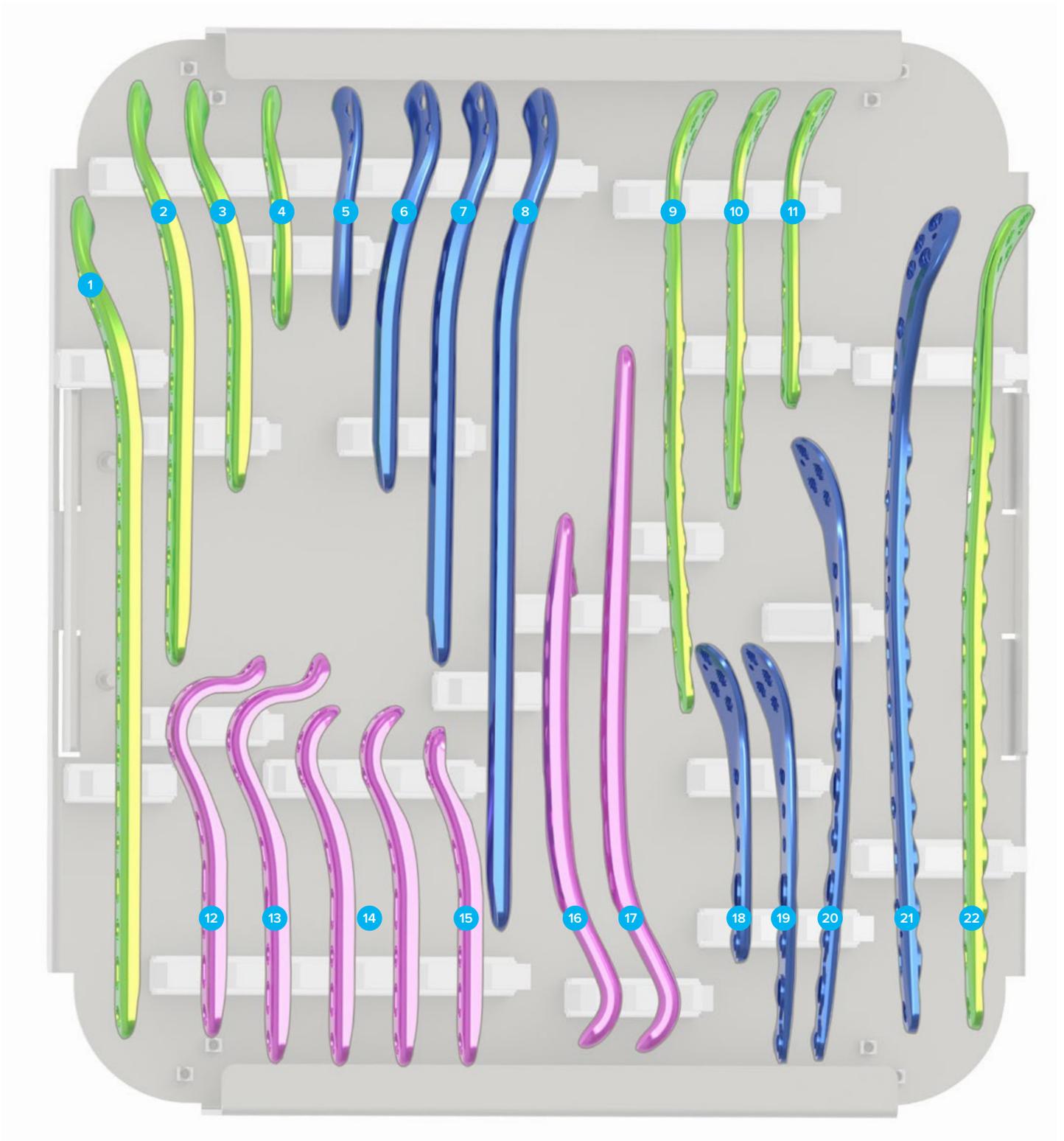
| | | | | | |
|----|--|-----------|----|---|----------|
| 1 | Locking Lateral Plate, 20-hole, Right (206 mm) | PL-LEL20R | 11 | Posterolateral Distal Humerus Plate, 5-hole, RT (78 mm) | 70-0375 |
| 2 | Locking Lateral Plate, 14-hole, Right (142 mm) | PL-LEL14R | 12 | Locking Medial Plate, Short, 9-hole (95 mm) | PL-LEM9S |
| 3 | Locking Lateral Plate, 10-hole, Right (100 mm) | PL-LEL10R | 13 | Locking Medial Plate, Long, 9-hole (96 mm) | PL-LEM9L |
| 4 | Locking Lateral Plate, 6-hole, Right (58 mm) | PL-LEL6R | 14 | Locking Medial Plate, 8-hole (88 mm) | PL-LEM8 |
| 5 | Locking Lateral Plate, 6-hole, Left (58 mm) | PL-LEL6L | 15 | Locking Medial Plate, 7-hole (84 mm) | PL-LEM7 |
| 6 | Locking Lateral Plate, 10-hole, Left (100 mm) | PL-LEL10L | 16 | Locking Medial Plate, 12-hole (130 mm) | PL-LEM12 |
| 7 | Locking Lateral Plate, 14-hole, Left (142 mm) | PL-LEL14L | 17 | Locking Medial Plate, 16-hole (175 mm) | PL-LEM16 |
| 8 | Locking Lateral Plate, 20-hole, Left (206 mm) | PL-LEL20L | 18 | Posterolateral Distal Humerus Plate, 5-hole, Left (78 mm) | 70-0374 |
| 9 | Posterolateral Distal Humerus Plate, 11-hole, Right (152 mm) | 70-0379 | 19 | Posterolateral Distal Humerus Plate, 7-hole, Left (103 mm) | 70-0376 |
| 10 | Posterolateral Distal Humerus Plate, 7-hole, Right (103 mm) | 70-0377 | 20 | Posterolateral Distal Humerus Plate, 11-hole, Left (152 mm) | 70-0378 |

