



Mini Compress® Compliant
Pre-stress Device

Surgical Technique

for use with the
Comprehensive® Segmental
Revision System

BIOMET®

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The science and art of medical care is to provide the right solution for each individual patient. This requires clinical mastery, a human connection between the surgeon and the patient, and the right tools for each situation.

At Biomet, we strive to view our work through the eyes of one surgeon and one patient. We treat every solution we provide as if it's meant for a family member.

Our approach to innovation creates real solutions that assist each surgeon in the delivery of durable personalized care to each patient, whether that solution requires a minimally invasive surgical technique, advanced biomaterials, or a patient-matched implant.

When one surgeon connects with one patient to provide personalized care, the promise of medicine is fulfilled.

Mini Compress® Device

Contents

Description 2

Indications 2

Resection 3

No Face Adapter Trial Construct 3

Canal Preparation.....4-7

Anchor Plug 8-17

Transverse Pins 17-29

Spindle 29-35

Centering Sleeve/Spindle..... 36-38

Spindle 39-49

Compress® Post Operative Treatment..... 50

Ordering Information..... 51-63

Mini Compress® Device

Description

The Compress® Device was developed as an alternative mode for fixating a segmental construct to host bone, while creating a stable bone-prosthesis interface. Unlike a stemmed construct, the Compress® was designed to prevent bone resorption by allowing stress sharing via the implant and the bone while providing a motion free environment suitable for biologic fixation.

The system is available in two different anchor plug/spindle options: the Short Compress® that requires 46 mm of medullary placement (particularly advantageous for bone loss) and the standard Compress® that requires 90 mm of medullary placement. The system also contains the following spindle diameters for the Short and Standard offerings: 25 mm, 30 mm, 38 mm, 44 mm and 49 mm x 37 mm Elliptical. The following surgical technique will display the Standard 90 mm Anchor Plug and 38 mm Standard Spindle.

Indications

The Compress® Segmental Humeral Replacement System is indicated for:

1. Correction or revision of unsuccessful osteotomy, arthrodesis, or previous joint replacement.
2. Tumor resections.
3. Revision of previously failed total joint arthroplasty.
4. Trauma.

The Compress® Segmental Humeral Replacement System components are intended for uncemented use.

The Discovery Elbow components and Nexel® Elbow Components when used in conjunction with the Compress® Segmental Humeral Replacement System are restricted to the Compress® Segmental Humeral Replacement System indications and are intended to be inserted with bone cement.

The Modular Hybrid® Glenoid when used in conjunction with the Compress® Segmental Humeral Replacement System is restricted to the Compress® Segmental Humeral

Replacement System indications and is intended to be used with bone cement. The optional porous titanium peg may be inserted without bone cement. The optional polyethylene peg should be inserted with bone cement.

For complete information on indications, contraindications, warnings and potential adverse effects, please see the package insert and patient risk information at www.Biomet.com.

Contraindications

1. Active infection.
2. Patients with mental or neurologic conditions who are unwilling or incapable of following postoperative care instructions.
3. Patient conditions including vascular insufficiency, insufficient quantity of cortical thickness (see table below), insufficient quality of bone, or latent infections.

Cortical Thickness* (mm)	Anchor Plug**	Force Level
2.5–3.9	5 Hole Anchor Plug	400
4.0–5.4	5 Hole Anchor Plug	600
5.5 and above	5 Hole Anchor Plug	800

*Cortical thickness should not exceed range anywhere between the anchor plug and the interface

**Any cortical defect between the anchor plug and interface is a contradiction for this system.

4. Pathologic soft tissue conditions or skeletal conditions, which would prevent secure fixation of the device in the bone.

The Compress® Segmental Humeral Replacement System has not been evaluated for safety and compatibility in the MR environment. The Compress® Segmental Humeral Replacement System has not been tested for heating or migration in the MR environment.

The Comprehensive® Segmental Humeral Replacement System, when used in conjunction with the Compress® Segmental Humeral Replacement System, has not been evaluated for safety and compatibility in the MR environment, nor tested for heating or migration in the MR environment.



Figure 1



Figure 2



Figure 3

Resection

Achieve the humeral resection through a freehand transverse cut.

Make a resection mark and a rotational alignment mark with a cautery device or methylene blue (Figure 1).

Using a transverse cut, resect the humerus at the reference resection mark (Figure 2).

No Face Adapter Trial Construct

It is recommended, following the transverse resection, that the 5 cm No Face Adapter Trial (located in the Mini Compress® General Instrument Tray) be attached to Segmental Trials in order to ascertain some semblance of the construct length (Figure 3). This is suggested at the onset of the surgery because once the holes for the Transverse Pins are drilled and the Anchor Plug is secure within the canal, no additional bone may be resected without dramatically altering the original replacement length.

Mini Compress® Device



Figure 4



Figure 5

Canal Preparation

Triple Reamer Method

Prepare the humeral canal for implant insertion by using the Compress® Triple Reamers (Figure 4).

When used in conjunction with the modular planers, the Triple Reamers are preset to a reaming depth of 90 mm for the standard anchor plug and spindle and 45 mm for the short anchor plug and spindle (90 mm reamers are illustrated above) and prepare for both the Anchor Plug and Centering Sleeve diameters (Figure 5). This allows the femoral osteotomy site to be perpendicular to the longitudinal axis of the humeral shaft.



Figure 6

After a starter reamer has opened the canal, the Triple Reamers are used sequentially with gentle force against the humeral osteotomy site, until cortical contact with the humeral diaphysis is achieved (Figure 6).

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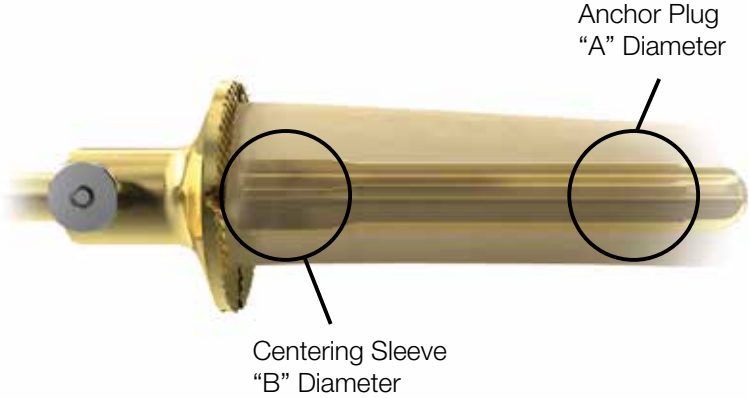


Figure 7

Canal Preparation (cont.)

The "A" diameter of the final Triple Reamer will determine the Anchor Plug size and the "B" diameter will determine the Centering Sleeve size (Figure 7).

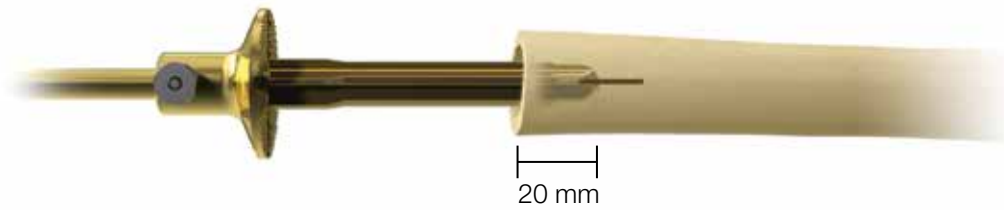


Figure 8

Note: If the Triple Reamer provides cortical contact for the Anchor Plug, but not the Centering Sleeve, reintroduce sequential Triple Reamers to a depth of 20 mm at the resection level until cortical contact is achieved (Figure 8). Refer to the Triple Reamer Table for the appropriate Anchor Plug and Centering Sleeve diameters.

Triple Reamer Table

Size	Diameters		Use Anchor Plug Diameter	Use Centering Sleeve Diameter
	"A" (mm)	"B" (mm)		
10-12	10	12	10	*
11-13	11	13	10	13
12-14	12	14	12	14
13-15	13	15	12	15
14-16	14	16	14	16
15-17	15	17	14	17
16-18	16	18	16	18
17-19	17	19	16	19
18-20	18	20	18	20
19-21	19	21	18	21
20-22	20	22	20	22
21-23	21	23	20	23
22-24	22	24	22	24

*The diameter of the spindle shaft is 12 mm, no centering sleeve necessary

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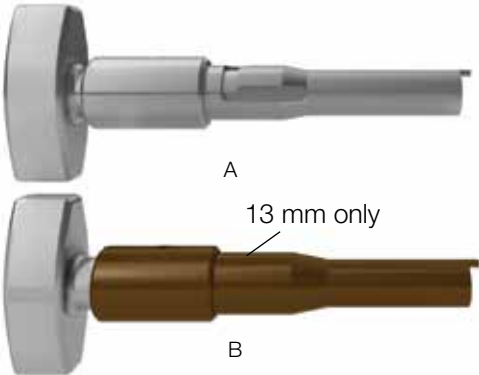


Figure 9



Figure 10

Anchor Plug

Instrumentation Assembly

Important: There are two distinct Anchor Plug Holders in the Compress® instrumentation. The first (Figure 9A) is used without a Centering Sleeve Trial when the final reamer at the resection level is 12 mm. It is also used with Centering Sleeve Trials when the final reamer measures 14 mm through 28 mm.

The second Anchor Plug Holder (Figure 9B) is used only when the final reamer at the resection level measures 13 mm. This 13 mm Anchor Plug Holder is used without a Centering Sleeve Trial.

Slide the Anchor Plug Holder through the Cross Bar (Figure 10).

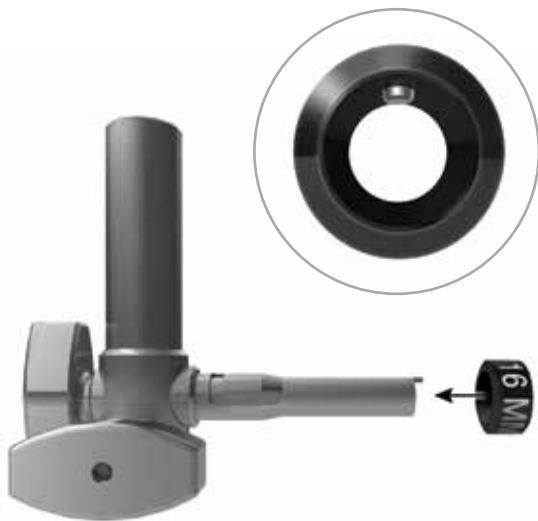


Figure 11



Figure 12

Slide the Centering Sleeve Provisional (based on the final reamer diameter B in the “Canal Preparation” step) onto the Anchor Plug Holder, making sure to align the exposed metal nub inside the provisional with the female keyway located on the holder. When the Provisional meets the Cross Bar, lock it into place with a clockwise turning motion (Figures 11 and 12). Confirm that the Centering Sleeve Provisional fits snugly within the canal at the osteotomy site.

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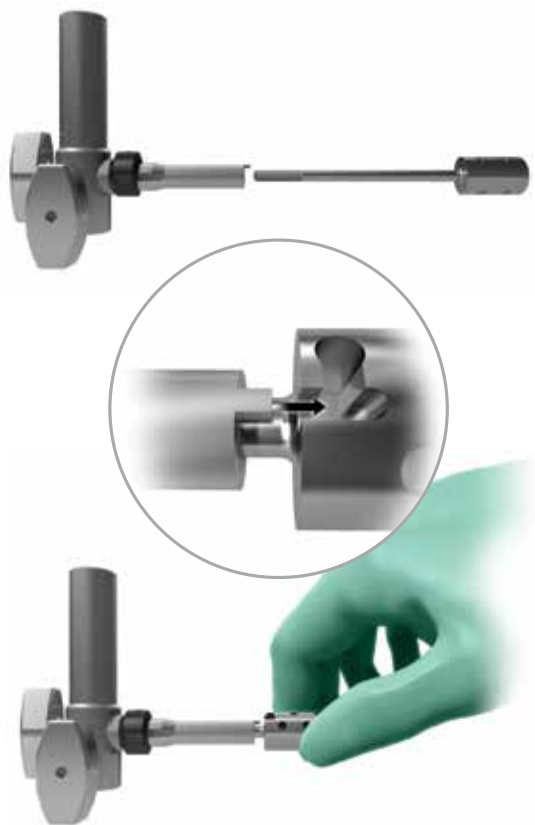


Figure 13



Figure 14

Anchor Plug (cont.)

