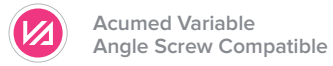
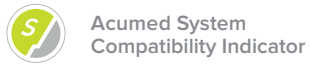


 **acumed**[®]
Small Fragment Base Set



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® Small Fragment Base Set

The Acumed Small Fragment Base Set is a comprehensive system for small fragment trauma surgeries of the upper and lower extremities. The set is designed as both a stand-alone system with traditional plating as well as a complement to Acumed's precontoured, anatomic-specific plating systems.

The Small Fragment Base Set includes:

- ▶ One-Third Tubular Plates
- ▶ 2.7 mm L-shaped, T-shaped, and straight Fragment Plates
- ▶ AcuTwist® Acutrak® Compression Screws
- ▶ Tension Band Pins

Screws in the system include 2.7 and 3.5 mm locking and nonlocking hexalobe screws, 2.7 and 3.5 mm variable angle hexalobe screws, and 4.0 mm fully and partially threaded cancellous hexalobe screws.

The system also features straightforward instrumentation including fragment plate benders, fragment plate cutters, and a variety of drills/drill guides.

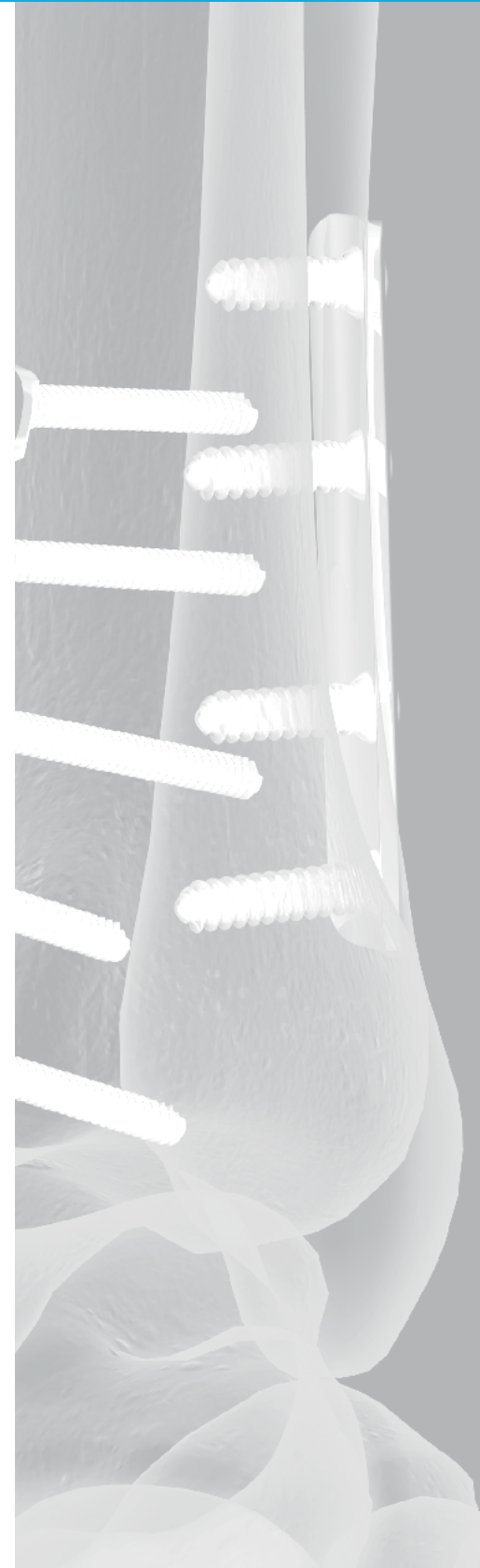
Indications for Use:

The Acumed Small Fragment Base Set contains orthopedic plates and screws with the following indications:

Acumed 2.7 mm Fragment Plates and 4.0 mm cancellous hexalobe screws are intended for fractures, osteotomies, nonunions, replantations, and fusions of small bones and small bone fragments.

Acumed One-Third Tubular Plates are intended for fixation of fractures, osteotomies, and nonunions of the clavicle, scapula, olecranon, humerus, radius, ulna, pelvis, distal tibia, and fibula.

2.7 mm and 3.5 mm nonlocking hexalobe screws are intended for fractures in the medial malleolus, distal radius, calcaneus, talus, humerus and patella, and intended for fixation of fractures, osteotomies, and nonunions of the distal tibia and fibula.





	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.
	Products with this symbol require use of the Acumed Small Fragment Base Set in order to complete surgery following the recommended surgical technique.
	Products with this symbol are compatible with Acumed 2.7 mm and 3.5 mm Variable Angle Screws for use in completing surgery following the recommended surgical technique.

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System Features

The Acumed Small Fragment Base Set contains One-Third Tubular Plates in a variety of lengths as well as 2.7 mm L-shaped, T-shaped, and straight Fragment Plates to treat small bone fractures and malunions. Plates are designed to minimize soft tissue irritation.

One-Third Tubular Plates



One-Third Tubular Plate 3-Hole 37 mm
(7008-0103)



One-Third Tubular Plate 7-Hole 85 mm
(7008-0107)



One-Third Tubular Plate 4-Hole 49 mm
(7008-0104)



One-Third Tubular Plate 8-Hole 97 mm
(7008-0108)



One-Third Tubular Plate 5-Hole 61 mm
(7008-0105)



One-Third Tubular Plate 10-Hole 121 mm
(7008-0110)



One-Third Tubular Plate 6-Hole 73 mm
(7008-0106)



One-Third Tubular Plate 12-Hole 145 mm
(7008-0112)

System Features [continued]

2.7 mm Fragment Plates



Fragment Plate 2.7 mm, 60 mm
(7010-0106N)



L Fragment Plate 2.7 mm Right, 61 mm
(7010-0107R)



L Fragment Plate 2.7 mm Left, 61 mm
(7010-0107L)



T Fragment Plate 2.7 mm, 61 mm
(7010-0108N)

Washers



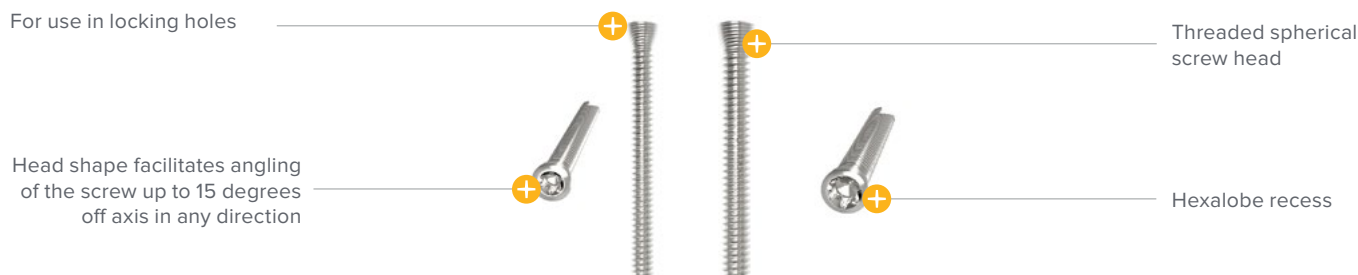
Cannulated Screw Washers 7.0 mm OD x 3.6 mm ID
(7003-07036)

System Features [continued]

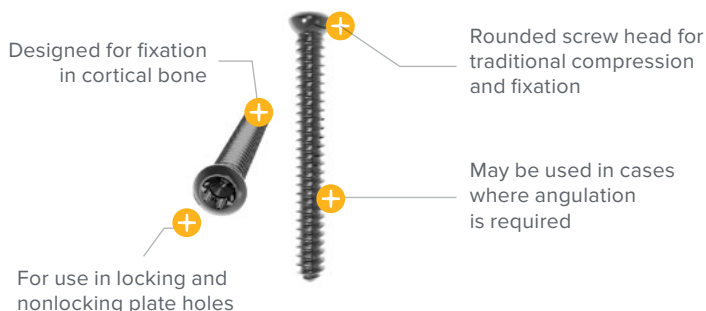
Screw Options

Acumed plating systems supported by the Small Fragment Base Set accept the following screws. These screws feature a hexalobe recess and are designed to have greater torsional strength in comparison to similar size hex screws.

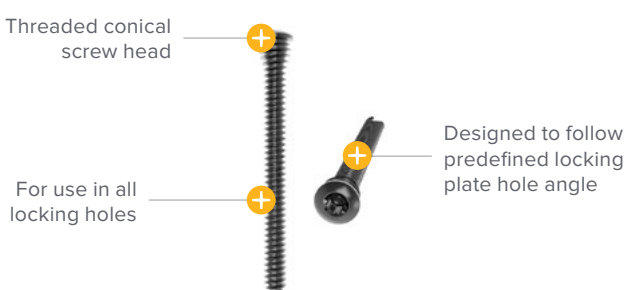
2.7 mm and 3.5 mm Variable Angle Hexalobe Screws



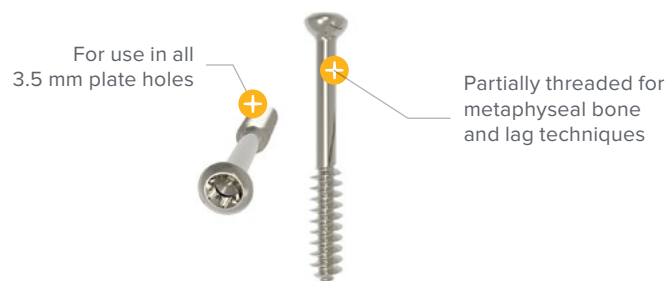
2.7 mm and 3.5 mm Nonlocking Hexalobe Screws



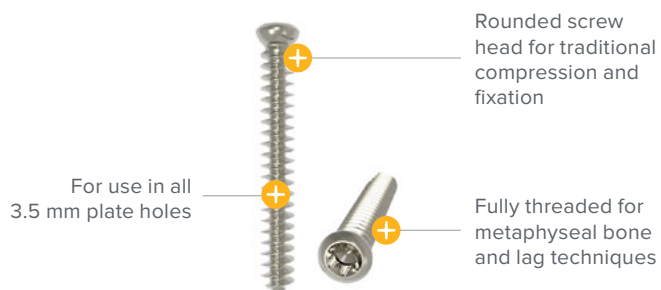
2.7 mm and 3.5 mm Locking Hexalobe Screws



4.0 mm Partially Threaded Cancellous Hexalobe Screws



4.0 mm Fully Threaded Cancellous Hexalobe Screws



Screw Type	Material	Available Lengths	
		(2 mm increments)	(5 mm increments)
2.7 mm Variable Angle Hexalobe Screws	Cobalt Chrome	10-50 mm	50-60 mm
3.5 mm Variable Angle Hexalobe Screws		10-50 mm	50-65 mm
2.7 mm Locking Hexalobe Screws	Titanium	8-50 mm	50-60 mm
3.5 mm Locking Hexalobe Screws		8-50 mm	50-65 mm
2.7 mm Nonlocking Hexalobe Screws		8-50 mm	50-60 mm
3.5 mm Nonlocking Hexalobe Screws		8-50 mm	50-65 mm
4.0 mm Partially Threaded Cancellous Hexalobe Screws		12-30 mm	30-60 mm
4.0 mm Fully Threaded Cancellous Hexalobe Screws		10-30 mm	30-60 mm

System Features [continued]

AcuTwist® Acutrak® Compression Screw

The AcuTwist Acutrak Compression Screw is designed to provide compressive fixation for use in fractures, fusions, and osteotomies. It is not intended for interference or soft tissue fixation.