Optional Components from Elbow Plating System

Distal Humerus Plates

| | | |
|----|--|---------|
| 21 | Posterolateral Distal Humerus Plate, 15-hole, Left (203 mm) | 70-0380 |
| 22 | Posterolateral Distal Humerus Plate, 15-hole, Right (203 mm) | 70-0381 |

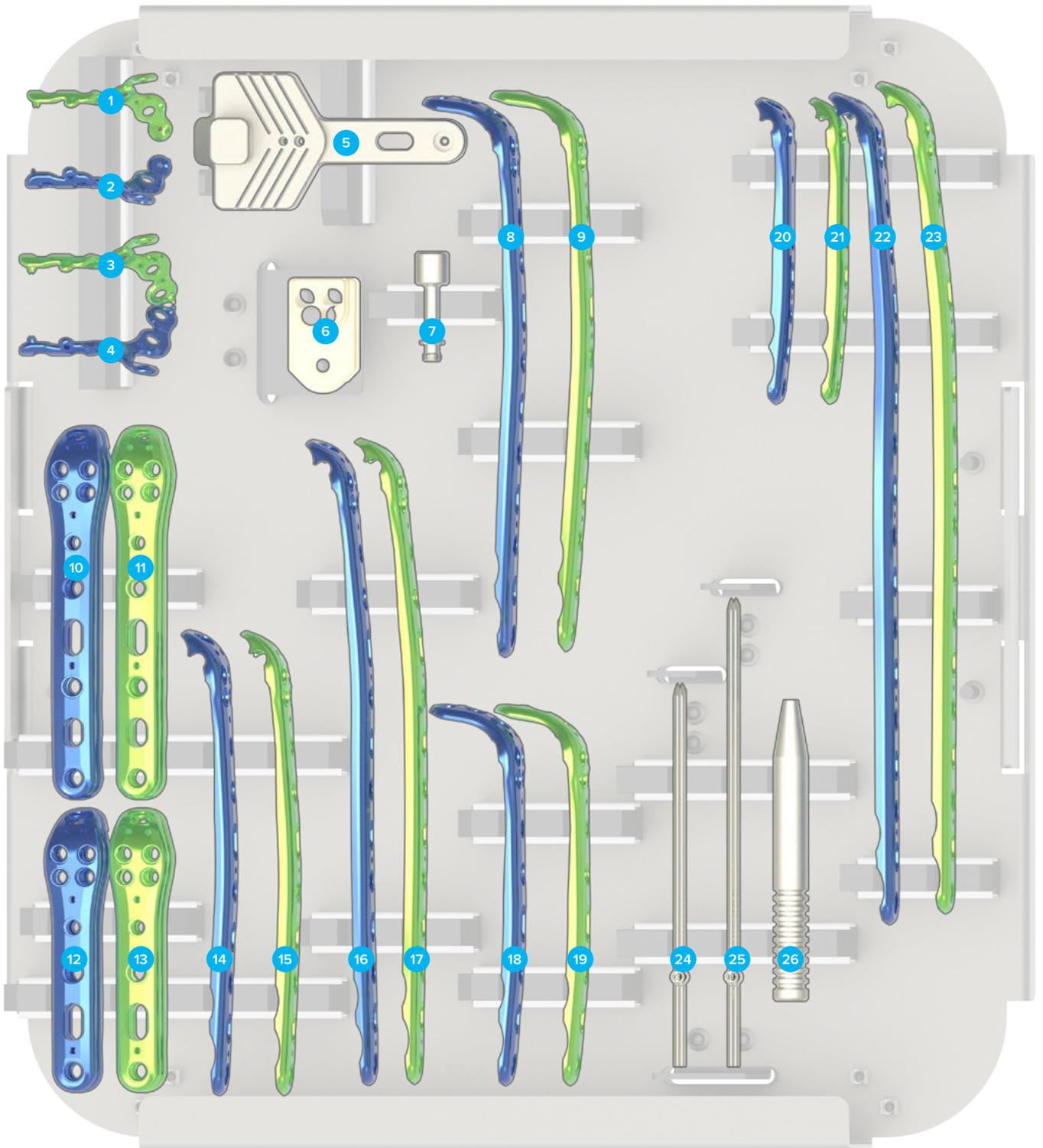
Note: To learn more about the full line of Acumed innovative surgical solutions, please contact your authorized Acumed distributor, call 888.627.9957, or visit www.acumed.net.