Slide the Anchor Plug implant (based on the final reamer diameter A in the “Canal Preparation” step) into the Anchor Plug Holder, making sure that the male tab of the holder fits into the female tab of the Anchor Plug head (Figure 13). Tighten into position with a clockwise motion of the Anchor Plug Holder knob (Figure 14).

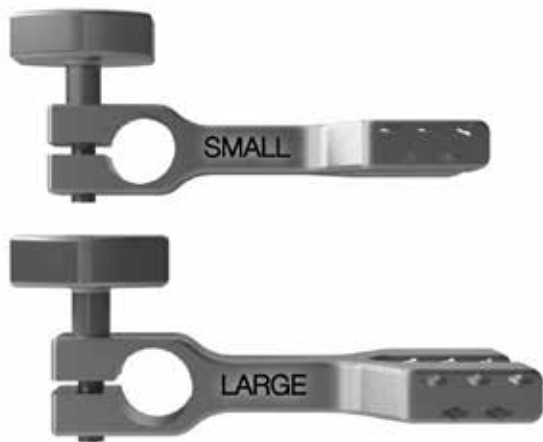


Figure 15

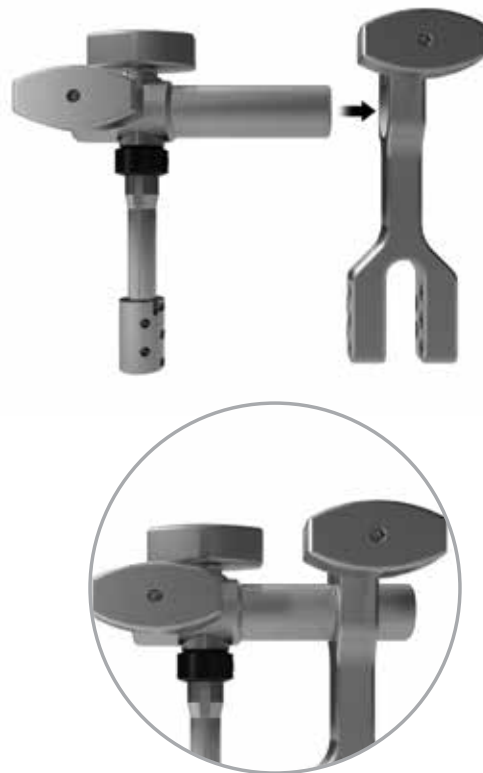


Figure 16

Instrumentation Assembly

Choose the appropriate Drill Guide (Figure 15) to match the selected Anchor Plug.

Note: Small Drill Guide is used with 10 mm – 12 mm Anchor Plugs (Short and Standard) and the Large Drill Guide is used with 14 mm – 24 mm Standard Anchor Plugs as well as the 14 mm – 28 mm Short Anchor Plugs.

Place the Cross Bar through the Drill Guide (Figure 16).

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Figure 17



Figure 18

Anchor Plug (cont.)

Instrumentation Assembly Alignment

Note: All three Drill Bits and the Pin Inserter are packaged with each Anchor Plug.

Align the Drill guide with the Anchor Plug by placing one of the Short Drill Bits through the far upper right hole of both the Anchor Plug and the Drill Guide (Figure 17).

Place the other Short Drill Bit through the far upper left hole of both the Anchor Plug and Drill Guide (Figure 18).



Figure 19

The Long Drill Bit is positioned through either of the two lower holes in the Anchor Plug and Drill Guide (Figure 19).

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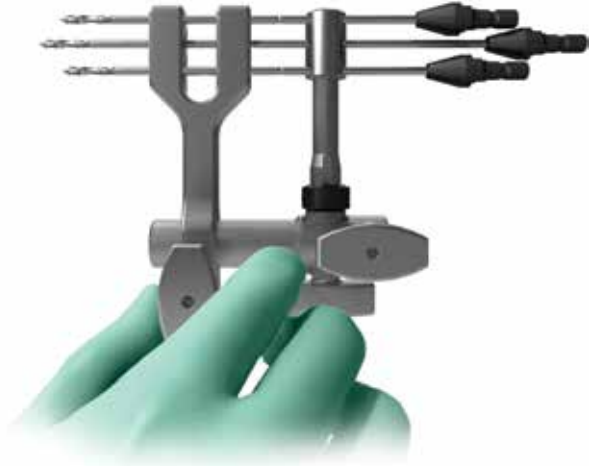


Figure 20

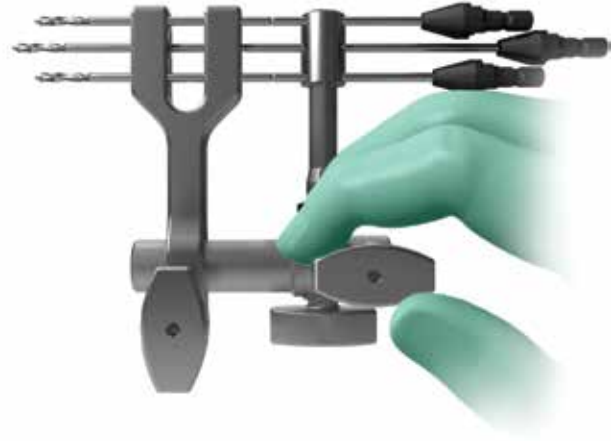


Figure 21

Anchor Plug (cont.)

Once the Drill Bits are in place, minimize the lateral distance between the Drill Guide and the Anchor Plug to optimize targeting once the Anchor Plug is inserted into the bone (Figure 20). Alternately tighten both Adjustment Knobs located on top with a clockwise motion until snug (Figure 21).

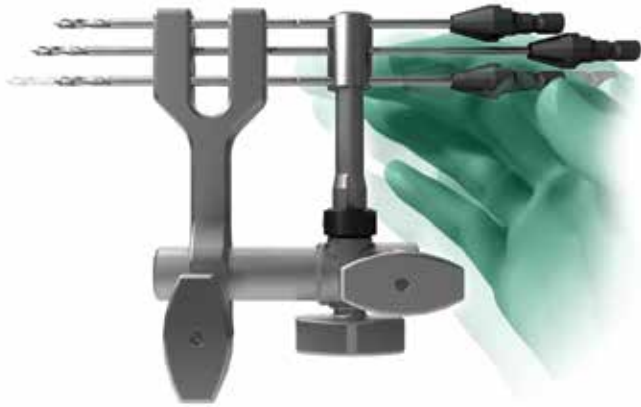


Figure 22

When the knobs are tight, all three Drill Bits should slide freely through the alignment holes (Figure 22).

Note: If the Drill Bits do not slide freely, loosen the top two adjustment knobs and begin the tightening process again.

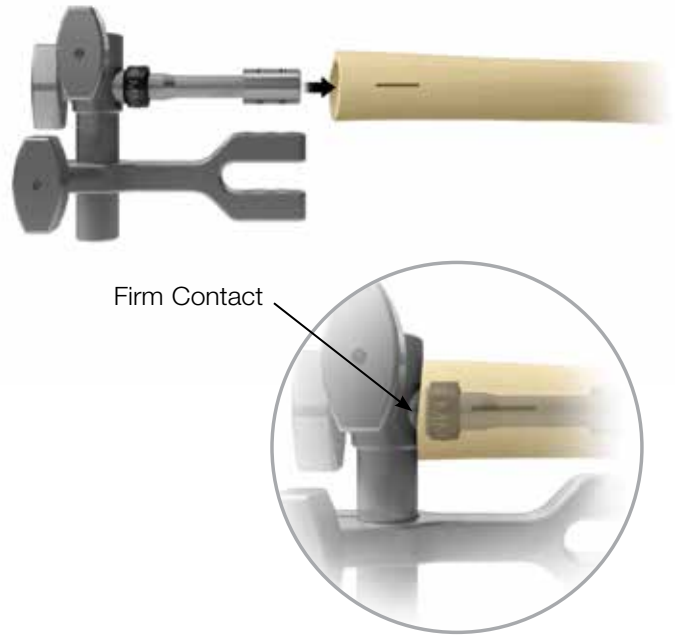


Figure 23

Anchor Plug Implantation

With the Drill Guide properly aligned with the Anchor Plug, remove the three Drill Bits and position the Anchor Plug into the humeral canal. Make certain that the Cross Bar is in firm and even contact with the humeral osteotomy site and that the centering sleeve provisional is snug within the canal (Figure 23). Placement of the Anchor Plug within the medullary canal is non-directional; location is typically dictated by the best exposure and ease of access to the Drill Guide.

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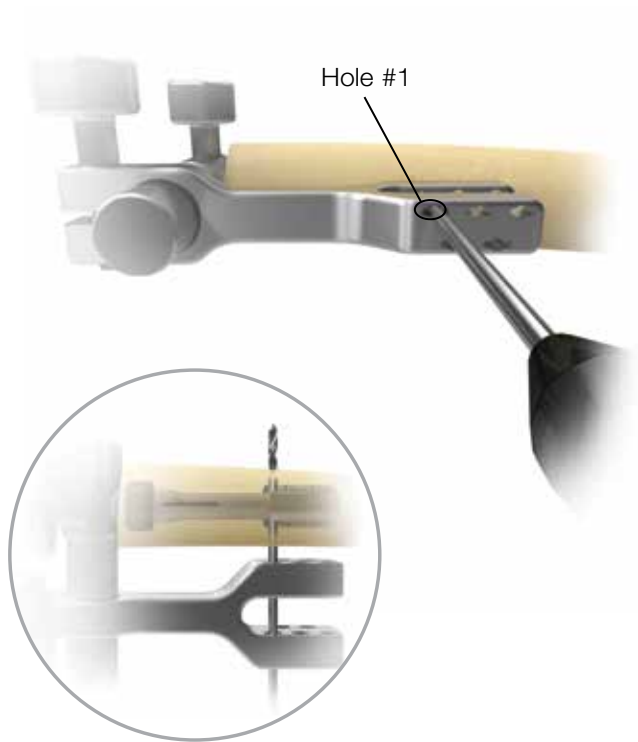


Figure 24

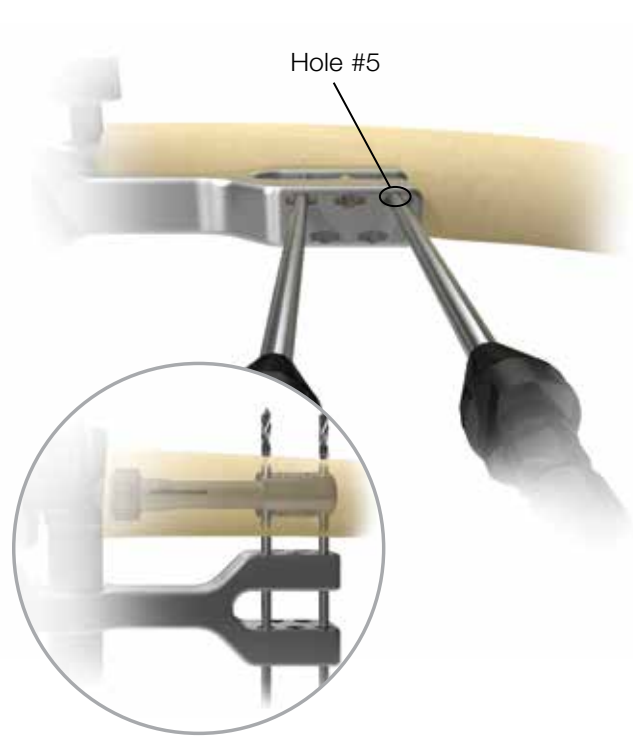


Figure 25

Anchor Plug (cont.)