The screw design includes a variable thread pitch, a tapered profile, a break-off groove, and threads along the entire length of the screw. The fully threaded screw length allows for greater resistance to pull-out force than partially threaded headed and headless screws.¹

Visit www.acumed.net for the AcuTwist Acutrak Compression Screw surgical technique (SPF00-07).



Acumed Tension Band Pin System

The Acumed Tension Band Pin System is the first interlocking solution designed to provide low-profile, secure fixation for patella, olecranon, and malleolus fractures to minimize soft tissue irritation and postoperative pin migration. This innovative solution is designed to minimize post-surgical complications associated with traditional tension band pinning with K-wires.

The Acumed Tension Band Pin System features an innovative method intended to minimize pin migration. An eyelet is located on the proximal end of the stainless steel pin. The pin is secured by passing the cerclage wire through the eyelet, minimizing migration of the pins postoperatively. The capturing of the pin allows compression to be maintained across the fracture or osteotomy site.

Visit www.acumed.net for the Tension Band Pin System surgical technique (SPF00-04).



70 mm Tension Band Pin
(30-0098)



90 mm Tension Band Pin
(30-0099)

Acumed Variable Angle Screws

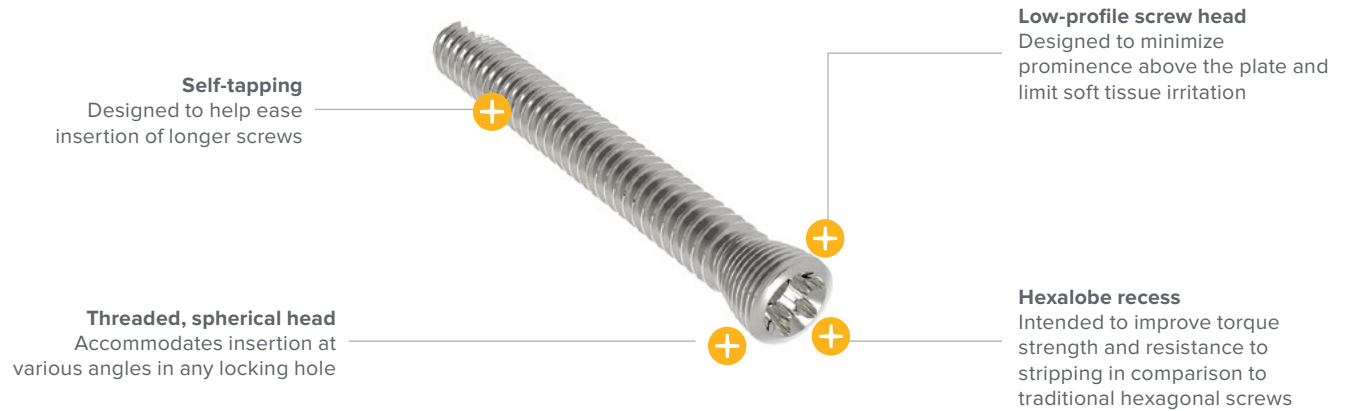


The 2.7 mm and 3.5 mm Variable Angle Screws are included as part of the Small Fragment Base Set. These screws can be used in locking plate holes within the Small Fragment Base Set as well as any systems dependent upon the Small Fragment Base Set. The variable angle hexalobe screw has a spherical head to accommodate insertion at various angles and may be angled up to 15 degrees off axis in any direction. Variable angle screws are provided to aid in the capture of specific fragments and to accommodate variations in patient anatomy.

Variable angle screws are designed to facilitate screw placement and allow the surgeon to:

- ▶ Target and capture best quality bone
- ▶ Angle screw to avoid joint penetration
- ▶ Tailor screw position to accommodate differences in patient anatomy and fracture fragment location
- ▶ Avoid existing implants

Variable Angle Screw Features

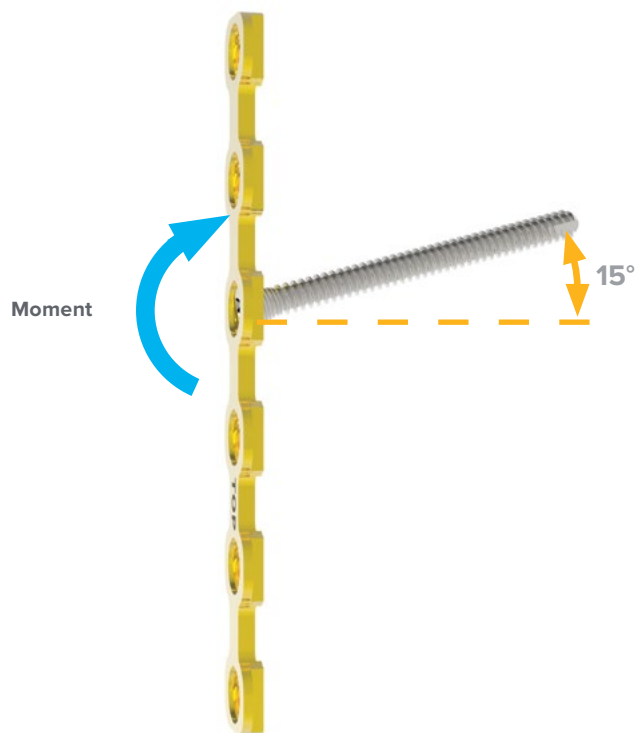
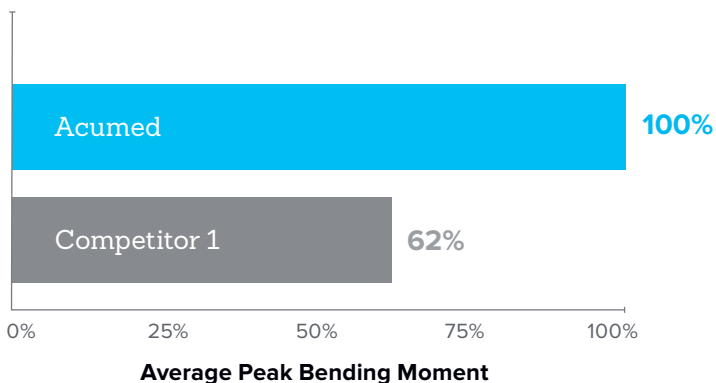


Mechanical Testing: Variable Angle Screws

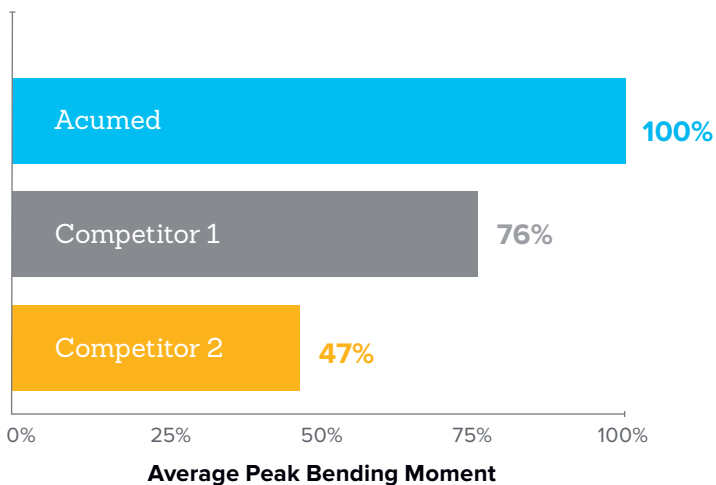
Cantilever Bending

Mechanical testing was performed to evaluate the strength of the screw-to-plate interface for Acumed’s variable angle screws. Similar testing was performed for two competitive variable angle screw systems. Screws were inserted into plates at angulations of 0, 5, 10, and 15 degrees from the axis of the hole. A load was applied to each screw at a uniform distance from the bottom of the plate to generate a bending moment at the screw-to-plate interface. The peak bending moment at failure was recorded for each screw. The table below represents a summary of this testing as an average of all loads at 15° angulation.

Static Cantilever Bending—2.7 mm Screw



Static Cantilever Bending—3.5 mm Screw



Source: Acumed Internal Test Reports TR01402, TR01558, and TR01607

Galvanic Corrosion Testing: Variable Angle Screws

The 2.7 mm and 3.5 mm variable angle hexalobe screws included in Acumed's Small Fragment Base Set are composed of cobalt-chromium-molybdenum (CCM) alloy and are used with Acumed plates composed of titanium alloy and commercially pure titanium.

Dissimilar metals in contact in an electrolyte solution may initiate an electrochemical process known as galvanic corrosion, where one metal corrodes another as a result of an electropotential difference between the metals.² Galvanic corrosion manifests as accelerated corrosion of the more active, corroding metal (anode) and slower corrosion of the more noble metal, if it corrodes at all.²

There is significant history on the safe use of CCM and titanium in the body. Both CCM and titanium are self-passivating, indicating that these materials would tend not to have galvanic interactions over time.² Kummer et al previously demonstrated that CCM-titanium couples result in low, stable galvanic currents that gradually decrease over time.³ A number of orthopaedic device manufacturers are currently utilizing CCM screws and titanium plates in the same combination as Acumed.

In order to quantify the potential impact of galvanic corrosion on Acumed's CCM variable angle screws, third-party testing was completed. The corrosion rate and mass loss for each sample couple was determined and used to calculate material release.

Summary of Galvanic Couple Current Data for Variable Angle Screw Platform Materials (CCM, Titanium Alloy, Commercially Pure Titanium)

Average results of testing each titanium material (cathode) in presence of CCM material (anode)

Corrosion Rate (CR) Mils Per Year (mpy) ³	Mass Loss (MR) ($\mu\text{g}/\text{cm}^2/\text{day}$)	Calculated Material Release ($\mu\text{g}/\text{day}$)
0.001	0.04	0.07

Source: Acumed Internal Test Report TR01671

The calculated corrosion rate (CR) was less than 0.001 mpy. The MR was less than 0.04 $\mu\text{g}/\text{cm}^2/\text{day}$. For these cobalt chromium screws, with a surface area of 1.63 cm^2 , this translates to less than 0.07 $\mu\text{g}/\text{day}$ of cobalt chromium material released.

In addition to the corrosion rate, mass loss, and calculated material release, the cobalt chrome screws were examined pre- and post-testing at up to 40X magnification to assess their general condition. This examination revealed no pitting or indication of corrosion.