Ordering Information [continued]

| Tray Components | | | |
|-------------------------|--|-------------------------------------|-----------------------------------|
| Coronoid Plates | | Instrumentation | |
| 3 | Coronoid Plate, Standard, Right | 70-0414 | 24 70 mm Tension Band Pin 30-0098 |
| 4 | Coronoid Plate, Standard, Left | 70-0413 | 25 90 mm Tension Band Pin 30-0099 |
| Instrumentation | | 26 Tension Band Pin Snapper 80-0411 | |
| 5 | Olecranon Plate Osteotomy Cutting Jig | 80-0653 | |
| 6 | Olecranon Plate Prox Targeting Guide | 80-0654 | |
| 7 | Locking Bolt: M4 | 80-0652 | |
| Olecranon Plates | | | |
| 8 | Olecranon Plate, Extended, 9-hole, Left (130 mm) | 70-0314 | |
| 9 | Olecranon Plate, Extended, 9-hole, Right (130 mm) | 70-0315 | |
| 10 | Olecranon Plate, Standard, 5-hole, Left (90 mm) | 70-0304 | |
| 11 | Olecranon Plate, Standard, 5-hole, Right (90 mm) | 70-0305 | |
| 12 | Olecranon Plate, Standard, 3-hole, Left (65 mm) | 70-0302 | |
| 13 | Olecranon Plate, Standard, 3-hole, Right (65 mm) | 70-0303 | |
| 14 | Olecranon Plate, Standard, 7-hole, Left (110 mm) | 70-0306 | |
| 15 | Olecranon Plate, Standard, 7-hole, Right (110 mm) | 70-0307 | |
| 16 | Olecranon Plate, Standard, 11-hole, Left (150 mm) | 70-0308 | |
| 17 | Olecranon Plate, Standard, 11-hole, Right (150 mm) | 70-0309 | |
| 18 | Olecranon Plate, Extended, 5-hole, Left (90 mm) | 70-0312 | |
| 19 | Olecranon Plate, Extended, 5-hole, Right (90 mm) | 70-0313 | |

| Optional Components from Elbow Plating System | | | |
|---|------------------------------|-------------------------|---|
| Coronoid Plates | | Olecranon Plates | |
| 1 | Coronoid Plate, Small, Right | 70-0416 | 20 Olecranon Plate, Narrow, 5-hole, Left (85 mm) 70-0316 |
| 2 | Coronoid Plate, Small, Left | 70-0415 | 21 Olecranon Plate, Narrow, 5-hole, Right (85 mm) 70-0317 |
| | | | 22 Olecranon Plate, Standard, 15-hole, Left (190 mm) 70-0310 |
| | | | 23 Olecranon Plate, Standard, 15-hole, Right (190 mm) 70-0311 |