Hold the Cross Bar and Drill Guide securely and run a Short Drill Bit through hole #1 of the Drill Guide and both cortices (Figure 24). Leave the Short Drill Bit in place.

Repeat this procedure with the second Short Drill Bit through hole #5, leaving the Short Drill Bit in place (Figure 25).



Figure 26

Using the Long Drill Bit, sequentially drill each of the remaining three placement holes and remove the long drill bit when finished (Figure 26).



Figure 27

Transverse Pins

Transverse Pin Measurement

The Hook Depth Gauge (Figure 27) is used to measure the bi-cortical distance for determining the Transverse Pin length.

Start by loosening Knobs 1 and 2 and collapsing the sleeves together.

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Figure 28

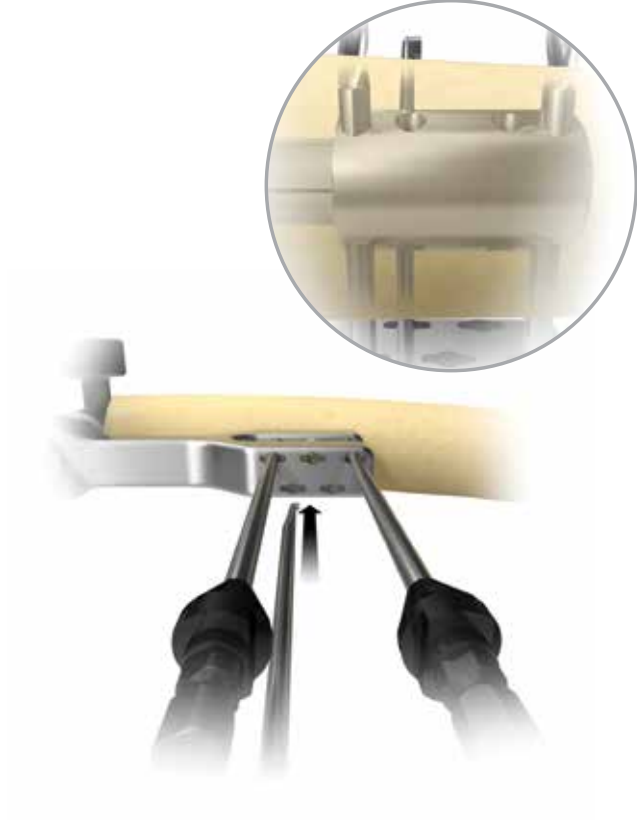


Figure 29

Transverse Pins (cont.)

Tighten Knob 2 (Figure 28).

Push the Hook through a pre-drilled hole and engage the outer aspect of the far cortex (Figure 29).



Figure 30

Collapse the sleeves against the drill guide and tighten Knob 1 (Figure 30).



Figure 31

Release the Hook from the far cortex, and position the tip firmly against the outer aspect of the near cortex (Figure 31).

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Figure 32

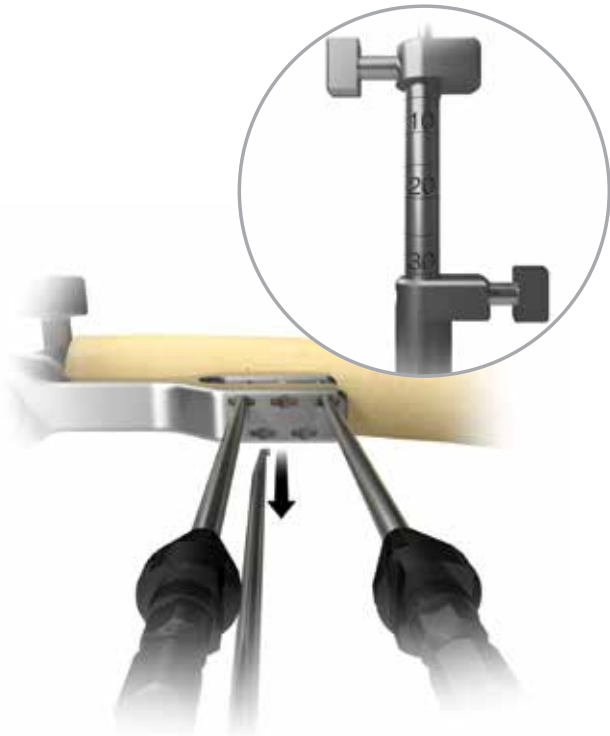


Figure 33

Transverse Pins (cont.)

Loosen Knob 2, slide the sleeve against the Drill Guide and tighten Knob 2 (Figure 32).

Transverse Pin Selection

Remove the Hook Gauge from the Drill Guide and read the bi-cortical distance that appears on the sliding scale (Figure 33).

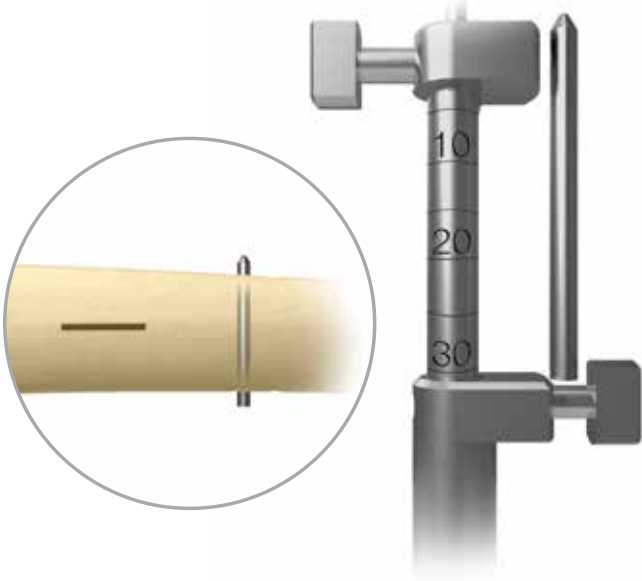


Figure 34



Figure 35

Add an additional 4 mm to the measurement, and select the Transverse Pin length that will provide the necessary 2 mm overhang on each side of the cortex (Figure 34).

Note: Transverse Pins are available from 20 mm through 76 mm, in 4 mm increments (Figure 35).

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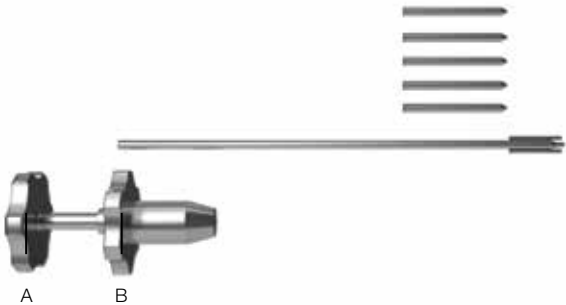


Figure 36

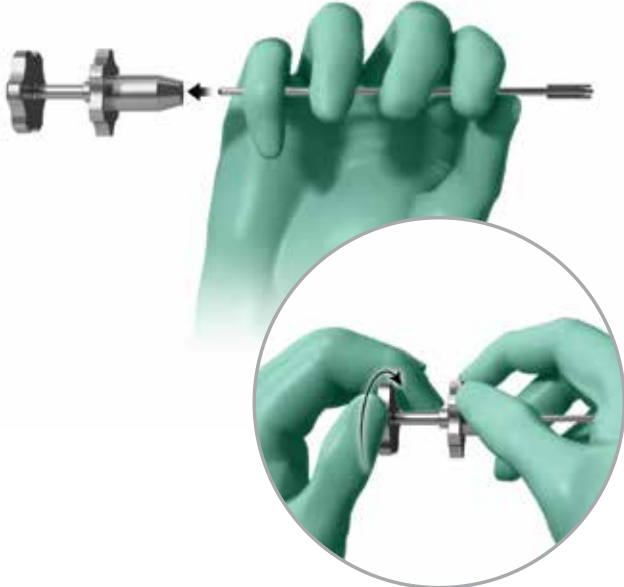


Figure 37

Transverse Pins (cont.)

The Pin Inserter Handle has two components: the Impaction Head (Figure 36A) and the Adjustment Knob (Figure 36B).

Note: Make sure the Adjustment Knob is loose by twisting in a counterclockwise motion; this will ensure that the Handle will accept the Pin Inserter.

Place the threaded end of the Pin Inserter into the Pin Inserter Handle and tighten with a clockwise turn (Figure 37).



Figure 38

Tighten the Adjustment Knob with a clockwise turn until the Pin Inserter is secure (Figure 38).

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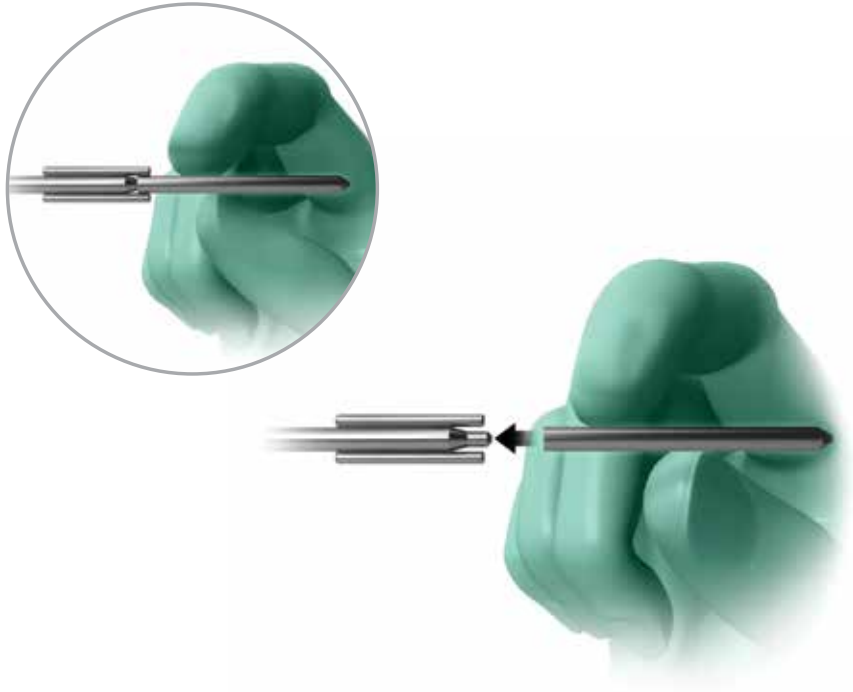


Figure 39

Transverse Pins (cont.)

Transverse Pin Insertion

Place a Transverse Pin onto the Pin Inserter (Figure 39).



