

For Fixation of Basilar Femoral Neck Fractures

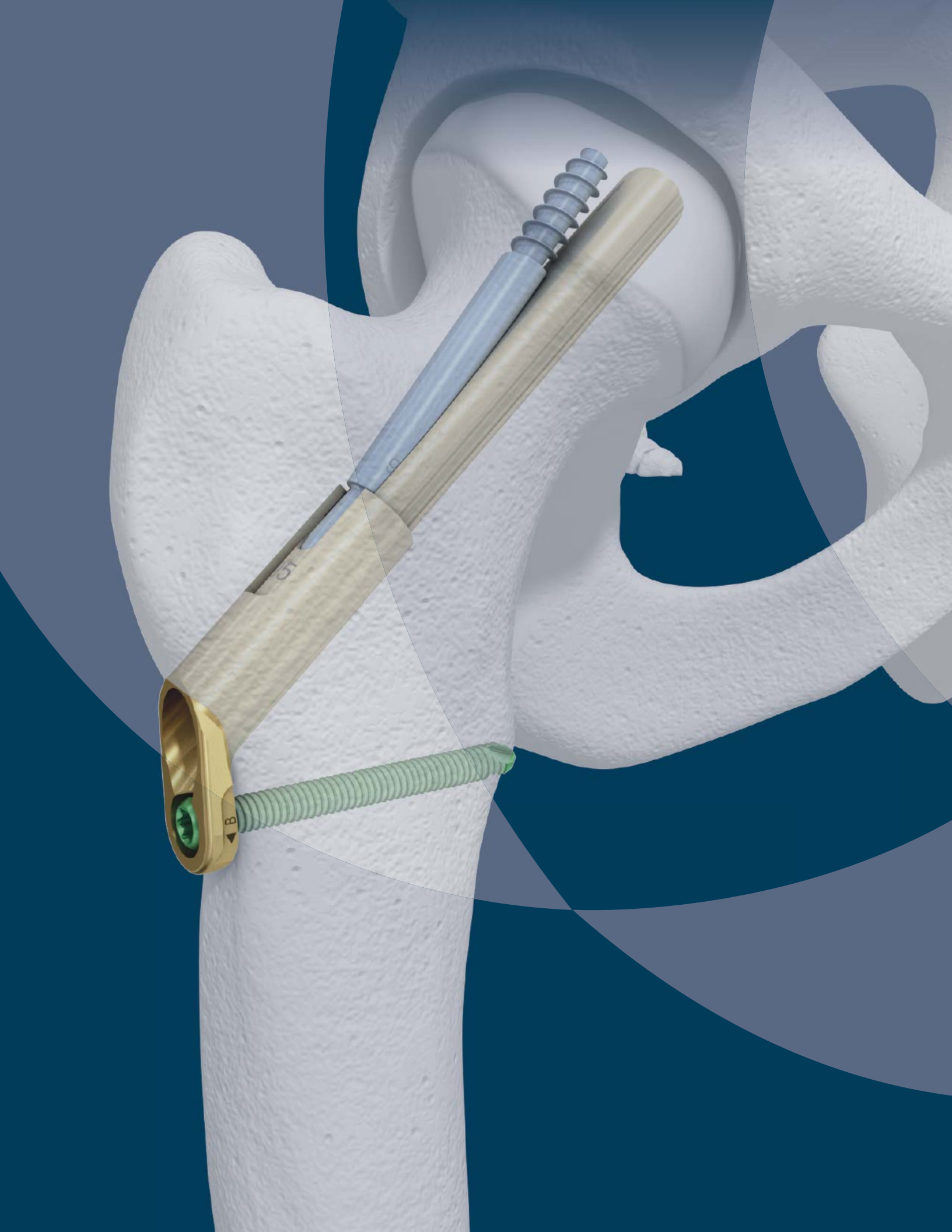
Femoral Neck System

Surgical Technique



Table of Contents

Introduction	AO Principles	3
	Indications, Contraindications, and Warnings	4
	MRI Safety Information	5
System Highlights		6
Surgical Technique	Preparation	8
	Implant Insertion	11
	Antirotation-Screw and Locking Screw Insertion	19
	Option: Intra-operative Compression	26
	Instrument Disassembly and Final Check	29
	Option: Implant Removal	31
	Checking Drill Stop Wear	34
Product Information	Implants	35
	Instruments	39
	Set List	42