Acumed's findings are consistent with those in the research literature which have indicated that CCM and titanium alloys generate a finite current ultimately resulting in a stable passive film, limiting material loss to nearly undetectable levels.³

Instrumentation

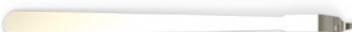
General Instrumentation



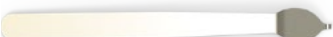
Cannulated Quick Release Driver Handle, Medium
(80-2364)



Cannulated Quick Release Driver Handle, Large
(80-2365)



8 mm Hohman Retractor
(PL-CL05)



15 mm Hohman Retractor
(MS-46827)



Periosteal Elevator
(MS-46212)



.062" x 3" Plate Tack, Threaded
(80-2430)



CO/CA Countersink
(PL-2080)



Polarus® 3 Reduction Device
(80-1601)



Tension Band Pin Snapper
(80-0411)



2.0 mm x 6" ST Guide Wire
(35-0015)



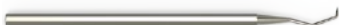
.062" x 6" ST Guide Wire
(WS-1607ST)



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



Plate Bender, Large
(PL-2045)



Sharp Hook
(PL-CL06)



Depth Gauge
(80-2496)



1.6 mm Wire Sleeve
(80-2369)



3.5 mm/2.8 mm Insert Drill Sleeve
(80-2370)



**AcuTwist® Acutrak®
Compression Screw Extractor**
(AI-EX20)



Fragment Plate Bender, Short
(80-2382)



Fragment Plate Bender, Long
(80-2381)



30 mm AcuTwist® Acutrak® Tap
(AI-NG30)



Large Screw Holding Forceps
(MS-45210)



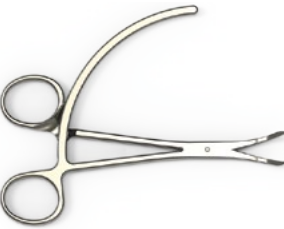
Needle Nose Pliers, 5.5
(MS-48245)



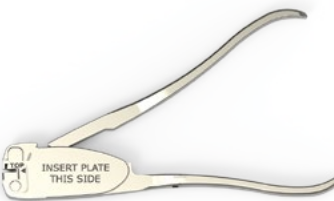
Reduction Forceps w/ Ratchet, Long
(80-2377)



**Pointed Forceps w/ Ratchet,
Wide Long**
(80-2375)



**Pointed Forceps w/ Ratchet,
Narrow Long**
(80-2376)



Fragment Plate Cutter
(80-2380)

2.7 mm Locking/Nonlocking Hexalobe Screw Instrumentation



2.0 mm Locking Drill Guide
(80-2371)



T8 Stick Fit Hexalobe Driver
(80-0759)



2.0 mm/2.7 mm Drill Guide
(80-2516)



2.7 mm Quick Release Drill, Lag
(80-2502)



2.0 mm Quick Release Drill w/ Depth Marks
(80-2378)

3.5 / 4.0 mm Locking/Nonlocking Hexalobe Screw Instrumentation



T15 Stick Fit Hexalobe Driver
(80-0760)



3.5 mm Quick Release Drill, Lag
(80-2503)



2.8 mm Quick Release Drill w/ Depth Marks
(80-2379)



T15 6 in Long Stick Fit Hexalobe Driver
(80-1065)



2.8 mm Compression Drill Guide
(80-2373)



2.8 mm/3.5 mm Drill Guide
(80-2517)



2.8 mm Locking Drill Guide
(80-2372)

2.7 / 3.5 mm Variable Angle Hexalobe Screw Instrumentation



2.8 mm Variable Angle Drill Guide
(80-2148)



2.0 mm Variable Angle Drill Guide
(80-2221)



2.8 mm Threaded VA Drill Guide
(80-2707)



2.0 mm Threaded VA Drill Guide
(80-2706)



Threaded VA Drill Guide Driver
(80-2708)



2.26 N-m Torque Limiting Quick Connect
(80-2367)



1.70 N-m Torque Limiting Quick Connect
(80-2366)



Handle for Torque Limiting Quick Connects
(80-2368)

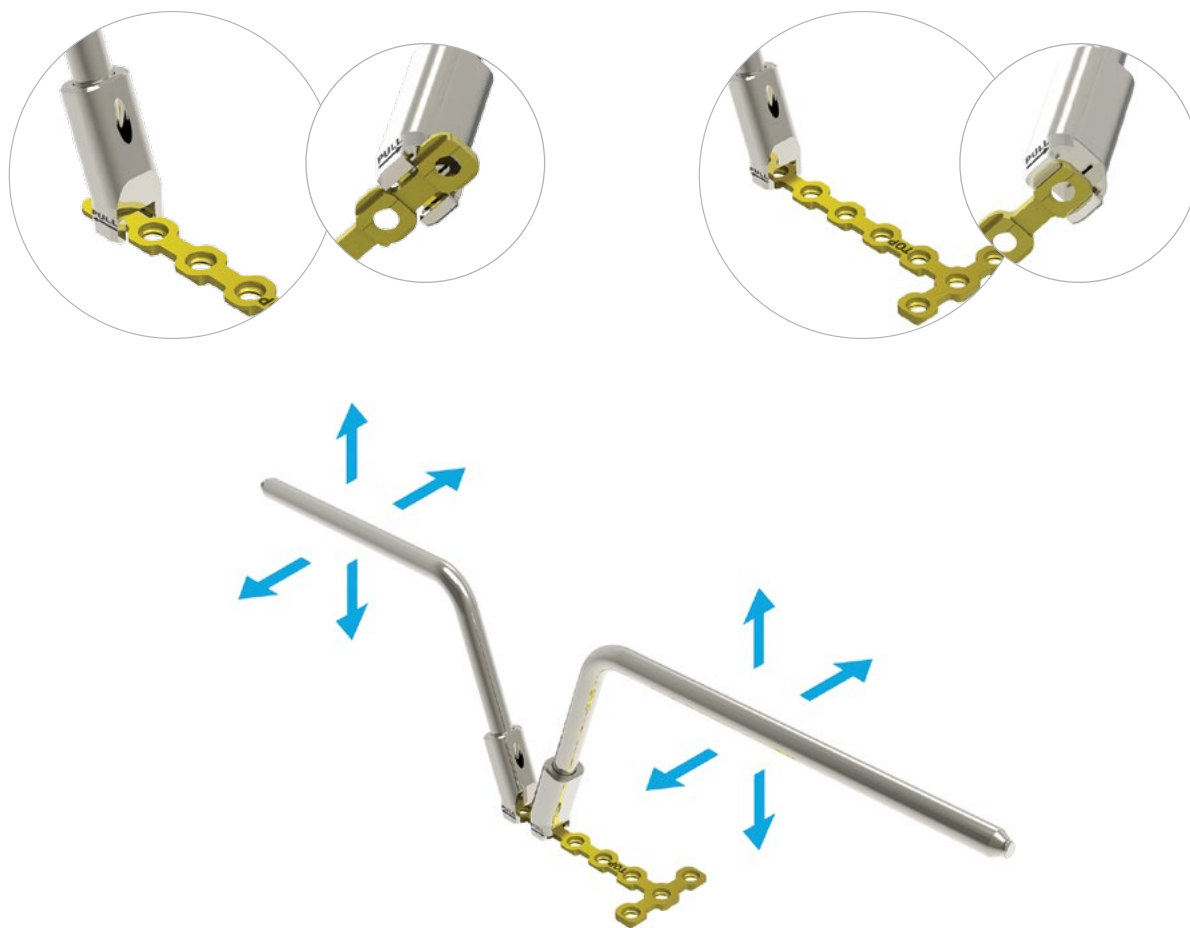
Instrumentation Features

2.7 mm Fragment Plate Benders

If required, plates can be bent using the Short (80-2382) or Long (80-2381) Fragment Plate Bender. Bending the fragment plate can be done *in situ* or *ex situ*.

- ▶ Attach the selected plate bender to the undercuts of the fragment plate.
- ▶ Alternatively, thread the plate bender ends into the appropriate holes.
- ▶ Bend plates to the desired amount by gripping the plate bender handles.

Warning: Repeated bending of the plate in opposite directions may cause the plate to become weaker or break. Do not bend, unbend, and re-bend the plate more than once.



Instrumentation Features [continued]

Locking Drill Guides

For 2.7 mm Hexalobe Screws

The 2.0 mm Locking Drill Guide (80-2371) has a hexalobe recess that can be used with the T8 Stick Fit Hexalobe Driver (80-0759). Connect the Cannulated Quick Release Driver Handle, Medium (80-2364) to the T8 Stick Fit Hexalobe Driver and insert the driver tip into the non-threaded end of the 2.0 mm Locking Drill Guide. Alternatively, the 2.0 mm Locking Drill Guides can be threaded into each other to create a lever arm to aid in plate placement.

For 3.5 mm Hexalobe Screws

The 2.8 mm Locking Drill Guide (80-2372) has a hexalobe recess that can be used with the T15 Stick Fit Hexalobe Driver (80-0760). Connect the Cannulated Quick Release Driver Handle, Large (80-2365) to the T15 Stick Fit Hexalobe Driver and insert the driver tip into the non-threaded end of the 2.8 mm Locking Drill Guide. Alternatively, the 2.8 mm Locking Drill Guides can be threaded into each other to create a lever arm to aid in plate placement.

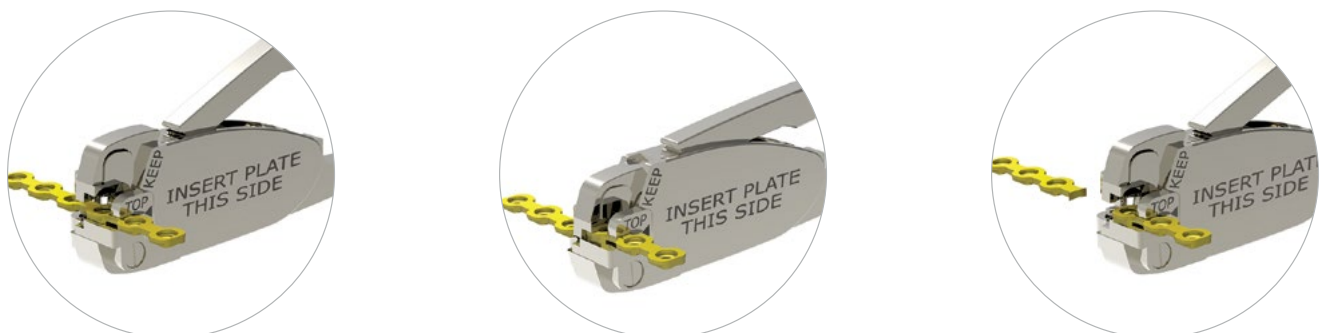


2.7 mm Fragment Plate Cutters

- ▶ If required, fragment plates may be cut to length using the Fragment Plate Cutter (80-2380).
- ▶ Place the fragment plate with the marking side up into the plate cutter so it rests against the posts.
- ▶ Squeeze the handles of the cutter.

Note: The spring holds the cut portion of the plate in place until the handle is released. The plate cutter is designed to leave a rounded edge.

Caution: Do not cut the fragment plate with the marking side down, as this will produce a sharp edge that could lead to soft tissue irritation.