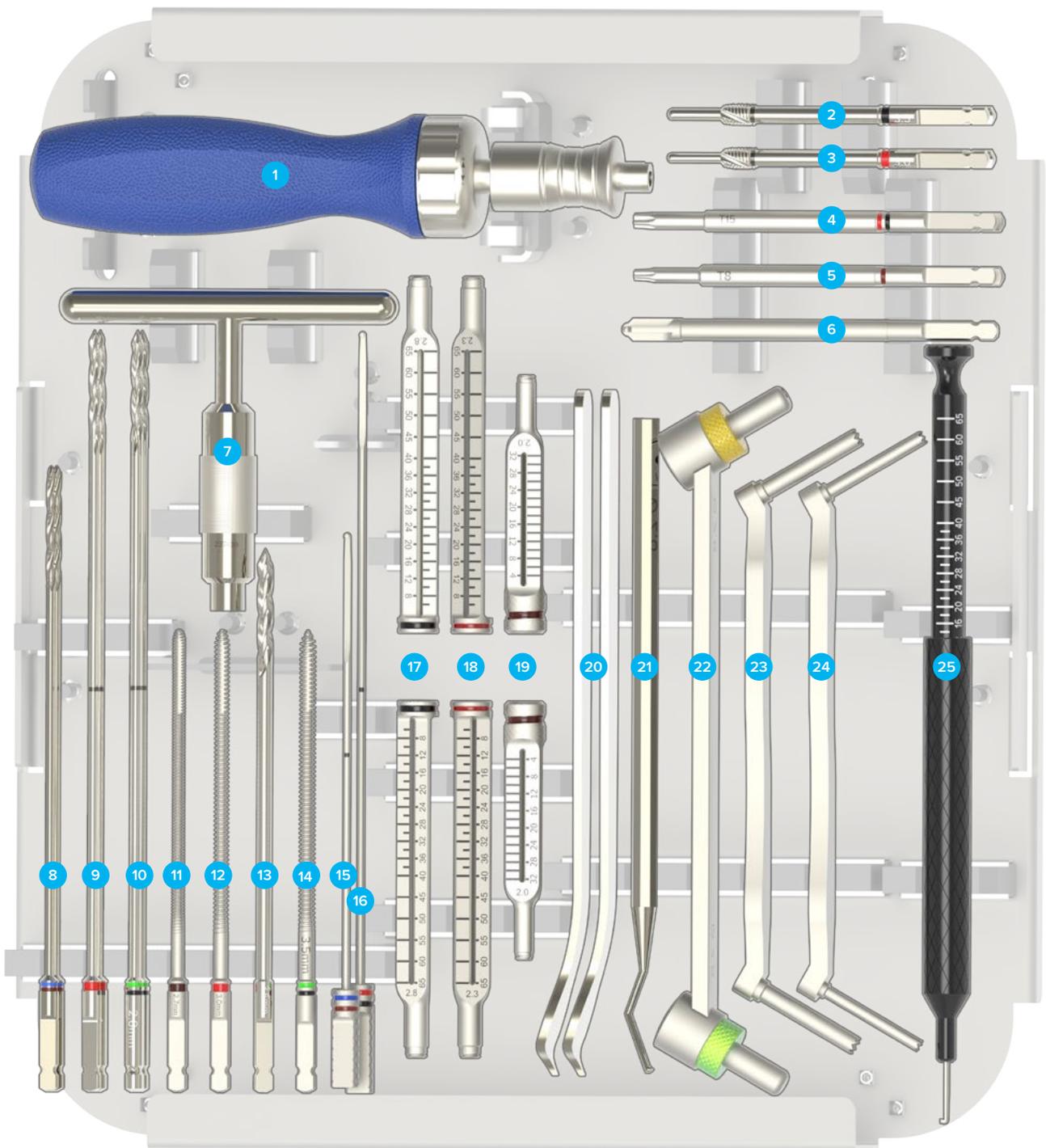


Ordering Information [continued]