Figure 40

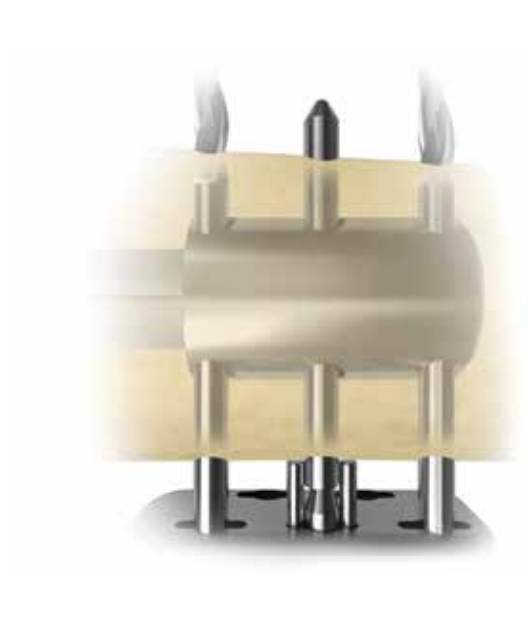


Figure 41

Guide the Pin Inserter into one of the three available holes in the Drill Guide (Figure 40).

Gently tap the Impaction Head until the pin is properly seated. The pin is properly seated when the tabs on the Pin Inserter come into contact with the near cortex (Figure 41) and a 2 mm overhang is visible on both the inner/outer cortex.

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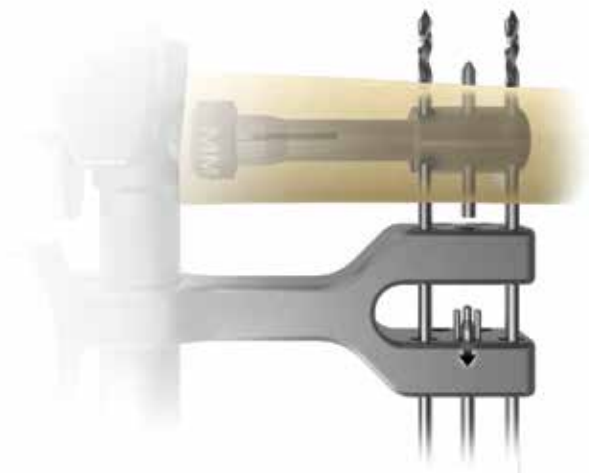


Figure 42

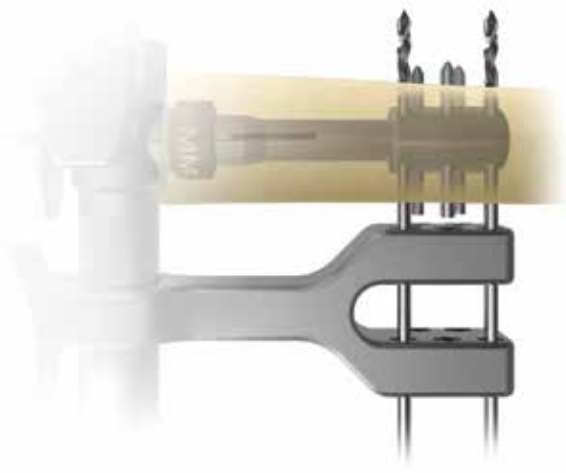


Figure 43

Transverse Pins (cont.)

Pull to remove the Pin Inserter (Figure 42) and proceed seating the next two Transverse Pins (Figure 43).

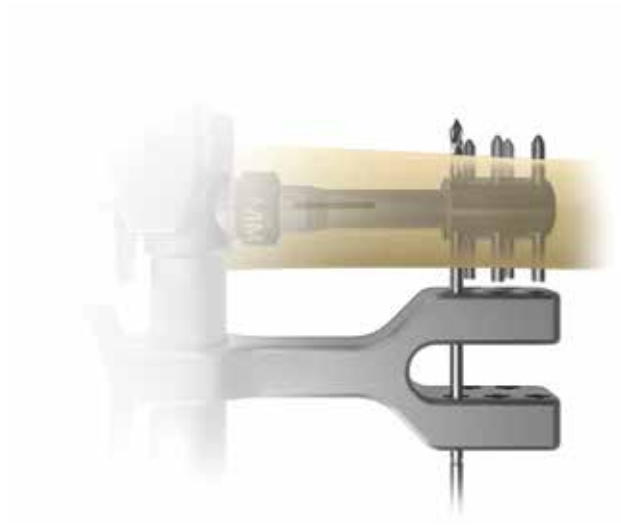


Figure 44

With the first three Transverse Pins in place, remove one of the Short Drill Bits and seat the fourth Transverse Pin (Figure 44).



Figure 45

Remove the final Short Drill Bit and seat the fifth and final Transverse Pin (Figure 45).

Note: 6 Pins are packaged together but only 5 are required.

Mini Compress® Device

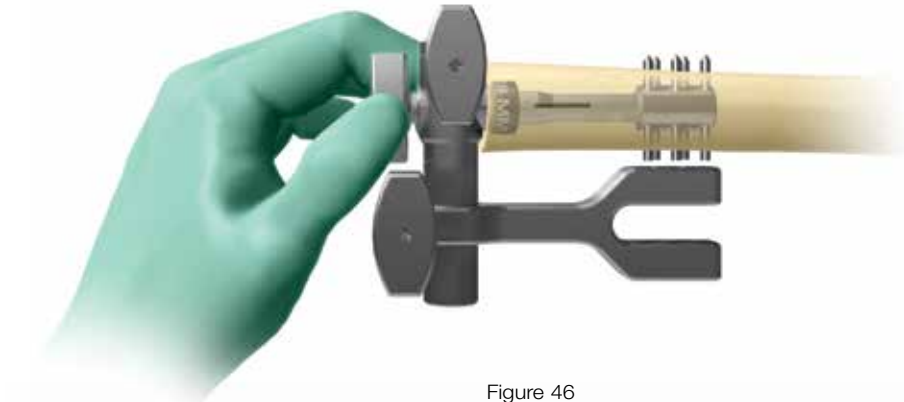


Figure 46

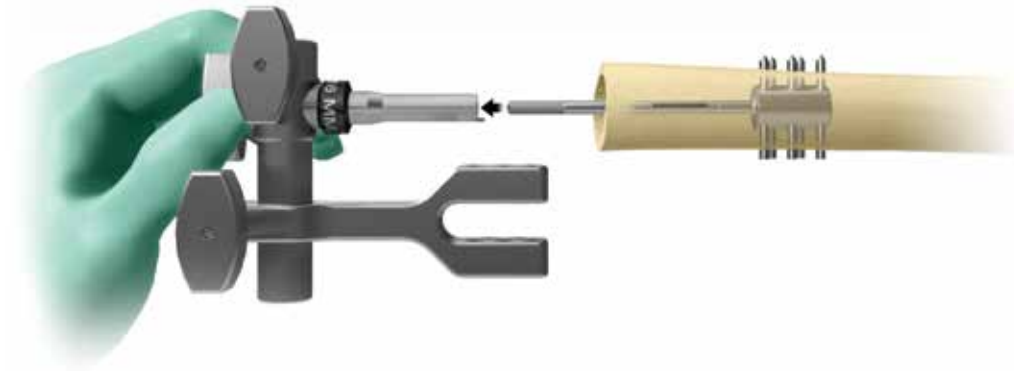


Figure 47

Transverse Pins (cont.)

Loosen the Anchor Plug Holder Knob (Figure 46) and remove the Drill Guide Assembly (Figure 47).

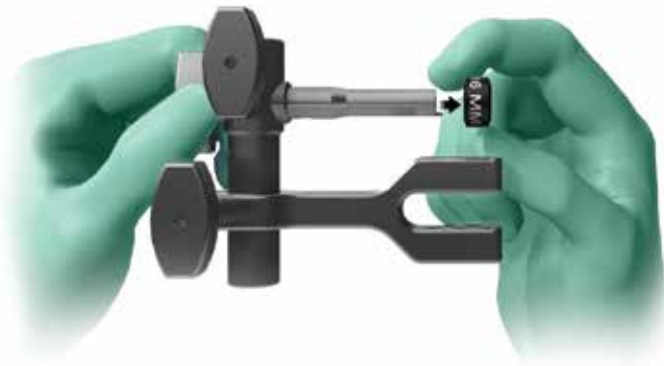


Figure 48

Remove the Centering Sleeve Provisional from the Anchor Plug Holder (Figure 48). Set the provisional aside, as it will be used later on in the technique.



Figure 49

Spindle

Diameter Selection

Measure the maximum diameter of the resected bone with a ruler for the various diameters of the Mini Compress® Spindles (Figure 49).

A measurement of the minimal cortical wall must now be taken to determine the force load of the spindle.

The selected implant must be closest to, but larger than, the bone measured in this step. The Implant Collar of the Spindle will ultimately overhang the bone.

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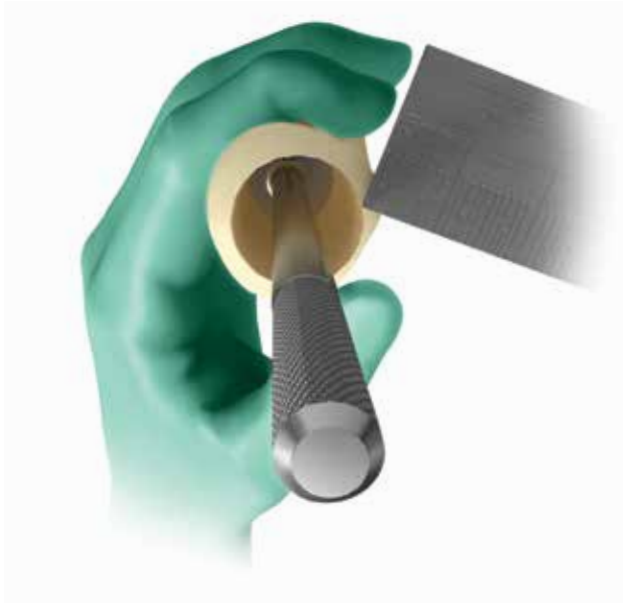


Figure 50

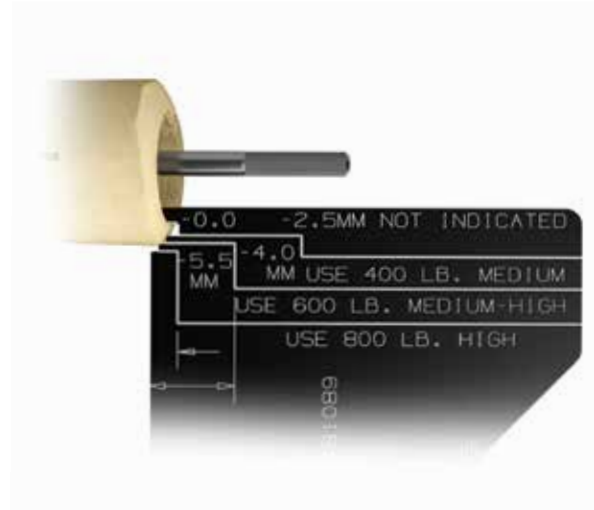


Figure 51

Spindle (cont.)

Select the correct Force Level based upon the minimal cortical thickness anywhere along the perimeter of the resection level (Figure 50), using a ruler or calipers or the Cortical Gauge.

Place the Cortical Gauge onto the most minimal cortical wall and determine the appropriate Force Level (400 lb/ 600 lb/800 lb) (Figure 51).

Important: It should be noted that cortical thickness should not exceed the range anywhere between the anchor plug and the interface. In addition, any cortical defect between the anchor plug and the interface is a contraindication for the system.

Cortical* Thickness (mm)	Anchor Plug**	Force Level (lbf)
2.5–3.9	5-Hole Anchor Plug	400
4.0–5.4	5-Hole Anchor Plug	600
5.5 and above	5-Hole Anchor Plug	800

* Cortical thickness should not exceed range anywhere between the anchor plug and the interface.