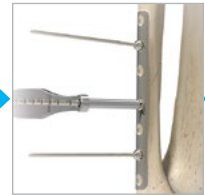
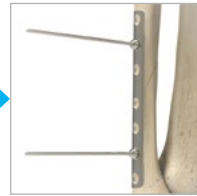
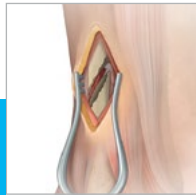
Surgical Technique Overview

Exposure
and Fracture
Reduction

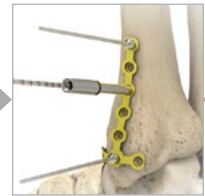
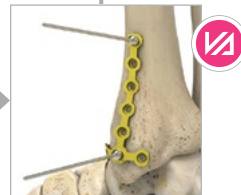
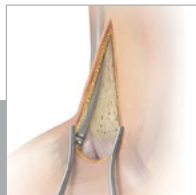
Plate Selection
and Placement

Drilling with
Drill Guide

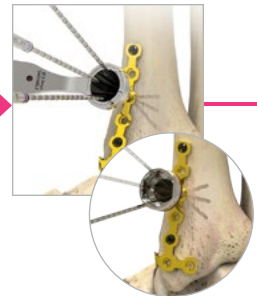
One-Third Tubular
Plate Surgical Technique



2.7 mm Fragment Plate
Surgical Technique



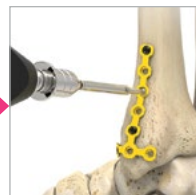
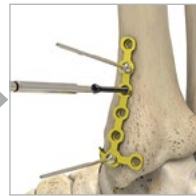
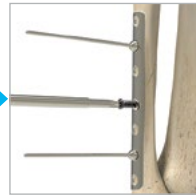
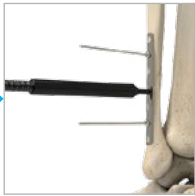
Variable Angle Screw
Surgical Technique



Screw Selection

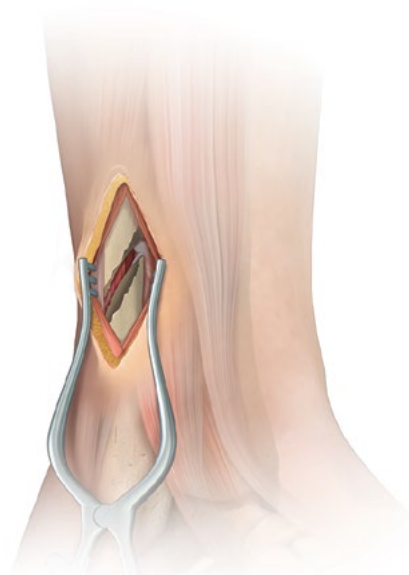
Screw Insertion

Closure and
Postoperative
Protocol



One-Third Tubular Plate Surgical Technique

Figure 1



1 Exposure and Fracture Reduction

Position the patient appropriately for selected small bone procedure and make an incision to expose the surgical site. Reduce the fracture using standard reduction techniques. Provisional stability can be achieved with guide wires and evaluated under fluoroscopy. Guide wires and forceps included in the set for reduction include:

Description	Part No.
.045" x 6" ST Guide Wire	WS-1106ST
.062" x 6" ST Guide Wire	WS-1607ST
2.0 mm x 6" ST Guide Wire	35-0015
.062" x 3" Plate Tack, Threaded	80-2430
Pointed Forceps w/ Ratchet, Wide Long	80-2375
Pointed Forceps w/ Ratchet, Narrow Long	80-2376
Reduction Forceps w/ Ratchet, Long	80-2377

Figure 2



2 Plate Selection and Placement

After reduction and stabilization, select the appropriate size One-Third Tubular Plate. Bend the plate using the Plate Bender (PL-2045) as necessary. Position the plate appropriately and fix provisionally with guide wires or Plate Tacks (80-2430). Evaluation under fluoroscopy can confirm satisfactory placement of the plate.

Warning: Excessive bending or contact with implants during use may cause the plate tack to be damaged or broken.



Reduction Forceps w/ Ratchet, Long (80-2377)



Pointed Forceps w/ Ratchet, Narrow Long (80-2376)



Pointed Forceps w/ Ratchet, Wide Long (80-2375)



.062" x 3" Plate Tack, Threaded (80-2430)



2.0 mm x 6" ST Guide Wire (35-0015)



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



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



One-Third Tubular Plate (7008-01XX)



Plate Bender (PL-2045)

One-Third Tubular Plate Surgical Technique [continued]

3 Nonlocking Screw Insertion

Based on surgical technique selected and indication being treated, the order and configuration of screws should be made at the surgeon's discretion. Drills and drivers to insert 3.5 mm nonlocking or 4.0 mm cancellous hexalobe screws have epoxy bands in BLACK and are listed at the bottom of the page.

Use the Depth Gauge (80-2496) to measure through the drilled hole to determine the correct length of screw (Figure 4A).

Note: The 2.8 mm/3.5 mm drill guide cannot be used with the depth marks on the drill to measure depth.

Warning: Excessive bending or contact with implants during use may cause the drill to be damaged or broken.

Note: One-Third Tubular Plates are designed to work with 3.5 mm nonlocking and 4.0 mm cancellous hexalobe screws only. They are not designed to be used with variable angle or locking hexalobe screws.

Screw Measurement

Once a screw has been selected from the Small Fragment Base Set Screw Caddy, the size may be verified by inserting the screw into the screw sizer with the tip of the screw placed at the 0 mm mark as shown. Screw size is then measured based on where the end of the screw head sits (Figure 4B).

Caution: Use the maximum number of screws based on the indication to reduce the risk of screw breakage during healing.

Closure and Postoperative Protocol

Closing and postoperative protocol are at the discretion of the surgeon.

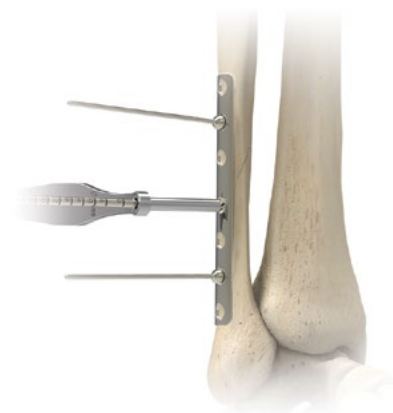


Figure 3

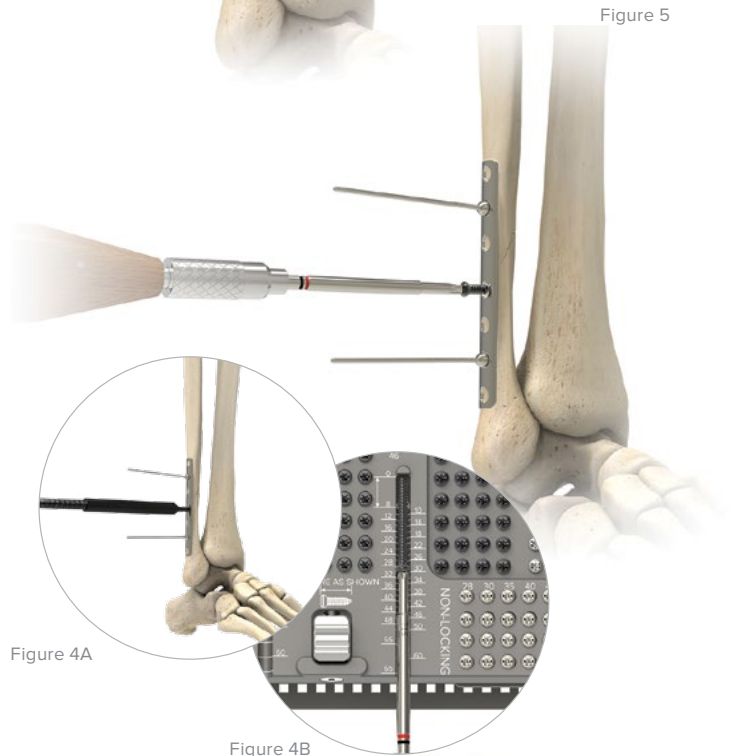


Figure 4A

Figure 4B



Figure 6



Depth Gauge
(80-2496)



T15 Stick Fit
Hexalobe Driver
(80-0760)



2.8 mm/3.5 mm
Drill Guide
(80-2517)



3.5 mm Nonlocking
Hexalobe Screw,
8–65 mm lengths
(30-XXXX)



2.8 mm Quick
Release Drill
w/ Depth Marks
(80-2379)



Cannulated Quick
Release Driver
Handle, Large
(80-2365)



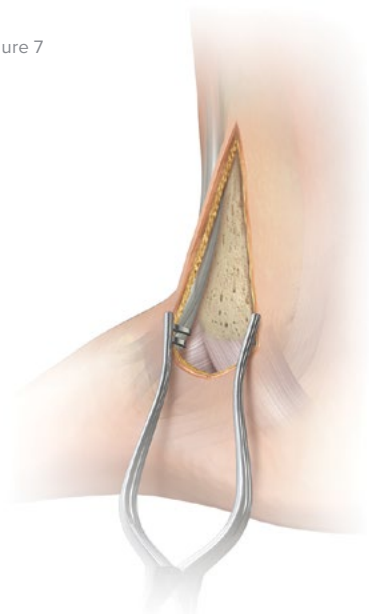
4.0 Partially
Threaded Cancellous
Hexalobe Screws,
10–60 mm lengths
(3016-400XX)



4.0 mm Cancellous
Hexalobe Screws,
12–60 mm lengths
(3015-400XX)

2.7 mm Fragment Plate Surgical Technique

Figure 7

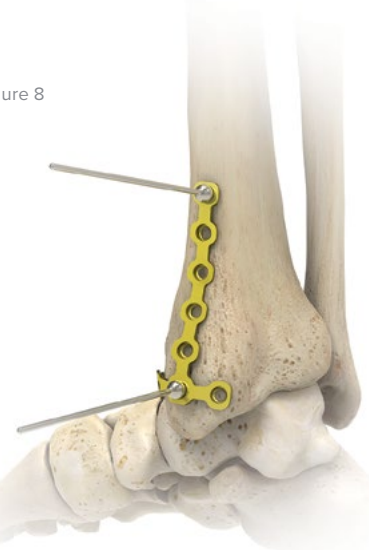


1 Exposure and Fracture Reduction

Position the patient appropriately for the selected procedure and make an incision to expose the surgical site. Reduce the fracture using standard reduction techniques. Provisional stability can be achieved with guide wires and evaluated under fluoroscopy. Guide wires and forceps included in the set for reduction include:

Description	Part No.
.045" x 6" ST Guide Wire	WS-1106ST
.062" x 6" ST Guide Wire	WS-1607ST
2.0 mm x 6" ST Guide Wire	35-0015
.062" x 3" Plate Tack, Threaded	80-2430
Pointed Forceps w/ Ratchet, Wide Long	80-2375
Pointed Forceps w/ Ratchet, Narrow Long	80-2376
Reduction Forceps w/ Ratchet, Long	80-2377

Figure 8

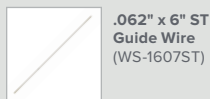


2 Plate Selection and Placement

After reduction and stabilization, select the appropriate shape (L, T, or straight) 2.7 mm Fragment Plate. Bend and/or cut the plate as necessary using the Short (80-2382) or Long (80-2381) Fragment Plate Bender and the Fragment Plate Cutter (80-2380). Instructions for using Fragment Plate Benders and Cutters are listed on pages 12–13.

Warning: Excessive bending or contact with implants during use may cause the plate tack to be damaged or broken.

Position the Fragment Plate appropriately and fix provisionally with guide wires or Plate Tacks (80-2430). Evaluation under fluoroscopy can confirm satisfactory placement of the plate.



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



Fragment Plate Cutter (80-2380)



2.7 mm Fragment Plate (7010-010XX)



Short Fragment Plate Bender (80-2382)



Long Fragment Plate Bender (80-2381)



Reduction Forceps w/ Ratchet, Long (80-2377)



Pointed Forceps w/ Ratchet, Narrow Long (80-2376)



Pointed Forceps w/ Ratchet, Wide Long (80-2375)



.062" x 3" Plate Tack, Threaded (80-2430)



2.0 mm x 6" ST Guide Wire (35-0015)



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

2.7 mm Fragment Plate Surgical Technique [continued]

3 2.7 mm Screw Insertion

Based on surgical technique selected and indication being treated, the order and configuration of screws should be made at the surgeon's discretion. Locking drill guides, drills, and drivers to insert 2.7 mm locking and nonlocking hexalobe screws have epoxy bands in BROWN and are listed at the bottom of the page.

Warning: Excessive bending or contact with implants during use may cause the drill to be damaged or broken.

Note: The 2.0 mm Quick Release Drill w/ Depth Marks (80-2378) is designed to be gauged for screw measurement off of the end of the 2.0 mm Locking Drill Guide (80-2371) (Figure 9). Alternatively, the Depth Gauge (80-2496) may be used to measure through the drilled hole to determine the correct length of screw (Figure 10A).