Tray Components

Instrumentation

| | | | | | |
|----|---|----------|----|--|----------|
| 1 | Medium Ratcheting Driver Handle | 80-0663 | 14 | 3.5 mm Cortical Screw Bone Tap | MS-LTT35 |
| 2 | Plate Tap for 3.5 mm Screw | 80-0661 | 15 | 2.0 mm Depth Probe | 80-0643 |
| 3 | Plate Tap for 3.0 mm Screw | 80-0659 | 16 | 2.3 mm Depth Probe | 80-0664 |
| 4 | T15 Stick Fit Hexalobe Driver | 80-0760 | 17 | 2.8 mm Hexalobe Locking Drill Guide 6–65 mm | 80-0668 |
| 5 | T8 Stick Fit Hexalobe Driver | 80-0759 | 18 | 2.3 mm Locking Drill Guide 6-65 mm | 80-0622 |
| 6 | CO/CA Countersink | PL-2080 | 19 | 2.0 mm Hexalobe Locking Drill Guide 4–32 mm | 80-0621 |
| 7 | Quick Release T-Handle | MS-T1212 | 20 | 15 mm Hohman Retractor | MS-46827 |
| 8 | 2.0 mm Quick Release Drill | 80-0318 | 21 | Sharp Hook | PL-CL06 |
| 9 | 2.3 mm Quick Release Drill | 80-0627 | 22 | Offset Drill Guide | PL-2095 |
| 10 | 2.8 mm Quick Release Drill | 80-0387 | 23 | 2.8 mm/3.5 mm Thin Drill Guide | PL-2196 |
| 11 | Bone Tap for 2.7 mm Hexalobe Screws | 80-0625 | 24 | 2.0 mm/2.3 mm Narrow Drill Guide | 80-0628 |
| 12 | Bone Tap for 3.0 mm Non-Locking Screws | 80-0626 | 25 | Depth Gauge 6–65 mm | 80-0623 |
| 13 | 3.5 mm x 5" Quick Release Drill | MS-DC35 | | | |



Ordering Information [continued]

Tray Components

Instrumentation

| | | | | | |
|---|----------------------------|------------|----|--------------------------------------|------------|
| 1 | 2.8 mm Drill Guide Cannula | PL-28CLAMP | 8 | .045" x 6" ST Guide Wire* | WS-1106ST |
| 2 | Targeted Drill Guide | PL-CLAMP | 9 | .062 x 5.75 STT Guide Wire, Titanium | WT-1606STT |
| 3 | 2.3 mm Drill Guide Cannula | 80-0624 | 10 | .035 x 5.75 STT Guide Wire, Titanium | WT-0906STT |
| 4 | Plate Holder Assembly | PL-2030 | 11 | Plate Tack | PL-PTACK |
| 5 | Plate Bender, Large | PL-2045 | 12 | 8" Bone Reduction Forceps | MS-1280 |
| 6 | 2.0 mm x 9" ST Guide Wire* | WS-2009ST | 13 | Bone Reduction Forceps, 5.25 | MS-45300 |
| 7 | .062" x 6" Guide Wire* | WS-1607ST | 14 | Reduction Forceps With Serrated Jaw | PL-CLO4 |
| | | | 15 | Periosteal Elevator | MS-46212 |