** Any cortical defect between the anchor plug and interface is a contraindication for this system.



Figure 52

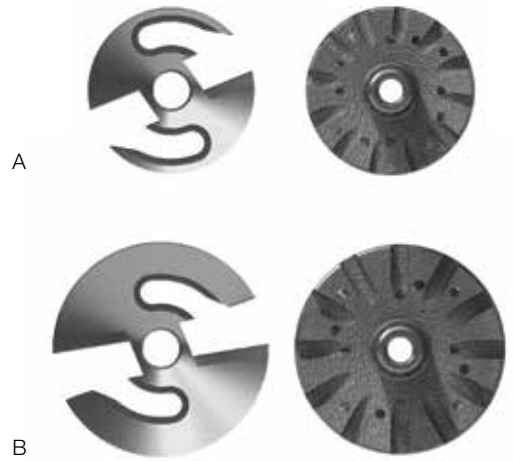


Figure 53

Face Reaming

Select the appropriate Face Reamer Blade based on the spindle diameter that was chosen in the previous step (Figure 52).

The Small Face Reamer Blade addresses the 25 mm and 30 mm Mini Compress® Spindles (Figure 53A) and the Large Face Reamer Blade addresses the 38 mm, 44 mm and 49 mm x 37 mm Elliptical Spindles (Figure 53B).

Mini Compress® Device

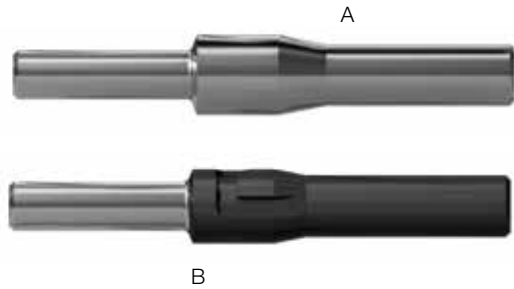


Figure 54

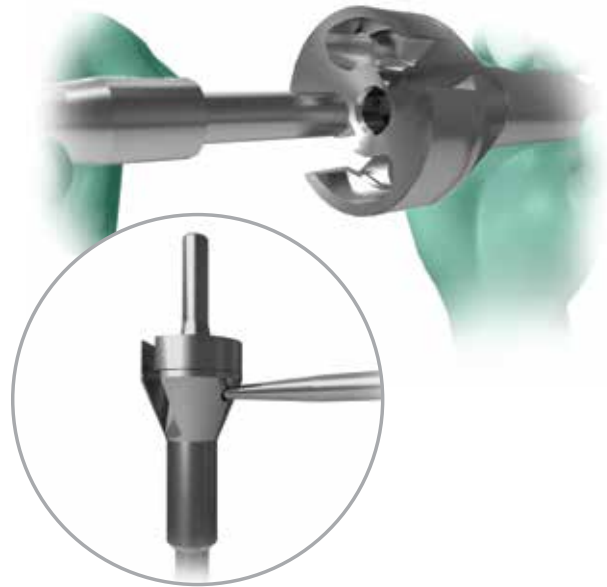


Figure 55

Spindle (cont.)

Face Reamer Assembly

Important: There are two distinct Reamer Pilots in the Compress® instrumentation. The first (Figure 54A) is used without a Centering Sleeve Trial when the final triple reamer diameter at the resection level measures 12 mm. It is also used with Centering Sleeve Trials when the final triple reamer diameter measures 14 mm through 28 mm.

The 13 mm Reamer Pilot (Figure 54B) is used only when the final triple reamer diameter at the resection level measures 13 mm; this trial is used without a Centering Sleeve Trial.

Place the Face Reamer Blade over the two retaining tabs located on the Reamer body and secure with a clockwise turning motion. **Insert the Reamer Pilot into the Face Reamer and tighten the side set screw (Figure 55).**

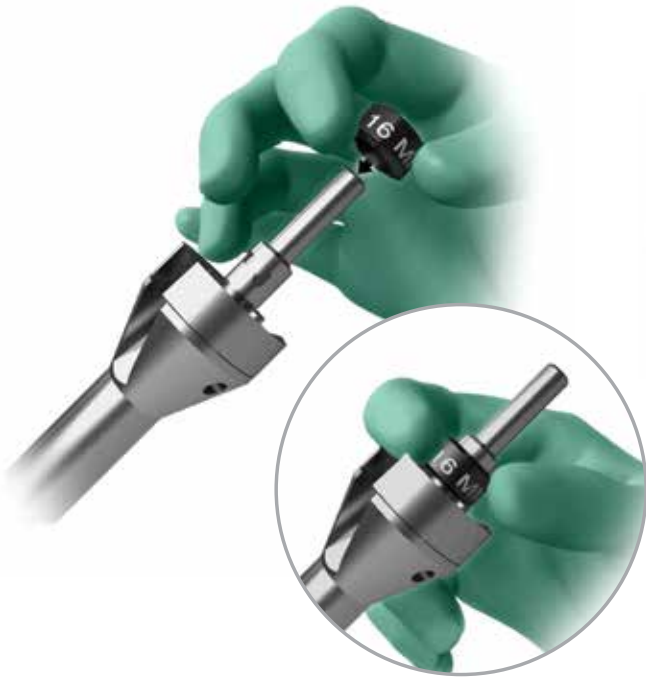


Figure 56

Slide the Centering Sleeve Provisional that was previously used on the Reamer Pilot, locking it into place with a clockwise turning motion (Figure 56).

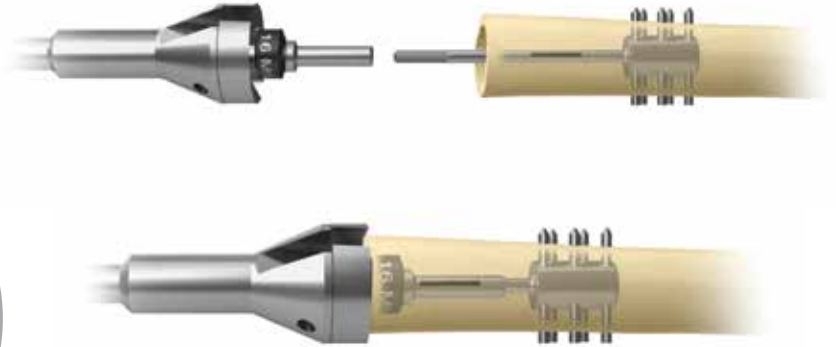


Figure 57

Face Reaming

Slide the Face Reamer assembly over the exposed Anchor Plug Traction Bar and ream the osteotomy site (Figure 57). Reaming is finished when the pilot “bottoms out” on the Anchor Plug.

Important: Start power and run at full speed prior to the Face Reamer contacting the bone.

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Figure 58

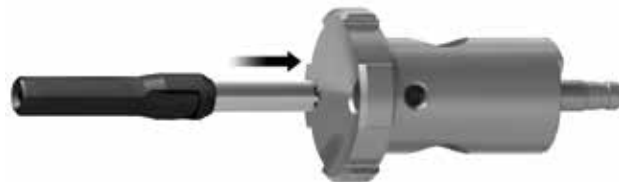


Figure 59

Spindle (cont.)

Face Reaming (cont.)

The bone is contoured to match the spindle and is now ready to accept the Mini Compress® 5 cm Face Adapter Trial if required (Figure 58).

Insert the Reamer Pilot into the end of the Mini Compress® 5 cm Face Adapter Trial and tighten the side set screw (Figure 59). Place the Reamer Pilot over the exposed traction bar and assemble the necessary provisionals.

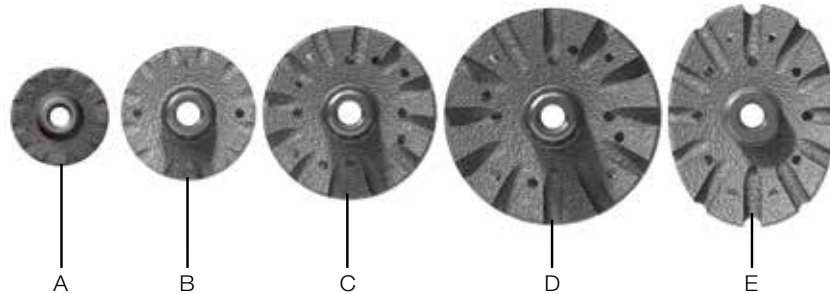


Figure 60

Diameter Selection

Select a Spindle based upon the prepared diameter of the osteotomy site.

25 mm Spindle: anatomies up to 21 mm in diameter (Figure 60A).

30 mm Spindle: anatomies up to 26 mm in diameter (Figure 60B).

38 mm Spindle: anatomies up to 34 mm in diameter (Figure 60C).

44 mm Spindle: anatomies up to 40 mm in diameter (Figure 60D).

49 mm x 37 mm Elliptical Spindle: anatomies in the metaphyseal flare where the bicortical measurement does not exceed 45 mm (Figure 60E).

Mini Compress[®] Device

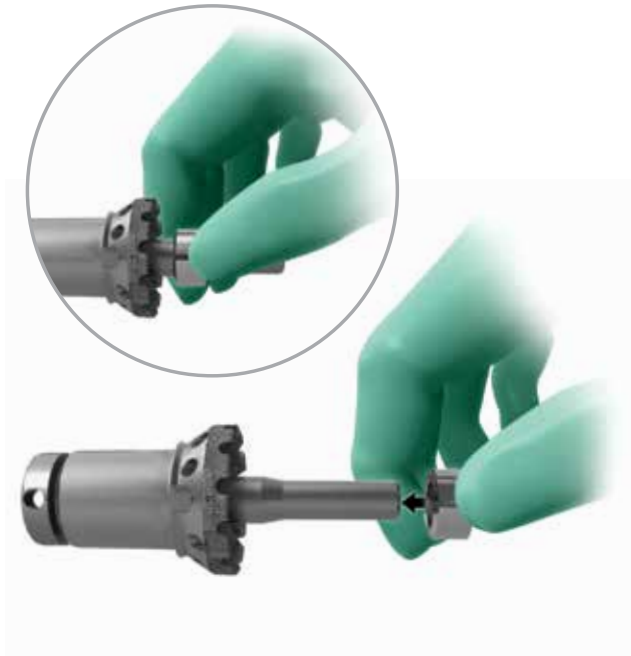


Figure 61



Figure 62

Centering Sleeve/Spindle

Assembly with Spindle

Important: All of the Spindles have a 12 mm diameter designed into the standard implant. The Centering Sleeve implants are added to increase this diameter as needed.

Place the Centering Sleeve Implant onto the Spindle (Figure 61).

Impact the Centering Sleeve with the Sleeve Impactor (Figure 62).

Note: The Centering Sleeve Implant will be the same size as the Centering Sleeve Trial previously used.



Figure 63

Slide the Spindle over the Anchor Plug Traction Bar until it fits snugly against the prepared femoral osteotomy site.

Note: Centering Sleeve must be completely seated within the prepared canal at the bone-implant interface.

The Spindle should be aligned anteriorly so that the Rotation Alignment Mark and one of the female Spindle slots lines up with the vertical reference mark made earlier (Figure 63).