Note: If 2.7 mm Variable Angle Hexalobe Screws are desired for use with the Fragment Plates, see pages 20–23 for the Variable Angle Screw Surgical Technique.

Confirm screw placement under fluoroscopy.

Screw Measurement

Once a screw has been selected from the Small Fragment Base Set Screw Caddy, the size may be verified by inserting the screw into the screw sizer with the tip of the screw placed at the 0 mm mark as shown. Screw size is then measured based on where the end of the screw head sits (Figure 10B).

Caution: Use the maximum number of screws based on the indication to reduce the risk of screw breakage during healing.

Closure and Postoperative Protocol

Closing and postoperative protocol are at the discretion of the surgeon.

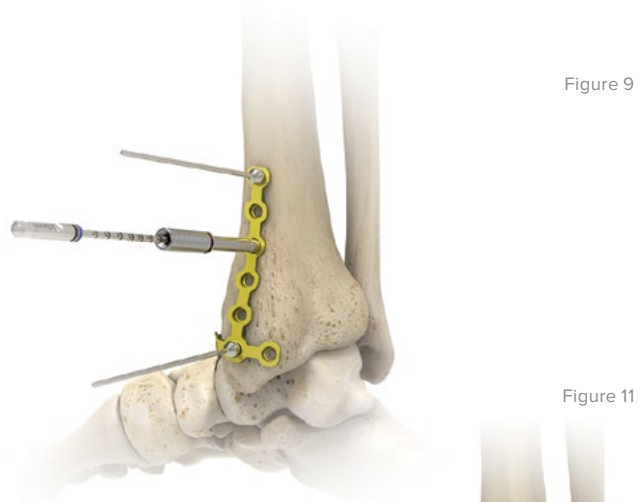


Figure 9

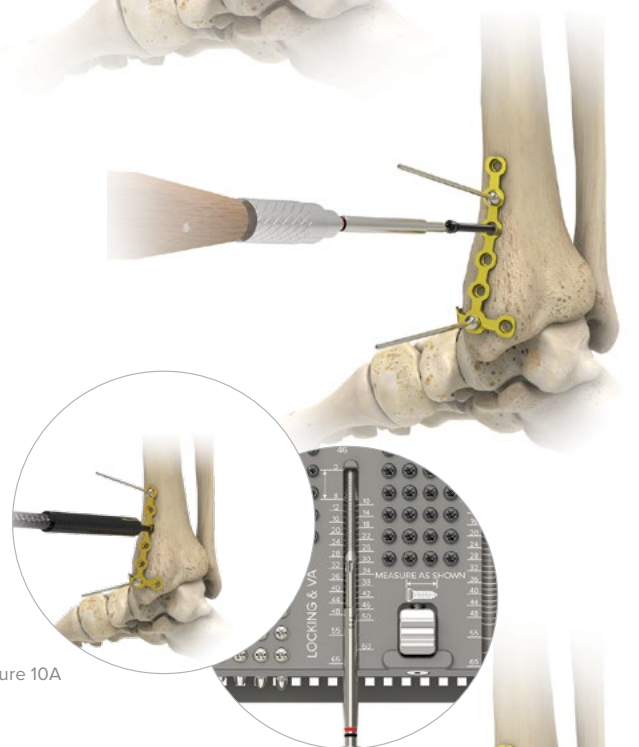


Figure 11

Figure 10A

Figure 10B



2.0 mm/2.7 mm Drill Guide (80-2516)



T8 Stick Fit Hexalobe Driver (80-0759)



2.0 mm Locking Drill Guide (80-2371)



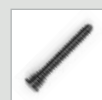
2.0 mm Quick Release Drill w/ Depth Marks (80-2378)



Cannulated Quick Release Driver Handle, Medium (80-2364)



2.7 mm Nonlocking Hexalobe Screw, 8–60 mm lengths (30-XXXX)



2.7 mm Locking Hexalobe Screw, 8–60 mm lengths (30-XXXX)



Depth Gauge (80-2496)

Variable Angle Screw Surgical Technique

Figure 13



1 Place Variable Angle Drill Guide

To insert a 2.7 mm Variable Angle Hexalobe Screw (3013-27XXX) off axis, insert the cone-shaped side of the 2.0 mm Variable Angle (VA) Drill Guide (80-2221) (Figure 13) or thread the 2.0 mm Threaded VA Drill Guide (80-2706) with the Threaded VA Drill Guide Driver (80-2708) into the desired plate hole (figures 14A and 14B).

To insert a 3.5 mm Variable Angle Hexalobe Screw (3013-35XXX) off axis, insert the cone-shaped side of the 2.8 mm Variable Angle (VA) Drill Guide (80-2148) or thread the 2.8 mm Threaded VA Drill Guide (80-2707) with the Threaded VA Drill Guide Driver (80-2708) into the desired plate hole.

Caution: The 2.0 mm VA drill guide and 2.8 mm VA drill guide do not lock into the plate. To ensure the variable angle screws are installed as intended, the drill guide must be aligned with the axis of the screw hole.

Note: 3.5 mm Variable Angle screws may not be placed in 2.7 mm Fragment Plates. 3.5 mm instructions are for variable angle compatible plate reference only.

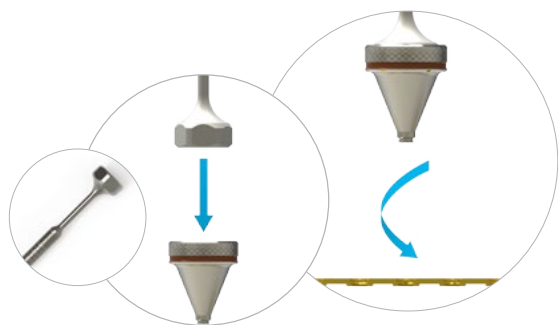


Figure 14A

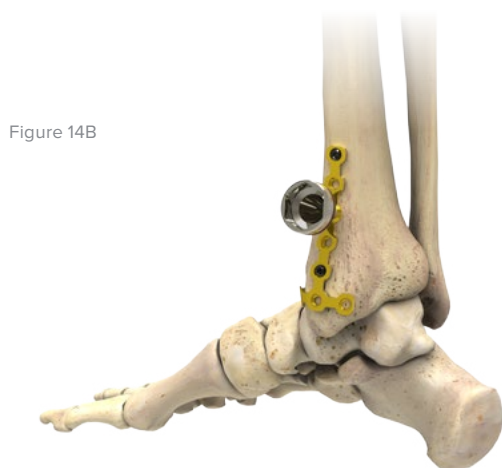


Figure 14B



2.0 mm Variable Angle (VA) Drill Guide (80-2221)



2.0 mm Threaded VA Drill Guide (80-2706)



2.8 mm Variable Angle (VA) Drill Guide (80-2148)



2.8 mm Threaded VA Drill Guide (80-2707)



Threaded VA Drill Guide Driver (80-2708)

Variable Angle Screw Surgical Technique [continued]

2 Drill

For 2.7 mm variable angle hexalobe screws, drill through the selected 2.0 mm VA Drill Guide with the 2.0 mm Quick Release Drill w/ Depth Marks (80-2378) (figures 15 and 16).

For 3.5 mm variable angle hexalobe screws, drill through the selected 2.8 mm VA Drill Guide with the 2.8 mm Quick Release Drill w/ Depth Marks (80-2379).

Use fluoroscopy to ensure the desired angle and depth have been achieved.

Caution: Avoid excessive re-drilling, particularly in poor quality bone, to prevent weakening of the screw-to-bone interface.

Warning: Excessive bending or contact with implants during use may cause the drill to be damaged or broken.

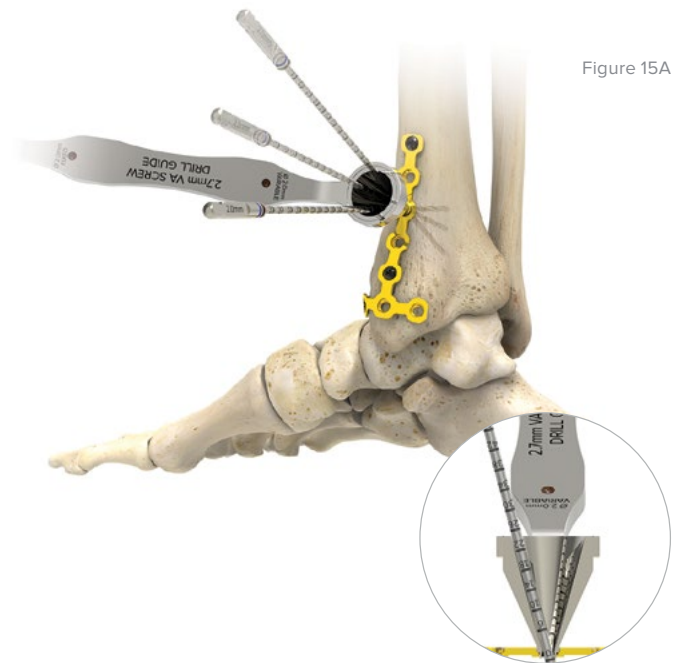


Figure 15A

Figure 15B

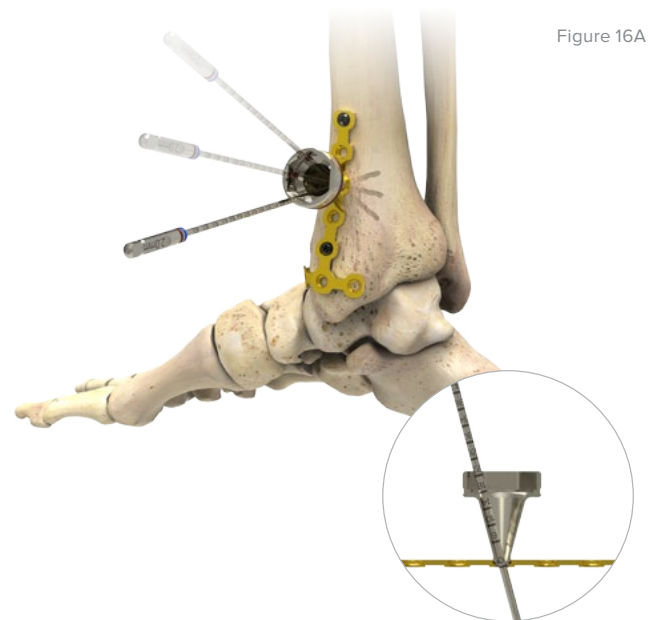


Figure 16A

Figure 16B



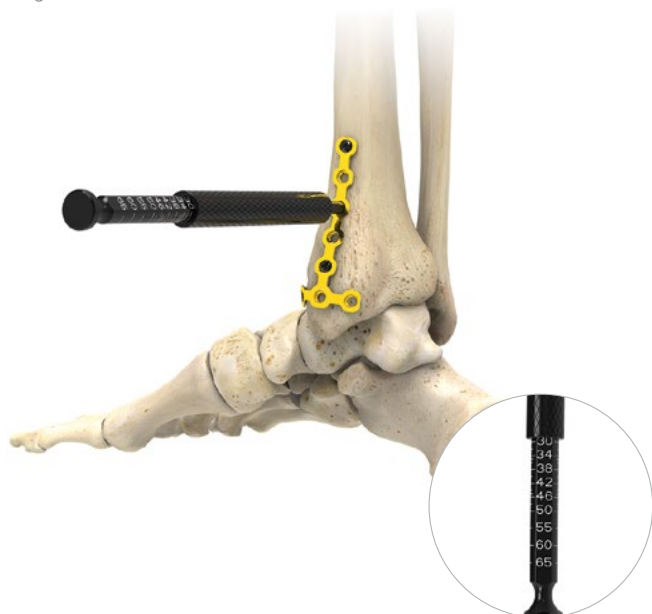
2.0 mm
Quick Release Drill
w/ Depth Marks
(80-2378)



2.8 mm
Quick Release Drill
w/ Depth Marks
(80-2379)

Variable Angle Screw Surgical Technique [continued]

Figure 17A



3 Measure Screw Length

Use the Depth Gauge (80-2496) to measure through the drilled hole to determine the correct length of screw.