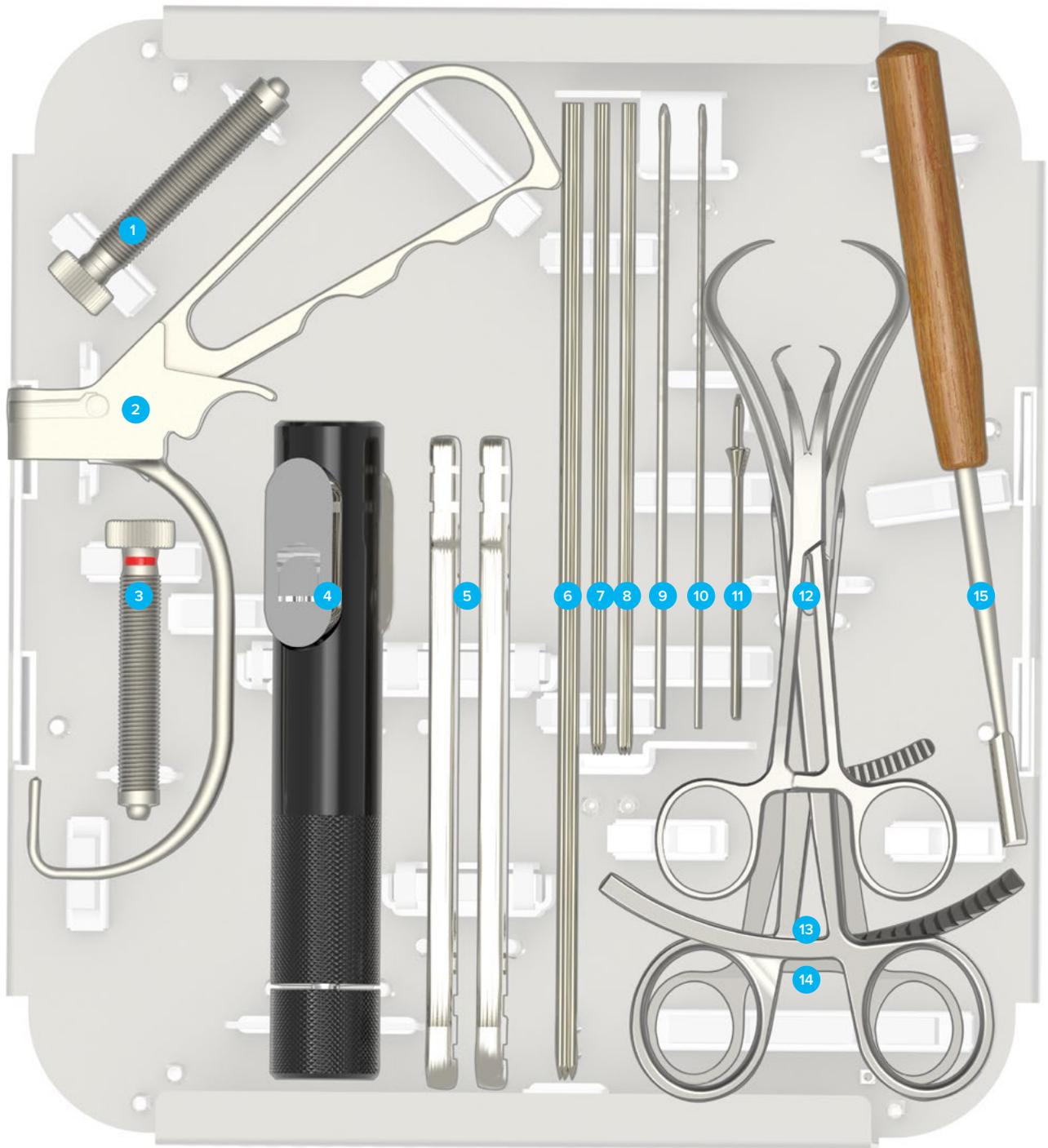
*Also used as a K-wire

Additional Components

| | |
|-------------------------------------|---------|
| 2.0 mm Quick Release Drill | 80-0318 |
| Targeting Guide Locking Bolt: 10-32 | 80-2164 |

Sterile Parts

| | |
|----------------------------------|-----------|
| Osteotomy Saw Blade Hub Style L | 80-0739-S |
| Osteotomy Saw Blade Hub Style S | 80-0740-S |
| Osteotomy Saw Blade Hub Style DS | 80-2017-S |



Ordering Information [continued]