Mini Compress[®] Device

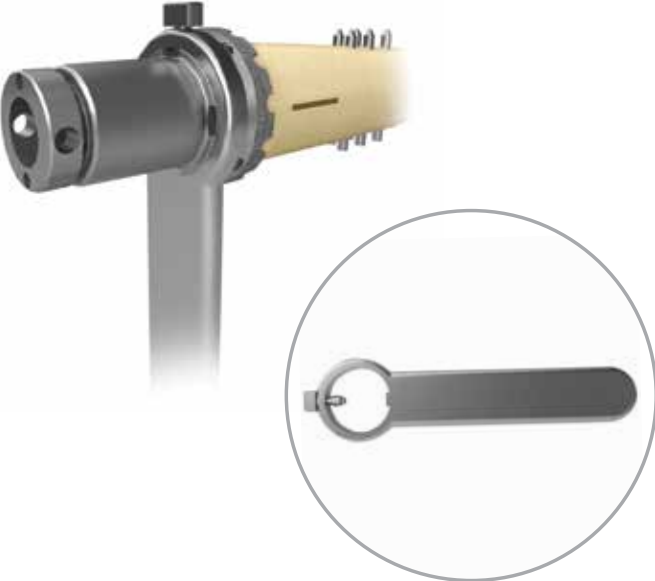


Figure 64

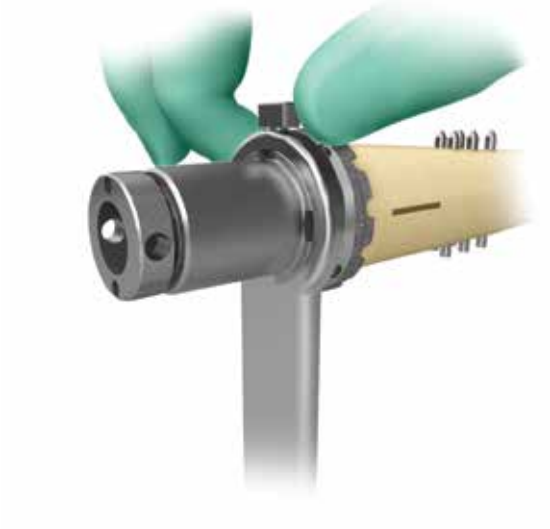


Figure 65

Position the Anti-Torque Wrench into two of the female Spindle slots and tighten the Locking Knob (Figures 64 and 65).

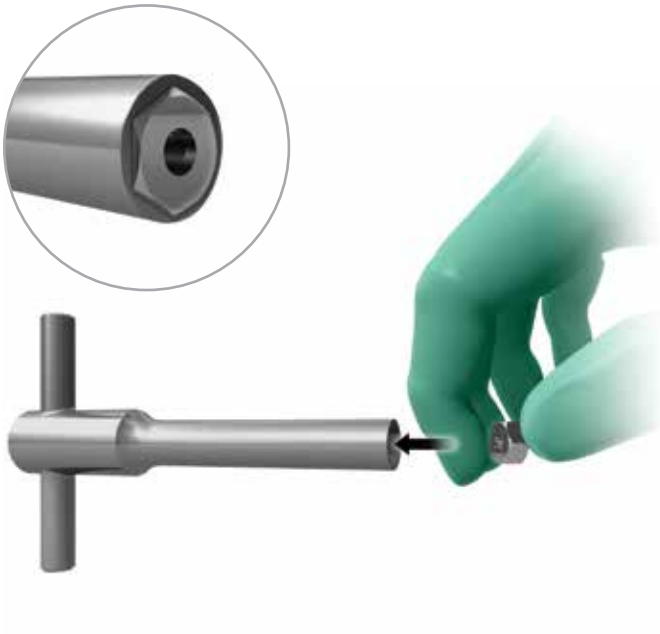


Figure 66

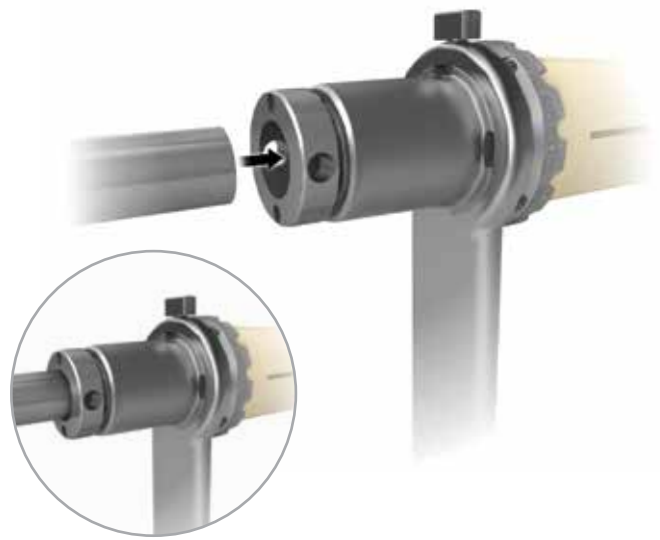


Figure 67

Spindle

Spindle Implantation

Place the Nut into the Nut Driver and insert onto the exposed Anchor Plug Traction Bar in the Spindle (Figures 66 and 67).

Mini Compress[®] Device



Figure 68

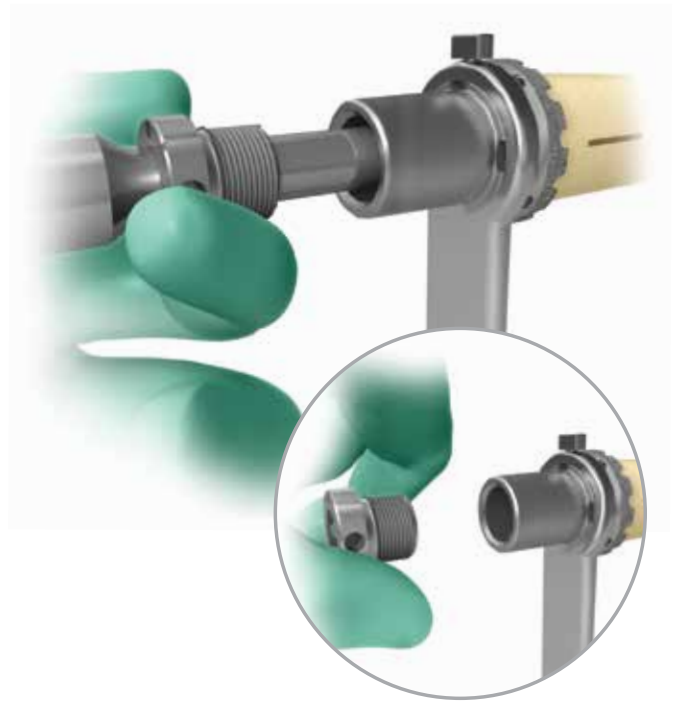


Figure 69

Spindle (cont.)

Tighten in a clockwise direction with the Nut Driver, while holding the Anti-Torque Wrench in place until resistance is felt (this is the initial contact of the Nut with the Washers of the Spindle).

Continue to slowly turn the Nut Driver in a clockwise direction until the Compression Cap can be manually released. The Compression Cap should release by hand in a counter-clockwise motion (Figures 68 and 69).



Figure 70



Figure 71

Note: If the Compression Cap cannot be removed manually after **one full turn** of the Nut Driver, remove the Nut Driver and place the Spanner Wrench (Figure 70) into the surface holes of the Compression Cap and twist off in a counter-clockwise direction (Figure 71).

Important: After the Compression Cap is removed from the Spindle, DO NOT DISCARD. Place the Compression Cap in reserve on the back table until the surgery is completed.

Mini Compress® Device



Figure 72



Figure 73

Spindle (cont.)

Place the 4 cm Taper Adapter trial (located in the Mini Compress® General Instrument Tray) over the Mini Compress® Spindle Taper (Figure 72) and assemble the additional trials to achieve the correct construct length (Figure 73).



Figure 74

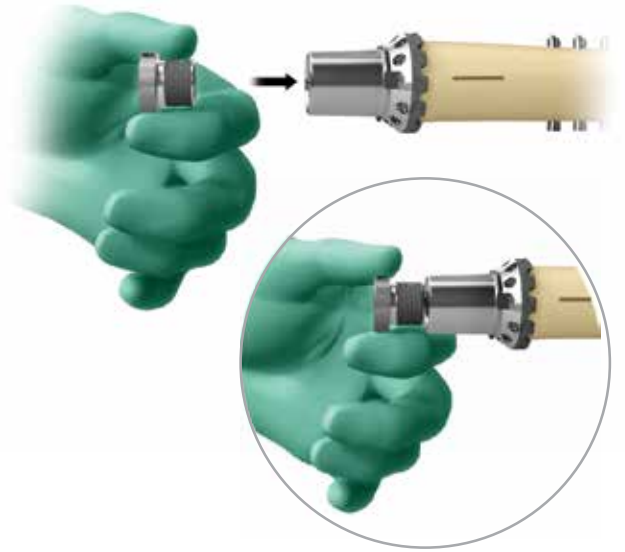


Figure 75

Realignment of Spindle

Note: If the Spindle alignment needs to be changed, disassociate the Provisionals and replace the Compression Cap with firm clockwise manual rotation (Figures 74 and 75).

Mini Compress[®] Device

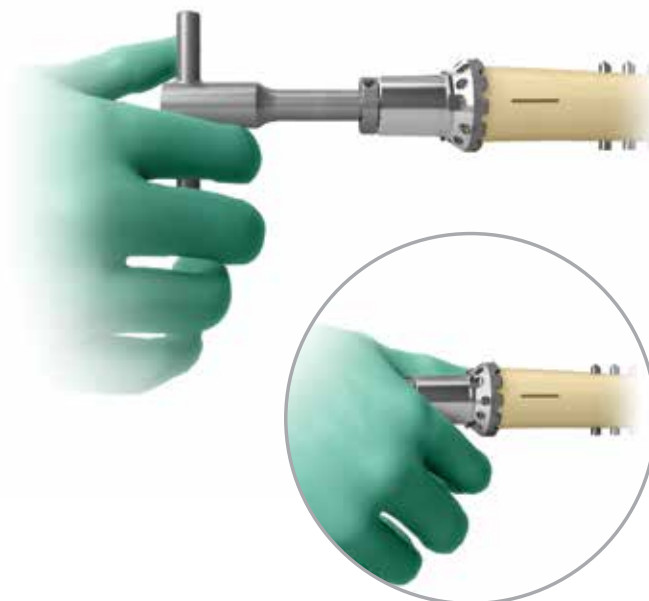


Figure 76

Spindle (cont.)

Reintroduce the Nut Driver and in a counter-clockwise direction make one full turn (360 degrees) to loosen the nut. Change the rotation of the Spindle (Figure 76) and re-start the locking process (beginning with figure 68).



Figure 77

Pin Drilling and Insertion

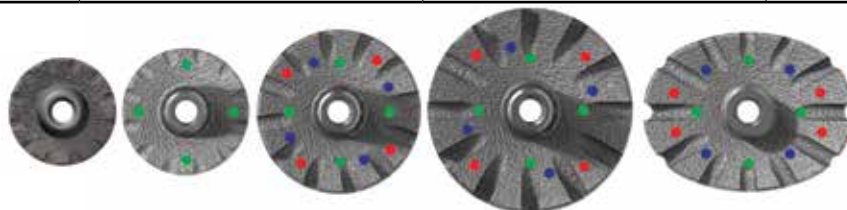
The bone/implant construct should be at this stage prior to drilling for and inserting the anti-rotation pins (Figure 77). The final version angle of the construct should have already been determined prior to placing the anti-rotation pins.

The table below specifies which array of holes may be used based on the Centering Sleeve that was previously selected.

Note: The 25 mm spindle does not have anti-rotation pin options.

Pin Placement Table

Spindle Size	Inner Array	Middle Array	Outer Array
25 mm	–	–	–
30 mm	13–14 mm Sleeve	–	–
38 mm	13 mm Sleeve	13–18 mm Sleeve	13–22 mm Sleeve
44 mm	13 mm Sleeve	13–20 mm Sleeve	13–27 mm Sleeve
Elliptical (37x49 mm)	13–15 mm Sleeve	13–18 mm Sleeve	13–28 mm Sleeve



Mini Compress® Device



Figure 78



Figure 79



Figure 80

Spindle (cont.)

Thread the Anti-rotation Drill Guides into the selected holes of the spindle collar until fully seated (Figure 78).

Insert the specially designed drill into each respective drill guide and drill until the guide prevents further advancement (Figure 79 and 80).