Note: The cone side of the VA drill guides may not be used to determine screw length.

Figure 17B



Depth Gauge
(80-2496)

Variable Angle Screw Surgical Technique [continued]

4 Insert Variable Angle Screw

Note: Final tightening of the 2.7 mm and 3.5 mm variable angle hexalobe screws must be done manually and not under power. The Torque Limiting Quick Connect ensures a consistent insertion torque to provide a uniform screw-plate interface and may prevent overtightening of the screw. See below for the torque limit for each screw.

To insert a 2.7 mm variable angle hexalobe screw, assemble the 1.70 N·m Torque Limiting Quick Connect (80-2366) to the Handle for Torque Limiting Quick Connect (80-2368). Connect the T8 Stick Fit Hexalobe Driver (80-0759) to the Torque Limiting Quick Connect assembly.

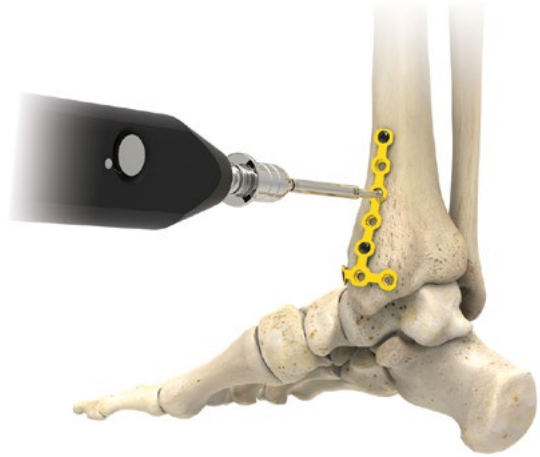
To insert a 3.5 mm variable angle hexalobe screw, assemble the 2.26 N·m Torque Limiting Quick Connect (80-2367) to the Handle for Torque Limiting Quick Connect (80-2368). Connect the T15 Stick Fit Hexalobe Driver (80-0760) to the Torque Limiting Quick Connect assembly.

Advance the screw by hand until achieving an audible click and/or tactile feedback. Final tightening should be completed with the Torque Limiting Handle, which is designed to provide a secure lock between the plate and screw. Upon final seating, confirm proper screw placement and screw length under fluoroscopy.

Note: Do not use a Torque Limiting Quick Connect for screw removal.

Caution: Use the maximum number of screws based on the indication to reduce the risk of screw breakage during healing.

Figure 18



Screw	Torque Limit	Color Band
2.7 mm Variable Angle Hexalobe Screw (3013-27XXX)	1.70 N·m	Brown
3.5 mm Variable Angle Hexalobe Screw (3013-35XXX)	2.26 N·m	Black



Handle for Torque Limiting Quick Connect (80-2368)



T8 Stick Fit Hexalobe Driver (80-0759)



T15 Stick Fit Hexalobe Driver (80-0760)



2.7 mm Variable Angle Hexalobe Screw, 10–60 mm lengths (3013-27XXX)



3.5 mm Variable Angle Hexalobe Screw, 10–65 mm lengths (3013-35XXX)



1.70 N·m Torque Limiting Quick Connect (80-2366)



2.26 N·m Torque Limiting Quick Connect (80-2367)

Ordering Information

Tray Components

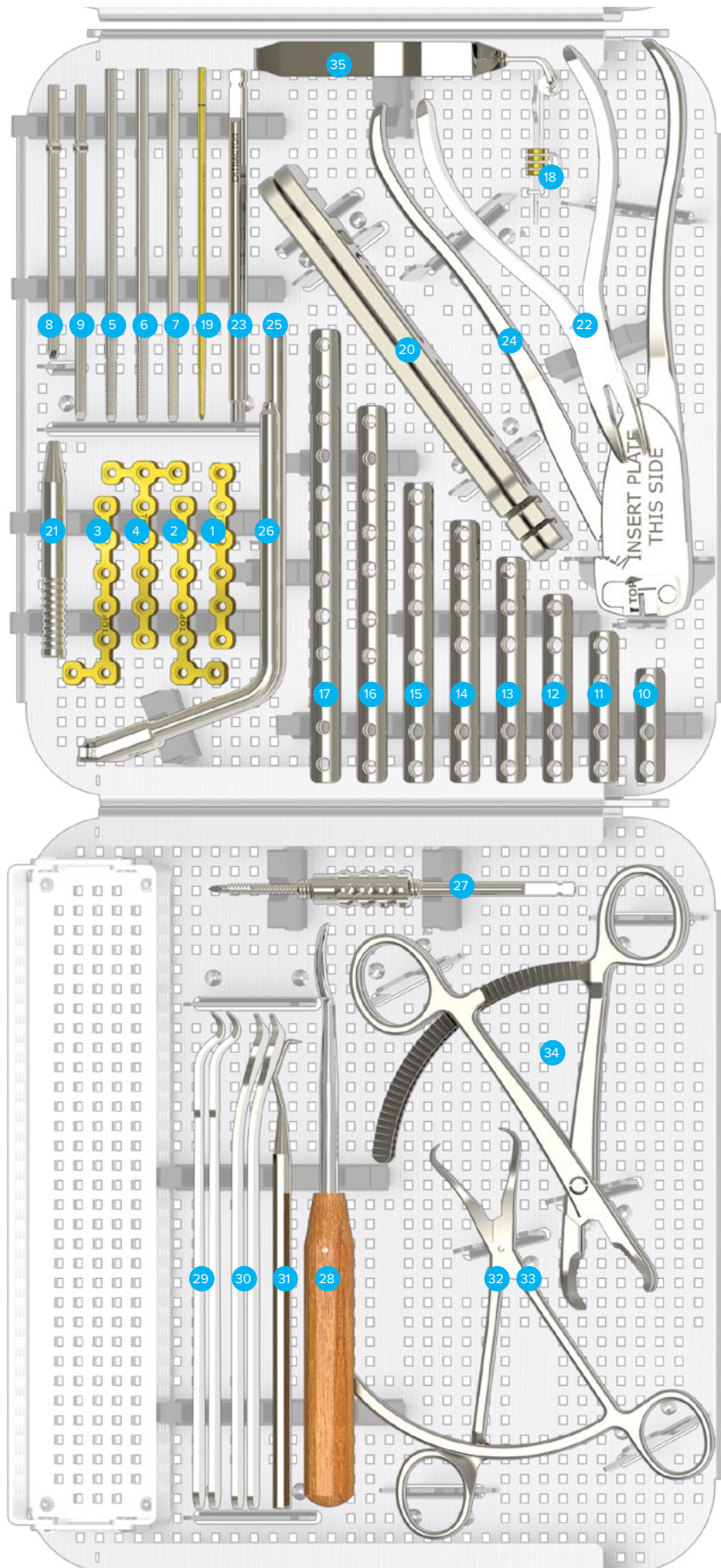
Implants*

1	Fragment Plate 2.7 mm	7010-0106N	10	One-Third Tubular Plate 3-Hole	7008-0103
2	L Fragment Plate 2.7 mm Left	7010-0107L	11	One-Third Tubular Plate 4-Hole	7008-0104
3	L Fragment Plate 2.7 mm Right	7010-0107R	12	One-Third Tubular Plate 5-Hole	7008-0105
4	T Fragment Plate 2.7 mm	7010-0108N	13	One-Third Tubular Plate 6-Hole	7008-0106
5	20 mm AcuTwist® Acutrak Compression Screw	AI-0020	14	One-Third Tubular Plate 7-Hole	7008-0107
6	26 mm AcuTwist® Acutrak Compression Screw	AI-0026	15	One-Third Tubular Plate 8-Hole	7008-0108
7	30 mm AcuTwist® Acutrak Compression Screw	AI-0030	16	One-Third Tubular Plate 10-Hole	7008-0110
8	70.0 mm Tension Band Pin (1.6 mm diameter)	30-0098	17	One-Third Tubular Plate 12-Hole	7008-0112
9	90.0 mm Tension Band Pin	30-0099	18	Cannulated Screw Washer 7.0 mm OD x 3.6 mm ID	7003-07036

Instruments

19	30 mm AcuTwist® Acutrak® Tap	AI-NG30	28	Periosteal Elevator	MS-46212
20	Plate Bender, Large	PL-2045	29	8 mm Hohman Retractor	PL-CL05
21	Tension Band Pin Snapper	80-0411	30	15 mm Hohman Retractor	MS-46827
22	Needle Nose Pliers, 5.5	MS-48245	31	Sharp Hook	PL-CL06
23	AcuTwist® Acutrak® Compression Screw Extractor	AI-EX20	32	Pointed Forceps w/ Ratchet, Wide Long	80-2375
24	Fragment Plate Cutter	80-2380	33	Pointed Forceps w/ Ratchet, Narrow Long	80-2376
25	Fragment Plate Bender, Long	80-2381	34	Reduction Forceps w/ Ratchet, Long	80-2377
26	Fragment Plate Bender, Short	80-2382	35	Large Screw Holding Forceps	MS-45210
27	Polarus® 3 Reduction Device	80-1601			

*Implants and screws are also available sterile-packed. Add an “-S” at end of product number for sterile product. For more details on sterile products, including pricing, contact our Business Services Department toll free at 888.627.9957.