| Screws | | | |
|---------------------------------------|---------|--|---------|
| 3.5 mm Locking Hexalobe Screws | | 3.5 mm Nonlocking Hexalobe Screws | |
| 3.5 mm x 8 mm Locking Hexalobe Screw | 30-0232 | 3.5 mm x 8 mm Nonlocking Hexalobe Screw | 30-0255 |
| 3.5 mm x 10 mm Locking Hexalobe Screw | 30-0233 | 3.5 mm x 10 mm Nonlocking Hexalobe Screw | 30-0256 |
| 3.5 mm x 12 mm Locking Hexalobe Screw | 30-0234 | 3.5 mm x 12 mm Nonlocking Hexalobe Screw | 30-0257 |
| 3.5 mm x 14 mm Locking Hexalobe Screw | 30-0235 | 3.5 mm x 14 mm Nonlocking Hexalobe Screw | 30-0258 |
| 3.5 mm x 16 mm Locking Hexalobe Screw | 30-0236 | 3.5 mm x 16 mm Nonlocking Hexalobe Screw | 30-0259 |
| 3.5 mm x 18 mm Locking Hexalobe Screw | 30-0237 | 3.5 mm x 18 mm Nonlocking Hexalobe Screw | 30-0260 |
| 3.5 mm x 20 mm Locking Hexalobe Screw | 30-0238 | 3.5 mm x 20 mm Nonlocking Hexalobe Screw | 30-0261 |
| 3.5 mm x 22 mm Locking Hexalobe Screw | 30-0239 | 3.5 mm x 22 mm Nonlocking Hexalobe Screw | 30-0262 |
| 3.5 mm x 24 mm Locking Hexalobe Screw | 30-0240 | 3.5 mm x 24 mm Nonlocking Hexalobe Screw | 30-0263 |
| 3.5 mm x 26 mm Locking Hexalobe Screw | 30-0241 | 3.5 mm x 26 mm Nonlocking Hexalobe Screw | 30-0264 |
| 3.5 mm x 28 mm Locking Hexalobe Screw | 30-0242 | 3.5 mm x 28 mm Nonlocking Hexalobe Screw | 30-0265 |
| 3.5 mm x 30 mm Locking Hexalobe Screw | 30-0243 | 3.5 mm x 30 mm Nonlocking Hexalobe Screw | 30-0266 |
| 3.5 mm x 32 mm Locking Hexalobe Screw | 30-0244 | 3.5 mm x 32 mm Nonlocking Hexalobe Screw | 30-0267 |
| 3.5 mm x 34 mm Locking Hexalobe Screw | 30-0245 | 3.5 mm x 34 mm Nonlocking Hexalobe Screw | 30-0268 |
| 3.5 mm x 36 mm Locking Hexalobe Screw | 30-0246 | 3.5 mm x 36 mm Nonlocking Hexalobe Screw | 30-0269 |
| 3.5 mm x 38 mm Locking Hexalobe Screw | 30-0247 | 3.5 mm x 38 mm Nonlocking Hexalobe Screw | 30-0270 |
| 3.5 mm x 40 mm Locking Hexalobe Screw | 30-0248 | 3.5 mm x 40 mm Nonlocking Hexalobe Screw | 30-0271 |
| 3.5 mm x 45 mm Locking Hexalobe Screw | 30-0249 | 3.5 mm x 45 mm Nonlocking Hexalobe Screw | 30-0272 |
| 3.5 mm x 50 mm Locking Hexalobe Screw | 30-0250 | 3.5 mm x 50 mm Nonlocking Hexalobe Screw | 30-0273 |
| 3.5 mm x 55 mm Locking Hexalobe Screw | 30-0251 | 3.5 mm x 55 mm Nonlocking Hexalobe Screw | 30-0274 |
| 3.5 mm x 60 mm Locking Hexalobe Screw | 30-0252 | 3.5 mm x 60 mm Nonlocking Hexalobe Screw | 30-0275 |
| | | 3.5 mm x 65 mm Nonlocking Hexalobe Screw | 30-0276 |

Ordering Information [continued]

| Screws | | | |
|---------------------------------------|---------|--|---------|
| 3.0 mm Locking Hexalobe Screws | | 3.0 mm Nonlocking Hexalobe Screws | |
| 3.0 mm x 8 mm Locking Hexalobe Screw | 30-0278 | 3.0 mm x 8 mm Nonlocking Hexalobe Screw | 30-0301 |
| 3.0 mm x 10 mm Locking Hexalobe Screw | 30-0279 | 3.0 mm x 10 mm Nonlocking Hexalobe Screw | 30-0302 |
| 3.0 mm x 12 mm Locking Hexalobe Screw | 30-0280 | 3.0 mm x 12 mm Nonlocking Hexalobe Screw | 30-0303 |
| 3.0 mm x 14 mm Locking Hexalobe Screw | 30-0281 | 3.0 mm x 14 mm Nonlocking Hexalobe Screw | 30-0304 |
| 3.0 mm x 16 mm Locking Hexalobe Screw | 30-0282 | 3.0 mm x 16 mm Nonlocking Hexalobe Screw | 30-0305 |
| 3.0 mm x 18 mm Locking Hexalobe Screw | 30-0283 | 3.0 mm x 18 mm Nonlocking Hexalobe Screw | 30-0306 |
| 3.0 mm x 20 mm Locking Hexalobe Screw | 30-0284 | 3.0 mm x 20 mm Nonlocking Hexalobe Screw | 30-0307 |
| 3.0 mm x 22 mm Locking Hexalobe Screw | 30-0285 | 3.0 mm x 22 mm Nonlocking Hexalobe Screw | 30-0308 |
| 3.0 mm x 24 mm Locking Hexalobe Screw | 30-0286 | 3.0 mm x 24 mm Nonlocking Hexalobe Screw | 30-0309 |
| 3.0 mm x 26 mm Locking Hexalobe Screw | 30-0287 | 3.0 mm x 26 mm Nonlocking Hexalobe Screw | 30-0310 |
| 3.0 mm x 28 mm Locking Hexalobe Screw | 30-0288 | 3.0 mm x 28 mm Nonlocking Hexalobe Screw | 30-0311 |
| 3.0 mm x 30 mm Locking Hexalobe Screw | 30-0289 | 3.0 mm x 30 mm Nonlocking Hexalobe Screw | 30-0312 |
| 3.0 mm x 32 mm Locking Hexalobe Screw | 30-0290 | 3.0 mm x 32 mm Nonlocking Hexalobe Screw | 30-0313 |
| 3.0 mm x 34 mm Locking Hexalobe Screw | 30-0291 | 3.0 mm x 34 mm Nonlocking Hexalobe Screw | 30-0314 |
| 3.0 mm x 36 mm Locking Hexalobe Screw | 30-0292 | 3.0 mm x 36 mm Nonlocking Hexalobe Screw | 30-0315 |
| 3.0 mm x 38 mm Locking Hexalobe Screw | 30-0293 | 3.0 mm x 38 mm Nonlocking Hexalobe Screw | 30-0316 |
| 3.0 mm x 40 mm Locking Hexalobe Screw | 30-0294 | 3.0 mm x 40 mm Nonlocking Hexalobe Screw | 30-0317 |
| 3.0 mm x 45 mm Locking Hexalobe Screw | 30-0295 | 3.0 mm x 45 mm Nonlocking Hexalobe Screw | 30-0318 |
| 3.0 mm x 50 mm Locking Hexalobe Screw | 30-0296 | 3.0 mm x 50 mm Nonlocking Hexalobe Screw | 30-0319 |
| 3.0 mm x 55 mm Locking Hexalobe Screw | 30-0297 | 3.0 mm x 55 mm Nonlocking Hexalobe Screw | 30-0320 |
| 3.0 mm x 60 mm Locking Hexalobe Screw | 30-0298 | 3.0 mm x 60 mm Nonlocking Hexalobe Screw | 30-0321 |
| | | 3.0 mm x 65 mm Nonlocking Hexalobe Screw | 30-0322 |