Figure 81

Remove the first drill guide, leaving the others in place (Figure 81).



Figure 82

Using the Pin Driver, insert a pin into the first predrilled location and thread the screw until it is fully seated (Figure 82). Repeat for remaining pin locations.

Note: It is recommended, whenever possible, that a minimum of 3 pins are placed in the spindle collar.

Mini Compress® Device



Figure 83

Spindle (cont.)

Impact the 4 cm Mini Compress®/Comprehensive® SRS Taper Adapter over the Mini Compress® Spindle Taper (Figure 83). Confirm the conical screw is seated in the male taper of the Comprehensive® SRS Taper Adapter.



Figure 84

Construct Assembly for Proper Locking Screw Placement

Place the Proximal Humeral Construct (Taper Adapter, Diaphyseal Segment and Proximal Humeral Component) over the taper of the Spindle and impact the taper (Figure 84). Confirm the conical screw is seated in the intercalary segment.

After impaction, secure the intercalary segment and proximal body by driving both side-access locking screws at each taper junction with the torque-limited 2.5 mm hex driver in the Comprehensive® SRS instrument set.

For proximal reconstructions, the male tab on the proximal body or segment should cover the flat on the corresponding side of the Taper Adapter (i.e. for a right shoulder, cover the flat engraved 'right' on the taper adapter). The opposite is correct for distal humeral reconstructions.

Note: Figure 84 inset shows the orientation of the alignment flats built into the taper adapter (left/right specific) allowing for 30 degrees of retroversion in proximal reconstruction.

Impact the definitive humeral head.

Attach Regenerex® Augments with a 3.5 mm driver and T-handle within the Comprehensive® SRS Instrument Set where needed. Use suture holes in the Regenerex® Augments for soft tissue reattachment. Ensure that the tensioning of the glenohumeral joint is satisfactorily restored.

Mini Compress® Device

Compress® Post Operative Treatment

IMPORTANT

1st 6 weeks

The patient is kept non-load bearing while early osseous-integration takes place.

2nd 6 weeks

The patient is kept 50% load bearing.

Postoperative treatment is recommended by:

B. Hudson Berrey, M.D.

Professor, Orthopaedics
University of Florida College of Medicine
Chief of Orthopaedic Service/Shands Jacksonville
Jacksonville, FL

John Healey, M.D.

Chief of Orthopaedic Surgery
Memorial Sloan-Kettering Cancer Center
Professor of Surgery
Weill Medical College of Cornell University
New York, NY

James Johnston, M.D.

Kaiser Permanente Medical Center
Department of Orthopaedic Surgery
South San Francisco, CA

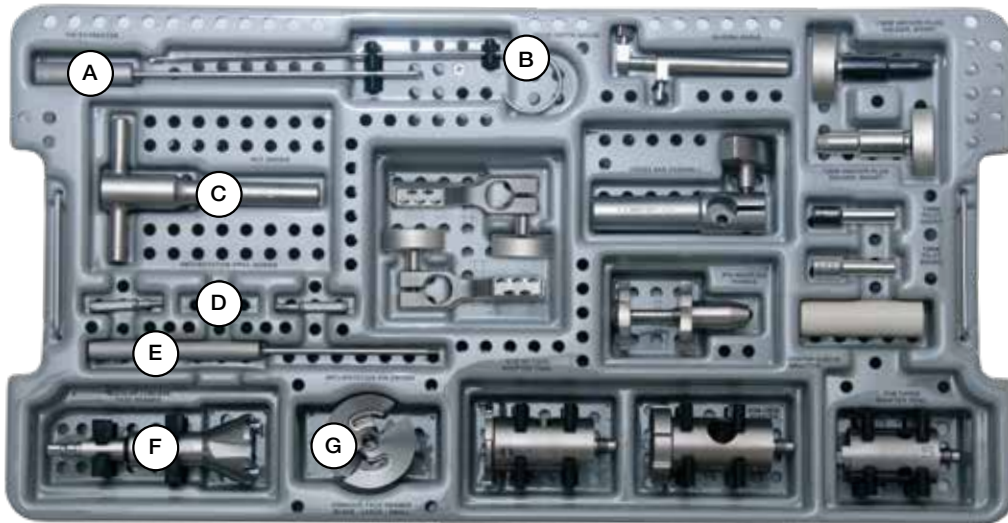
Richard O'Donnell, M.D.








Associate Professor of Clinical Orthopaedic Surgery
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Associate Professor
Director, Sarcoma Services
Chief, SARC Lab
Huntsman Cancer Institute & Primary Children's
Medical Center
University of Utah
Salt Lake City, UT

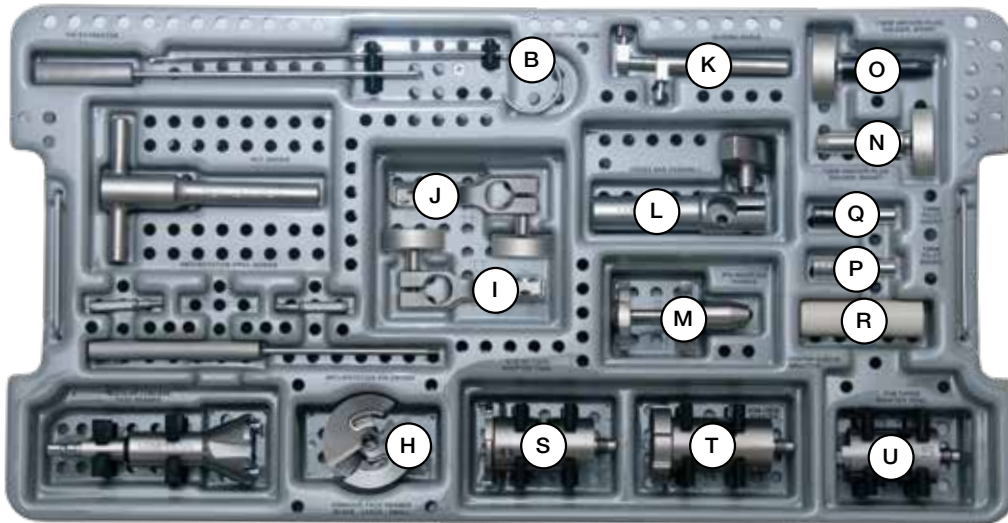
Short Instrument Tray










Product	Label	Part Number	Size	Description
	A	32-481032	–	Pin Extractor
	B	32-481028	–	Hook Depth Gauge
	C	32-481007	–	Nut Driver
	D	32-481124	–	Anti-Rotation Drill Guides (3)
	E	32-481125	–	Anti-Rotation Pin Driver
	F	32-481120	–	Modular Concave Face Reamer
	G	32-481121	–	Small Modular Concave Face Reamer Blade

Mini Compress® Device

Short Instrument Tray (cont.)

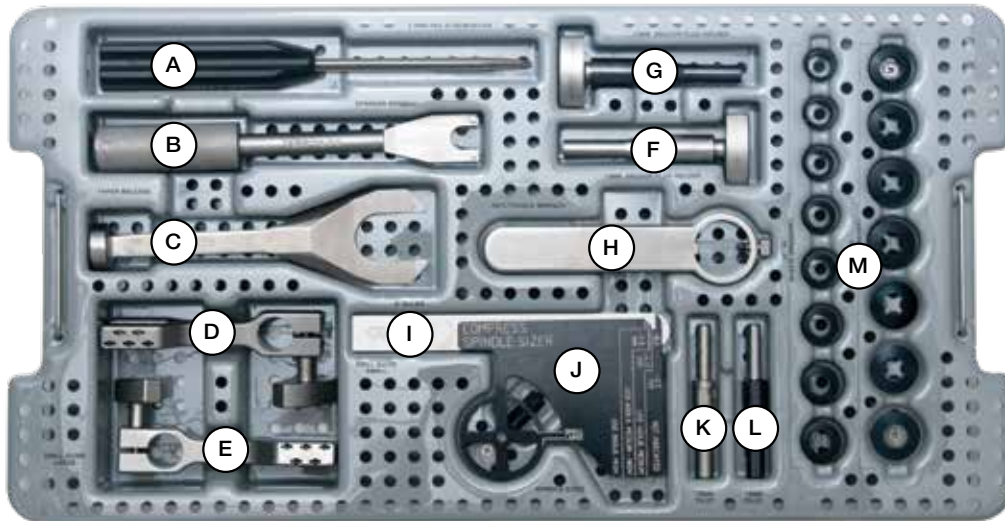









Product	Label	Part Number	Size	Description
	H	32-481122	–	Large Modular Concave Face Reamer Blade
	I	32-472711	–	Small Short Drill Guide
	J	32-472712	–	Large Short Drill Guide
	K	32-481034	–	Sliding Scale Assembly
	L	32-481005	–	Cross Bar Assembly
	M	32-481030	–	Pin Inserter Handle
	N	32-472706	12 mm	Short Anchor Plug Holder







Product	Label	Part Number	Size	Description
	O	32-472707	13 mm	Short Anchor Plug Holder
	P	32-472704	12 mm	Short Pilot
	Q	32-472705	13 mm	Short Pilot
	R	32-481029	–	Centering Sleeve Impactor
	S	32-481114	6 cm	No Face Adapter Trial (Replicates the 5 cm Taper Adapter and 1 cm Spindle Collar)
	T	32-481115	6 cm	Face Adapter Trial (Replicates the 5 cm Taper Adapter and 1 cm Spindle Collar)
	U	32-481075	5 cm	Taper Adapter Trial

Mini Compress® Device

Standard Instrument Tray

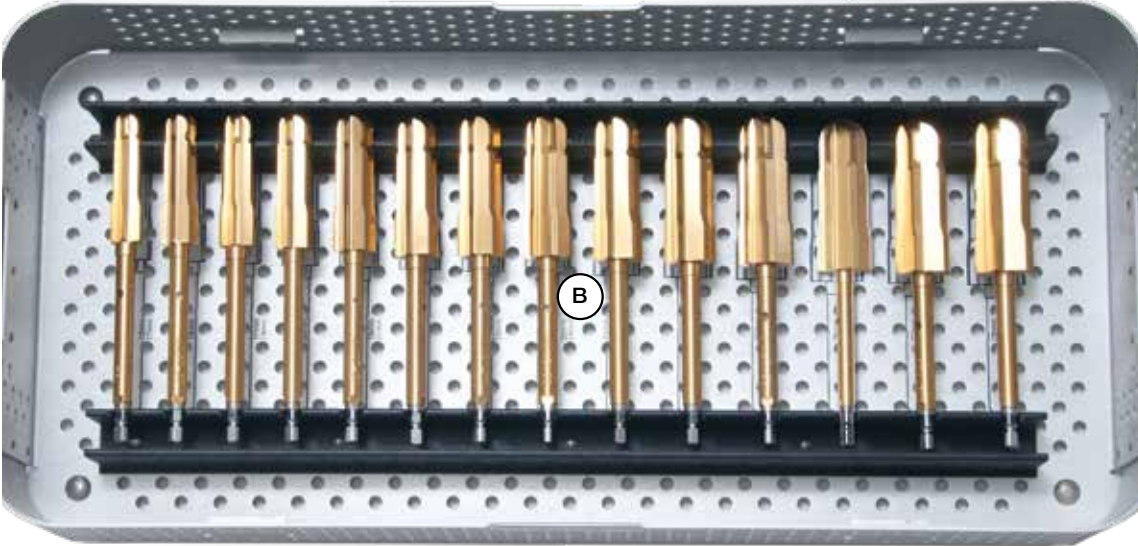
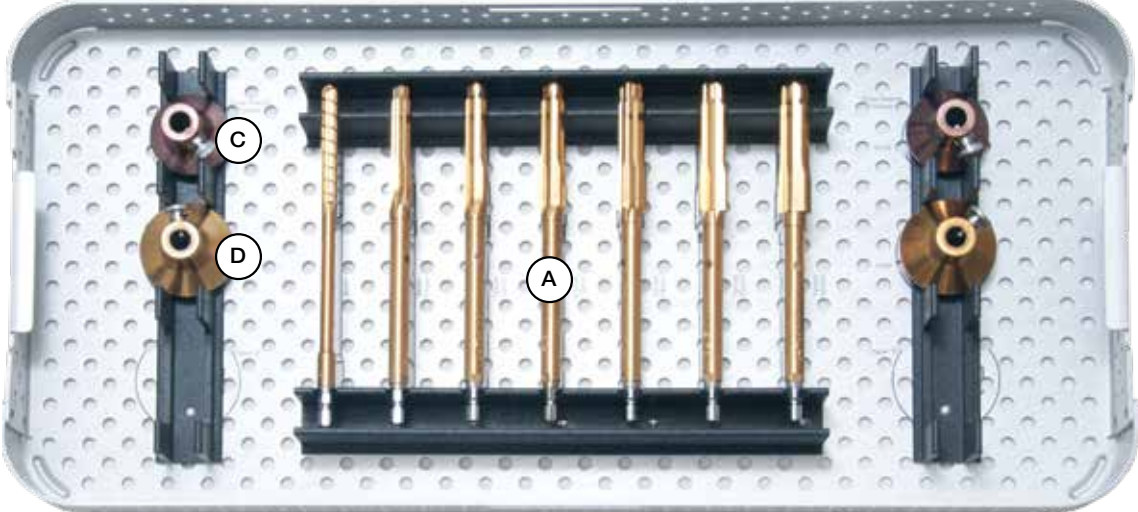