Ordering Information [continued]

Tray Components

Instruments

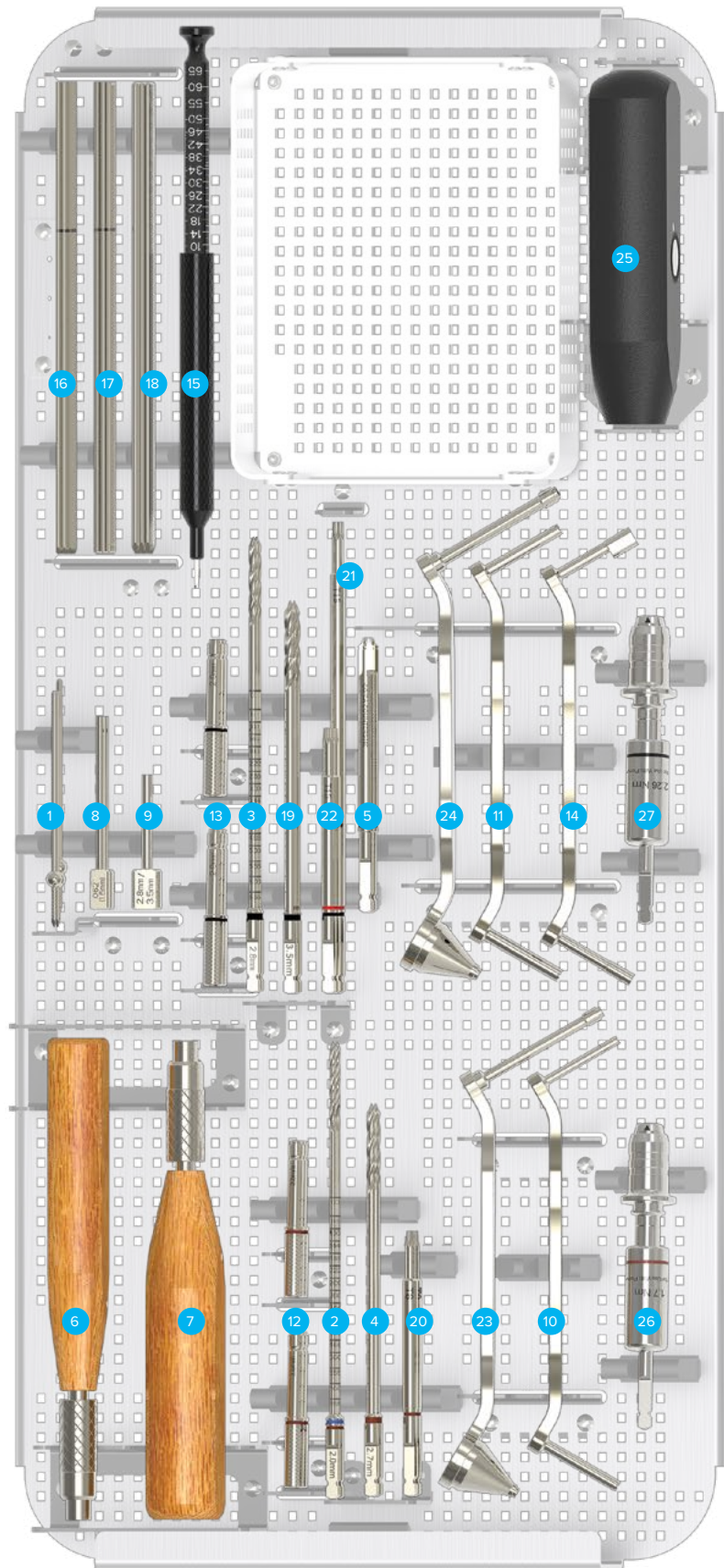
1	.062" x 3" Plate Tack, Threaded	80-2430	15	Depth Gauge	80-2496
2	2.0 mm Quick Release Drill w/ Depth Marks	80-2378	16	.045" x 6" ST Guide Wire	WS-1106ST
3	2.8 mm Quick Release Drill w/ Depth Marks	80-2379	17	.062" x 6" ST Guide Wire	WS-1607ST
4	2.7 mm Quick Release Drill, Lag	80-2502	18	2.0 mm x 6" ST Guide Wire	35-0015
5	CO/CA Countersink	PL-2080	19	3.5 mm Quick Release Drill, Lag	80-2503
6	Cannulated Quick Release Driver Handle, Medium	80-2364	20	T8 Stick Fit Hexalobe Driver	80-0759
7	Cannulated Quick Release Driver Handle, Large	80-2365	21	T15 6 in Long Stick Fit Hexalobe Driver	80-1065
8	1.6 mm Wire Sleeve	80-2369	22	T15 Stick Fit Hexalobe Driver	80-0760
9	3.5 mm/2.8 mm Insert Drill Sleeve	80-2370	23	2.0 mm Variable Angle Drill Guide	80-2221
10	2.0 mm/2.7 mm Drill Guide	80-2516	24	2.8 mm Variable Angle Drill Guide	80-2148
11	2.8 mm/3.5 mm Drill Guide	80-2517	25	Handle for Torque Limiting Quick Connect	80-2368
12	2.0 mm Locking Drill Guide	80-2371	26	1.70 N-m Torque Limiting Quick Connect	80-2366
13	2.8 mm Locking Drill Guide	80-2372	27	2.26 N-m Torque Limiting Quick Connect	80-2367
14	2.8 mm Compression Drill Guide	80-2373			

Optional Components

Can be placed in any utility bin within the Small Fragment Base Set

Instruments

2.0 mm Threaded VA Drill Guide	80-2706	Threaded VA Drill Guide Driver	80-2708
2.8 mm Threaded VA Drill Guide	80-2707		



Ordering Information [continued]

Screws			
1 2.7 mm Variable Angle Hexalobe Screws*		2 2.7 mm Locking Hexalobe Screws*	
2.7 mm x 10 mm Variable Angle Hexalobe Screw	3013-27010	2.7 mm x 8 mm Locking Hexalobe Screw	30-0324
2.7 mm x 12 mm Variable Angle Hexalobe Screw	3013-27012	2.7 mm x 10 mm Locking Hexalobe Screw	30-0325
2.7 mm x 14 mm Variable Angle Hexalobe Screw	3013-27014	2.7 mm x 12 mm Locking Hexalobe Screw	30-0326
2.7 mm x 16 mm Variable Angle Hexalobe Screw	3013-27016	2.7 mm x 14 mm Locking Hexalobe Screw	30-0327
2.7 mm x 18 mm Variable Angle Hexalobe Screw	3013-27018	2.7 mm x 16 mm Locking Hexalobe Screw	30-0328
2.7 mm x 20 mm Variable Angle Hexalobe Screw	3013-27020	2.7 mm x 18 mm Locking Hexalobe Screw	30-0329
2.7 mm x 22 mm Variable Angle Hexalobe Screw	3013-27022	2.7 mm x 20 mm Locking Hexalobe Screw	30-0330
2.7 mm x 24 mm Variable Angle Hexalobe Screw	3013-27024	2.7 mm x 22 mm Locking Hexalobe Screw	30-0331
2.7 mm x 26 mm Variable Angle Hexalobe Screw	3013-27026	2.7 mm x 24 mm Locking Hexalobe Screw	30-0332
2.7 mm x 28 mm Variable Angle Hexalobe Screw	3013-27028	2.7 mm x 26 mm Locking Hexalobe Screw	30-0333
2.7 mm x 30 mm Variable Angle Hexalobe Screw	3013-27030	2.7 mm x 28 mm Locking Hexalobe Screw	30-0334
2.7 mm x 32 mm Variable Angle Hexalobe Screw	3013-27032	2.7 mm x 30 mm Locking Hexalobe Screw	30-0335
2.7 mm x 34 mm Variable Angle Hexalobe Screw	3013-27034	2.7 mm x 32 mm Locking Hexalobe Screw	30-0336
2.7 mm x 36 mm Variable Angle Hexalobe Screw	3013-27036	2.7 mm x 34 mm Locking Hexalobe Screw	30-0337
2.7 mm x 38 mm Variable Angle Hexalobe Screw	3013-27038	2.7 mm x 36 mm Locking Hexalobe Screw	30-0338
2.7 mm x 40 mm Variable Angle Hexalobe Screw	3013-27040	2.7 mm x 38 mm Locking Hexalobe Screw	30-0339
2.7 mm x 42 mm Variable Angle Hexalobe Screw	3013-27042	2.7 mm x 40 mm Locking Hexalobe Screw	30-0340
2.7 mm x 44 mm Variable Angle Hexalobe Screw	3013-27044	2.7 mm x 42 mm Locking Hexalobe Screw	30-2842
2.7 mm x 46 mm Variable Angle Hexalobe Screw	3013-27046	2.7 mm x 44 mm Locking Hexalobe Screw	30-2844
2.7 mm x 48 mm Variable Angle Hexalobe Screw	3013-27048	2.7 mm x 46 mm Locking Hexalobe Screw	30-2846
2.7 mm x 50 mm Variable Angle Hexalobe Screw	3013-27050	2.7 mm x 48 mm Locking Hexalobe Screw	30-2848
2.7 mm x 55 mm Variable Angle Hexalobe Screw	3013-27055	2.7 mm x 50 mm Locking Hexalobe Screw	30-2850
2.7 mm x 60 mm Variable Angle Hexalobe Screw	3013-27060	2.7 mm x 55 mm Locking Hexalobe Screw	30-2855
		2.7 mm x 60 mm Locking Hexalobe Screw	30-2860

Ordering Information [continued]

Screws

3 2.7 mm Nonlocking Hexalobe Screws*

2.7 mm x 8 mm Nonlocking Hexalobe Screw	30-0343	2.7 mm x 32 mm Nonlocking Hexalobe Screw	30-0355
2.7 mm x 10 mm Nonlocking Hexalobe Screw	30-0344	2.7 mm x 34 mm Nonlocking Hexalobe Screw	30-0356
2.7 mm x 12 mm Nonlocking Hexalobe Screw	30-0345	2.7 mm x 36 mm Nonlocking Hexalobe Screw	30-0357
2.7 mm x 14 mm Nonlocking Hexalobe Screw	30-0346	2.7 mm x 38 mm Nonlocking Hexalobe Screw	30-0358
2.7 mm x 16 mm Nonlocking Hexalobe Screw	30-0347	2.7 mm x 40 mm Nonlocking Hexalobe Screw	30-0359
2.7 mm x 18 mm Nonlocking Hexalobe Screw	30-0348	2.7 mm x 42 mm Nonlocking Hexalobe Screw	30-2742
2.7 mm x 20 mm Nonlocking Hexalobe Screw	30-0349	2.7 mm x 44 mm Nonlocking Hexalobe Screw	30-2744
2.7 mm x 22 mm Nonlocking Hexalobe Screw	30-0350	2.7 mm x 46 mm Nonlocking Hexalobe Screw	30-2746
2.7 mm x 24 mm Nonlocking Hexalobe Screw	30-0351	2.7 mm x 48 mm Nonlocking Hexalobe Screw	30-2748
2.7 mm x 26 mm Nonlocking Hexalobe Screw	30-0352	2.7 mm x 50 mm Nonlocking Hexalobe Screw	30-0361
2.7 mm x 28 mm Nonlocking Hexalobe Screw	30-0353	2.7 mm x 55 mm Nonlocking Hexalobe Screw	30-0362
2.7 mm x 30 mm Nonlocking Hexalobe Screw	30-0354	2.7 mm x 60 mm Nonlocking Hexalobe Screw	30-0363

Ordering Information [continued]

Screws

4 3.5 mm Nonlocking Hexalobe Screws*

3.5 mm x 8 mm Nonlocking Hexalobe Screw	30-0255
3.5 mm x 10 mm Nonlocking Hexalobe Screw	30-0256
3.5 mm x 12 mm Nonlocking Hexalobe Screw	30-0257
3.5 mm x 14 mm Nonlocking Hexalobe Screw	30-0258
3.5 mm x 16 mm Nonlocking Hexalobe Screw	30-0259
3.5 mm x 18 mm Nonlocking Hexalobe Screw	30-0260
3.5 mm x 20 mm Nonlocking Hexalobe Screw	30-0261
3.5 mm x 22 mm Nonlocking Hexalobe Screw	30-0262
3.5 mm x 24 mm Nonlocking Hexalobe Screw	30-0263
3.5 mm x 26 mm Nonlocking Hexalobe Screw	30-0264
3.5 mm x 28 mm Nonlocking Hexalobe Screw	30-0265
3.5 mm x 30 mm Nonlocking Hexalobe Screw	30-0266
3.5 mm x 32 mm Nonlocking Hexalobe Screw	30-0267
3.5 mm x 34 mm Nonlocking Hexalobe Screw	30-0268
3.5 mm x 36 mm Nonlocking Hexalobe Screw	30-0269
3.5 mm x 38 mm Nonlocking Hexalobe Screw	30-0270
3.5 mm x 40 mm Nonlocking Hexalobe Screw	30-0271
3.5 mm x 42 mm Nonlocking Hexalobe Screw	30-3542
3.5 mm x 44 mm Nonlocking Hexalobe Screw	30-3544
3.5 mm x 46 mm Nonlocking Hexalobe Screw	30-3546
3.5 mm x 48 mm Nonlocking Hexalobe Screw	30-3548
3.5 mm x 50 mm Nonlocking Hexalobe Screw	30-0273
3.5 mm x 55 mm Nonlocking Hexalobe Screw	30-0274
3.5 mm x 60 mm Nonlocking Hexalobe Screw	30-0275
3.5 mm x 65 mm Nonlocking Hexalobe Screw	30-0276