Ordering Information [continued]

| Screws | | | |
|---------------------------------------|---------|--|---------|
| 2.7 mm Locking Hexalobe Screws | | 2.7 mm Nonlocking Hexalobe Screws | |
| 2.7 mm x 8 mm Locking Hexalobe Screw | 30-0324 | 2.7 mm x 8 mm Nonlocking Hexalobe Screw | 30-0343 |
| 2.7 mm x 10 mm Locking Hexalobe Screw | 30-0325 | 2.7 mm x 10 mm Nonlocking Hexalobe Screw | 30-0344 |
| 2.7 mm x 12 mm Locking Hexalobe Screw | 30-0326 | 2.7 mm x 12 mm Nonlocking Hexalobe Screw | 30-0345 |
| 2.7 mm x 14 mm Locking Hexalobe Screw | 30-0327 | 2.7 mm x 14 mm Nonlocking Hexalobe Screw | 30-0346 |
| 2.7 mm x 16 mm Locking Hexalobe Screw | 30-0328 | 2.7 mm x 16 mm Nonlocking Hexalobe Screw | 30-0347 |
| 2.7 mm x 18 mm Locking Hexalobe Screw | 30-0329 | 2.7 mm x 18 mm Nonlocking Hexalobe Screw | 30-0348 |
| 2.7 mm x 20 mm Locking Hexalobe Screw | 30-0330 | 2.7 mm x 20 mm Nonlocking Hexalobe Screw | 30-0349 |
| 2.7 mm x 22 mm Locking Hexalobe Screw | 30-0331 | 2.7 mm x 22 mm Nonlocking Hexalobe Screw | 30-0350 |
| 2.7 mm x 24 mm Locking Hexalobe Screw | 30-0332 | 2.7 mm x 24 mm Nonlocking Hexalobe Screw | 30-0351 |
| 2.7 mm x 26 mm Locking Hexalobe Screw | 30-0333 | 2.7 mm x 26 mm Nonlocking Hexalobe Screw | 30-0352 |
| 2.7 mm x 28 mm Locking Hexalobe Screw | 30-0334 | 2.7 mm x 28 mm Nonlocking Hexalobe Screw | 30-0353 |
| 2.7 mm x 30 mm Locking Hexalobe Screw | 30-0335 | 2.7 mm x 30 mm Nonlocking Hexalobe Screw | 30-0354 |
| 2.7 mm x 32 mm Locking Hexalobe Screw | 30-0336 | 2.7 mm x 32 mm Nonlocking Hexalobe Screw | 30-0355 |



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