Product	Label	Part Number	Size	Description
	A	456462	3.5"	Hex Screwdriver
	B	32-481025	-	Spanner Wrench
	C	32-481027	-	Taper Release
	D	32-481003	-	Small Drill Guide
	E	32-481004	-	Large Drill Guide
	F	32-481006	12 mm	Anchor Plug Holder
	G	32-481091	13 mm	Anchor Plug Holder

Product	Label	Part Number	Size	Description
	H	32-481026	-	Anti-Torque Wrench
	I	32-481155	6"	Ruler
	J	32-481089	-	Distal Femur Spindle Sizer
	K	32-481002	12 mm	Pilot
	L	32-481090	13 mm	Pilot
	M	32-481009 32-481010 32-481011 32-481012 32-481013 32-481014 32-481015 32-481016 32-481017 32-481018 32-481019 32-481020 32-472708 32-472709 32-472710	14 mm 15 mm 16 mm 17 mm 18 mm 19 mm 20 mm 21 mm 22 mm 23 mm 24 mm 25 mm 26 mm 27 mm 28 mm	Centering Sleeve Trial

Mini Compress® Device

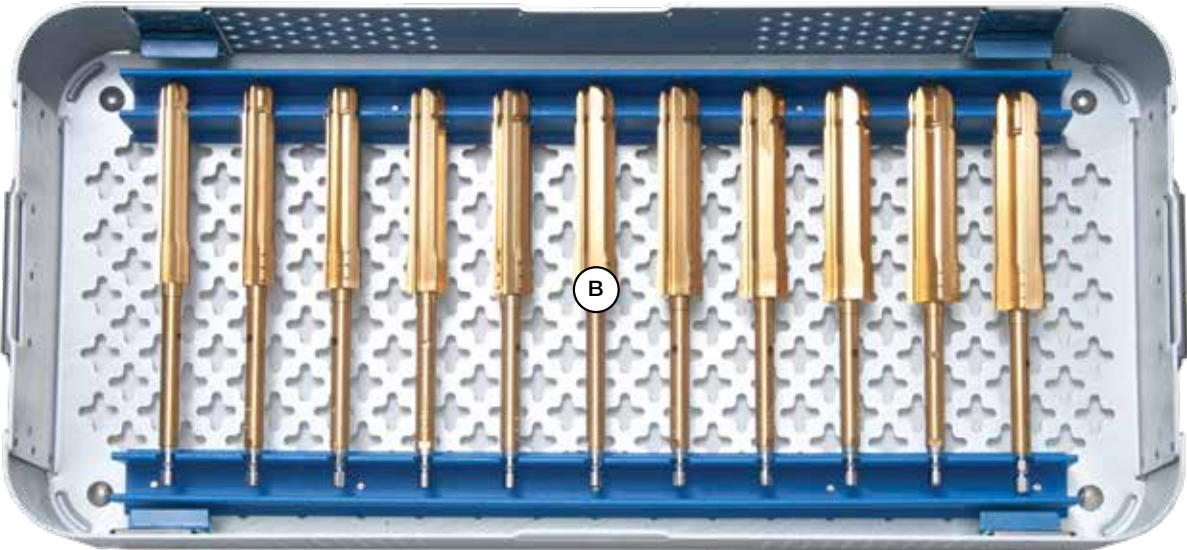
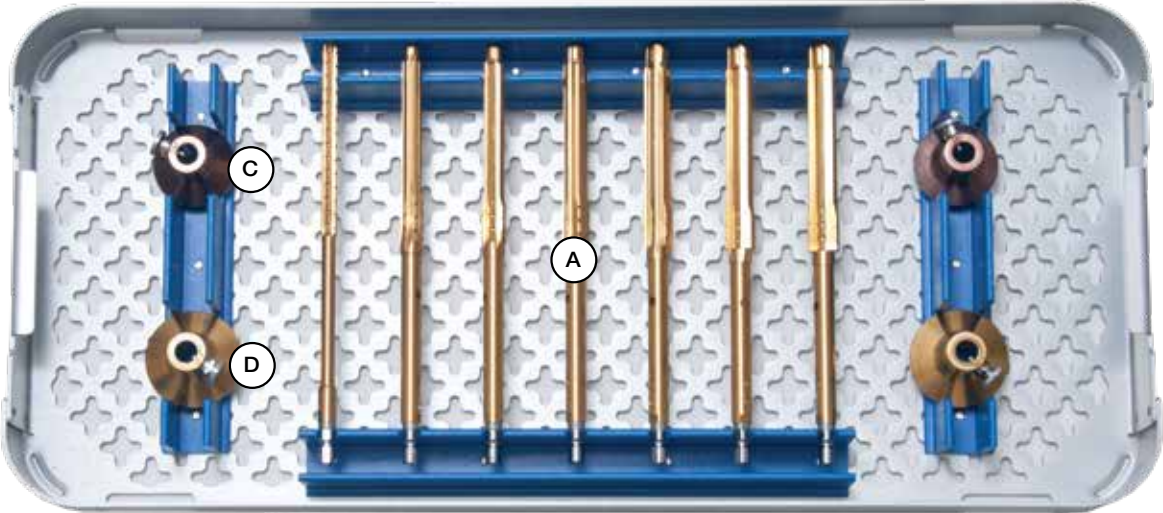
Short Triple Reamer Tray







Product	Label	Part Number	Size	Description
	A	32-472719	8 mm	Short Compress® Triple Reamer
		32-472720	9–11 mm	
32-472721	10–12 mm			
32-472722	11–13 mm			
32-472723	12–14 mm			
32-472724	13–15 mm			
32-472725	14–16 mm			
	B	32-472726	15–17 mm	Short Compress® Triple Reamer
		32-472727	16–18 mm	
		32-472728	17–19 mm	
		32-472729	18–20 mm	
		32-472730	19–21 mm	
		32-472731	20–22 mm	
		32-472732	21–23 mm	
		32-472733	22–24 mm	
		32-472734	23–25 mm	
		32-472735	24–26 mm	
		32-472736	25–27 mm	
		32-472737	26–28 mm	
		32-472738	27–29 mm	
32-472739	28–30 mm			
	C	32-481053	–	Compress® Face Reamer Small (Qty 2)
	D	32-481054	–	Compress® Face Reamer Large (Qty 2)

Mini Compress[®] Device




Standard Triple Reamer Tray






Product	Label	Part Number	Size	Description
	A	32-481035	8 mm	Compress® Triple Reamer
		32-481036	9–11 mm	
32-481037		10–12 mm		
32-481038		11–13 mm		
32-481039		12–14 mm		
32-481040		13–15 mm		
32-481041		14–16 mm		
	B	32-481042	15–17 mm	Compress® Triple Reamer
		32-481043	16–18 mm	
		32-481044	17–19 mm	
		32-481045	18–20 mm	
		32-481046	19–21 mm	
		32-481047	20–22 mm	
		32-481048	21–23 mm	
		32-481049	22–24 mm	
		32-481050	23–25 mm	
		32-481051	24–26 mm	
		32-481052	25–27 mm	
	C	32-481053	–	Compress® Face Reamer Small (Qty 2)
	D	32-481054	–	Compress® Face Reamer Large (Qty 2)

Mini Compress® Device

Short Mini Compress® Implants






Product	Part Number	Size	Description
	178552	10 mm	Short Compress® Anchor Plug
	178554	12 mm	
	178556	14 mm	
	178558	16 mm	
	178560	18 mm	
	178562	20 mm	
	178564	22 mm	
	178566	24 mm	
	178568	26 mm	
	178570	28 mm	
	178784	400 lb	Short Mini Compress® 25 mm Spindle
	178785	600 lb	
	178786	800 lb	
	178787	400 lb	Short Mini Compress® 30 mm Anti-Rotation Spindle
	178788	600 lb	
	178789	800 lb	

Standard Mini Compress® Implants







Product	Part Number	Size	Description
	178400 178402 178404 178406 178408 178410 178412 178414	10 mm 12 mm 14 mm 16 mm 18 mm 20 mm 22 mm 24 mm	Standard Compress® Anchor Plug
	178754 178755 178756	400 lb 600 lb 800 lb	Standard Mini Compress® 25 mm Spindle
	178757 178758 178759	400 lb 600 lb 800 lb	Standard Mini Compress® 30 mm Anti-Rotation Spindle

Mini Compress® Device

Auxiliary Mini Compress® Implants

Product	Part Number	Size	Description
	178512	-	Compress® Nut
	178524 178525 178526 178527 178528 178529 178530 178531 178532 178533 178534 178571 178572 178573 178574	20 mm 24 mm 28 mm 32 mm 36 mm 40 mm 44 mm 48 mm 52 mm 56 mm 60 mm 64 mm 68 mm 72 mm 76 mm	Transverse Pin
	178535 178536 178537 178538 178539 178540 178541 178542 178543 178544 178545 178546 178547 178736 178737 178738	13 mm 14 mm 15 mm 16 mm 17 mm 18 mm 19 mm 20 mm 21 mm 22 mm 23 mm 24 mm 25 mm 26 mm 27 mm 28 mm	Compress® Centering Sleeve
	178951	4 cm	Mini Compress®/SRS Taper Adapter — Mini — 30°
	178950	4 cm	Standard Compress®/SRS Taper Adapter Standard — 30°

Mini Compress® General Instrument Tray — 596012

Product	Part Number	Description
	CP461502	Mini Compress® Taper Separator
	110004099	Mini Compress®/SRS 4 cm Taper Adapter Trial*
	110004100	Standard Compress®/SRS 4 cm Taper Adapter Trial*
	CP461269	Mini Compress® Anti-Torque Wrench
	110004098	Mini Compress®/SRS 5 cm Adapter Trial — Face* (4 cm for Adapter and 1 cm for Spindle)
	110004097	Mini Compress®/SRS 5 cm Adapter Trial - No Face* (4 cm for Adapter and 1 cm for Spindle)

*Reference Comprehensive® SRS Surgical Technique BMET0173.1 for ordering information.

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