AO Principles

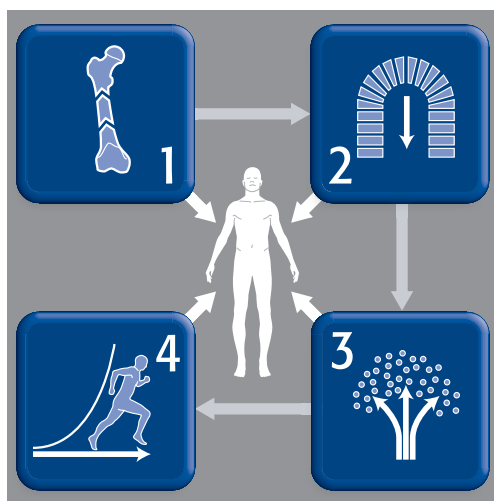
In 1958, the AO formulated four basic principles, which have become the guidelines for internal fixation.^{1,2}

Anatomic reduction

Fracture reduction and fixation to restore anatomical relationships.

Early, active mobilization

Early and safe mobilization and rehabilitation of the injured part and the patient as a whole.



Stable fixation

Fracture fixation providing absolute or relative stability, as required by the patient, the injury, and the personality of the fracture.

Preservation of blood supply

Preservation of the blood supply to soft tissues and bone by gentle reduction techniques and careful handling.

1. Müller ME, Allgöwer M, Schneider R, Willenegger H. *Manual of Internal Fixation*. 3rd ed. Berlin, Heidelberg, New York: Springer-Verlag; 1991.
2. Rüedi TP, RE Buckley, CG Moran. *AO Principles of Fracture Management*. 2nd ed. Stuttgart, New York: Thieme; 2007.

Indications, Contraindications, and Warnings

Indications

The Femoral Neck System (FNS) is indicated for basilar femoral neck fractures in adults and adolescents (12-21) in which the growth plates have fused or will not be crossed.

Contraindications

The specific contraindications for the Femoral Neck System (FNS) include:

- Pertrochanteric fractures
- Intertrochanteric fractures
- Subtrochanteric fractures

Warnings

This system should not be used for cases where there is a high incidence of:

- Sepsis
- Malignant primary or metastatic tumors
- Material sensitivity
- Compromised vascularity



MRI Safety Information



Non-clinical testing has demonstrated the DePuy Synthes Femoral Neck System (FNS) is MR Conditional. A patient with these devices can be safely scanned in an MR system meeting the following conditions:

- Static magnetic field of 1.5 Tesla or 3.0 Tesla transmit quadrature-driven coil only
- Maximum spatial field gradient of 3,000 gauss/cm (30 T/m) for 1.5 Tesla or 3.0 Tesla
- Maximum MR system reported, whole body averaged specific absorption rate (SAR) of 2 W/kg (Normal Operating Mode)

Under the scan conditions defined above, the DePuy Synthes Femoral Neck System (FNS) is expected to produce a maximum temperature rise of less than 7.0°C in both 1.5 Tesla and 3.0 Tesla for 15 minutes of continuous scanning. In non-clinical testing, the image artifact caused by the device extends approximately 25 mm from the DePuy Synthes Femoral Neck System (FNS) when imaged with a gradient echo pulse sequence and a 3.0 Tesla MRI system.