5 3.5 mm Locking Hexalobe Screws*

3.5 mm x 8 mm Locking Hexalobe Screw	30-0232
3.5 mm x 10 mm Locking Hexalobe Screw	30-0233
3.5 mm x 12 mm Locking Hexalobe Screw	30-0234
3.5 mm x 14 mm Locking Hexalobe Screw	30-0235
3.5 mm x 16 mm Locking Hexalobe Screw	30-0236
3.5 mm x 18 mm Locking Hexalobe Screw	30-0237
3.5 mm x 20 mm Locking Hexalobe Screw	30-0238
3.5 mm x 22 mm Locking Hexalobe Screw	30-0239
3.5 mm x 24 mm Locking Hexalobe Screw	30-0240
3.5 mm x 26 mm Locking Hexalobe Screw	30-0241
3.5 mm x 28 mm Locking Hexalobe Screw	30-0242
3.5 mm x 30 mm Locking Hexalobe Screw	30-0243
3.5 mm x 32 mm Locking Hexalobe Screw	30-0244
3.5 mm x 34 mm Locking Hexalobe Screw	30-0245
3.5 mm x 36 mm Locking Hexalobe Screw	30-0246
3.5 mm x 38 mm Locking Hexalobe Screw	30-0247
3.5 mm x 40 mm Locking Hexalobe Screw	30-0248
3.5 mm x 42 mm Locking Hexalobe Screw	30-3642
3.5 mm x 44 mm Locking Hexalobe Screw	30-3644
3.5 mm x 46 mm Locking Hexalobe Screw	30-3646
3.5 mm x 48 mm Locking Hexalobe Screw	30-3648
3.5 mm x 50 mm Locking Hexalobe Screw	30-0250
3.5 mm x 55 mm Locking Hexalobe Screw	30-0251
3.5 mm x 60 mm Locking Hexalobe Screw	30-0252
3.5 mm x 65 mm Locking Hexalobe Screw	30-0253

Ordering Information [continued]

Screws

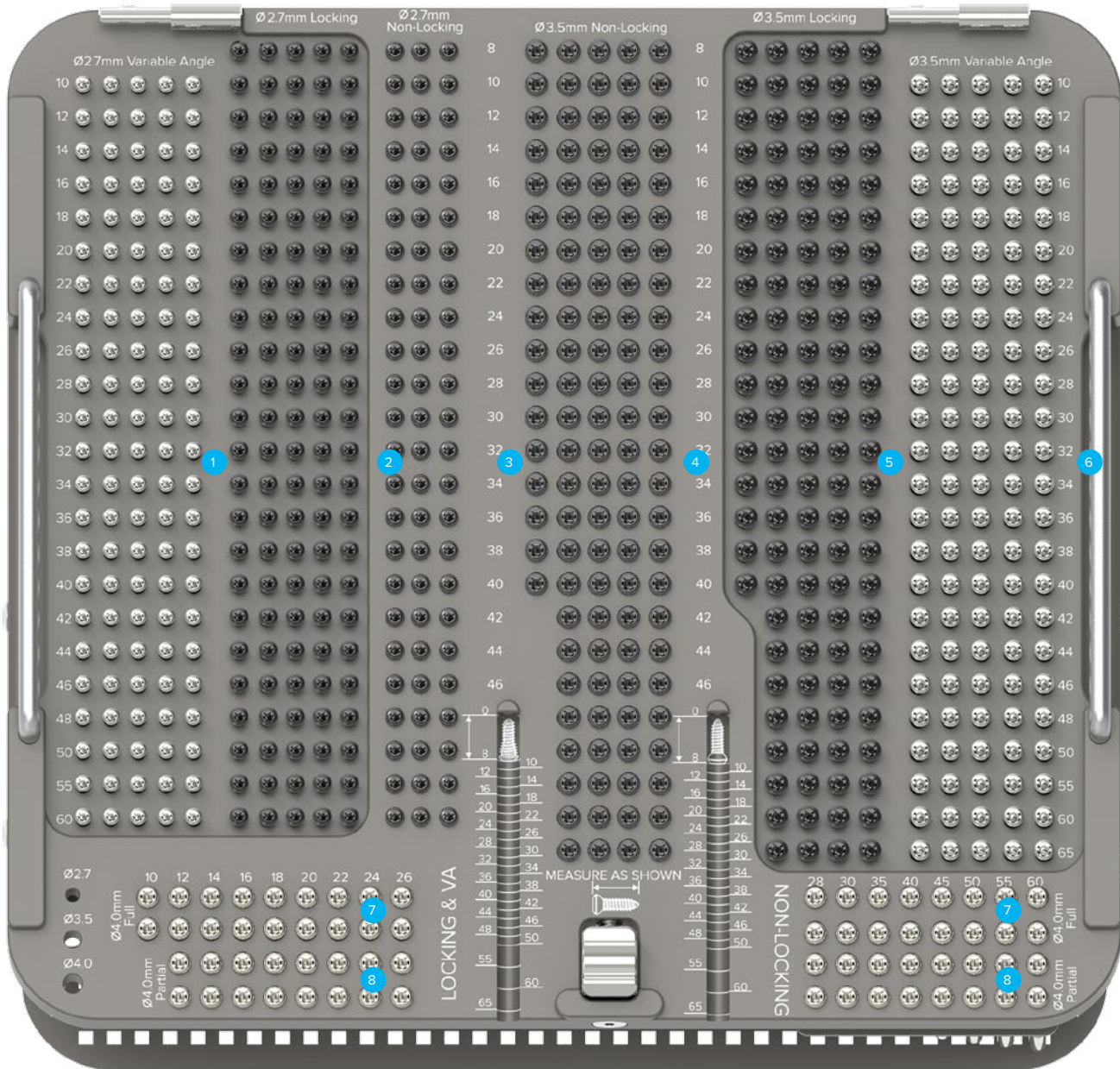
6 3.5 mm Variable Angle Hexalobe Screws*

3.5 mm x 10 mm Variable Angle Hexalobe Screw	3013-35010	3.5 mm x 34 mm Variable Angle Hexalobe Screw	3013-35034
3.5 mm x 12 mm Variable Angle Hexalobe Screw	3013-35012	3.5 mm x 36 mm Variable Angle Hexalobe Screw	3013-35036
3.5 mm x 14 mm Variable Angle Hexalobe Screw	3013-35014	3.5 mm x 38 mm Variable Angle Hexalobe Screw	3013-35038
3.5 mm x 16 mm Variable Angle Hexalobe Screw	3013-35016	3.5 mm x 40 mm Variable Angle Hexalobe Screw	3013-35040
3.5 mm x 18 mm Variable Angle Hexalobe Screw	3013-35018	3.5 mm x 42 mm Variable Angle Hexalobe Screw	3013-35042
3.5 mm x 20 mm Variable Angle Hexalobe Screw	3013-35020	3.5 mm x 44 mm Variable Angle Hexalobe Screw	3013-35044
3.5 mm x 22 mm Variable Angle Hexalobe Screw	3013-35022	3.5 mm x 46 mm Variable Angle Hexalobe Screw	3013-35046
3.5 mm x 24 mm Variable Angle Hexalobe Screw	3013-35024	3.5 mm x 48 mm Variable Angle Hexalobe Screw	3013-35048
3.5 mm x 26 mm Variable Angle Hexalobe Screw	3013-35026	3.5 mm x 50 mm Variable Angle Hexalobe Screw	3013-35050
3.5 mm x 28 mm Variable Angle Hexalobe Screw	3013-35028	3.5 mm x 55 mm Variable Angle Hexalobe Screw	3013-35055
3.5 mm x 30 mm Variable Angle Hexalobe Screw	3013-35030	3.5 mm x 60 mm Variable Angle Hexalobe Screw	3013-35060
3.5 mm x 32 mm Variable Angle Hexalobe Screw	3013-35032	3.5 mm x 65 mm Variable Angle Hexalobe Screw	3013-35065

Ordering Information [continued]

Screws			
7 4.0 mm Fully Threaded Cancellous Hexalobe Screws*		8 4.0 Partially Threaded Cancellous Hexalobe Screws*	
4.0 mm x 10 mm Cancellous Hexalobe Screw	3015-40010	4.0 mm x 12 mm PT Cancellous Hexalobe Screw	3016-40012
4.0 mm x 12 mm Cancellous Hexalobe Screw	3015-40012	4.0 mm x 14 mm PT Cancellous Hexalobe Screw	3016-40014
4.0 mm x 14 mm Cancellous Hexalobe Screw	3015-40014	4.0 mm x 16 mm PT Cancellous Hexalobe Screw	3016-40016
4.0 mm x 16 mm Cancellous Hexalobe Screw	3015-40016	4.0 mm x 18 mm PT Cancellous Hexalobe Screw	3016-40018
4.0 mm x 18 mm Cancellous Hexalobe Screw	3015-40018	4.0 mm x 20 mm PT Cancellous Hexalobe Screw	3016-40020
4.0 mm x 20 mm Cancellous Hexalobe Screw	3015-40020	4.0 mm x 22 mm PT Cancellous Hexalobe Screw	3016-40022
4.0 mm x 22 mm Cancellous Hexalobe Screw	3015-40022	4.0 mm x 24 mm PT Cancellous Hexalobe Screw	3016-40024
4.0 mm x 24 mm Cancellous Hexalobe Screw	3015-40024	4.0 mm x 26 mm PT Cancellous Hexalobe Screw	3016-40026
4.0 mm x 26 mm Cancellous Hexalobe Screw	3015-40026	4.0 mm x 28 mm PT Cancellous Hexalobe Screw	3016-40028
4.0 mm x 28 mm Cancellous Hexalobe Screw	3015-40028	4.0 mm x 30 mm PT Cancellous Hexalobe Screw	3016-40030
4.0 mm x 30 mm Cancellous Hexalobe Screw	3015-40030	4.0 mm x 35 mm PT Cancellous Hexalobe Screw	3016-40035
4.0 mm x 35 mm Cancellous Hexalobe Screw	3015-40035	4.0 mm x 40 mm PT Cancellous Hexalobe Screw	3016-40040
4.0 mm x 40 mm Cancellous Hexalobe Screw	3015-40040	4.0 mm x 45 mm PT Cancellous Hexalobe Screw	3016-40045
4.0 mm x 45 mm Cancellous Hexalobe Screw	3015-40045	4.0 mm x 50 mm PT Cancellous Hexalobe Screw	3016-40050
4.0 mm x 50 mm Cancellous Hexalobe Screw	3015-40050	4.0 mm x 55 mm PT Cancellous Hexalobe Screw	3016-40055
4.0 mm x 55 mm Cancellous Hexalobe Screw	3015-40055	4.0 mm x 60 mm PT Cancellous Hexalobe Screw	3016-40060
4.0 mm x 60 mm Cancellous Hexalobe Screw	3015-40060		

*Implants and screws are also available sterile-packed. Add an “-S” at end of product number for sterile product. For more details on sterile products, including pricing, contact our Business Services Department toll free at 888.627.9957.



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