System Highlights

The Femoral Neck System (FNS) is a dedicated product for the fixation of basilar femoral neck fractures and offers the following features:

Antirotation-Screw (ARScrew):

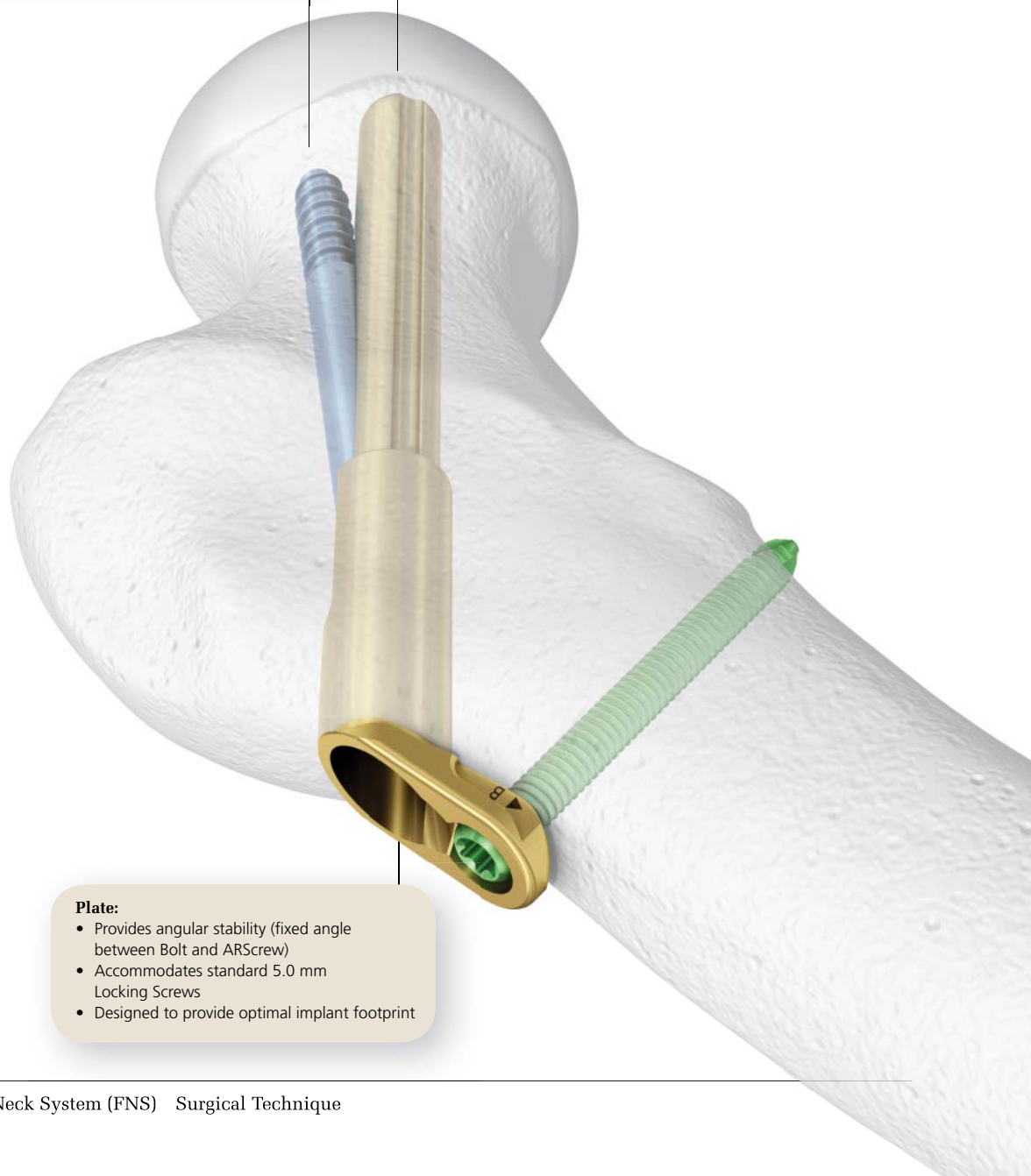
- Integrated Bolt and ARScrew provides rotational stability (7.5° divergence angle)
- Allows implant placement even in a small femoral neck

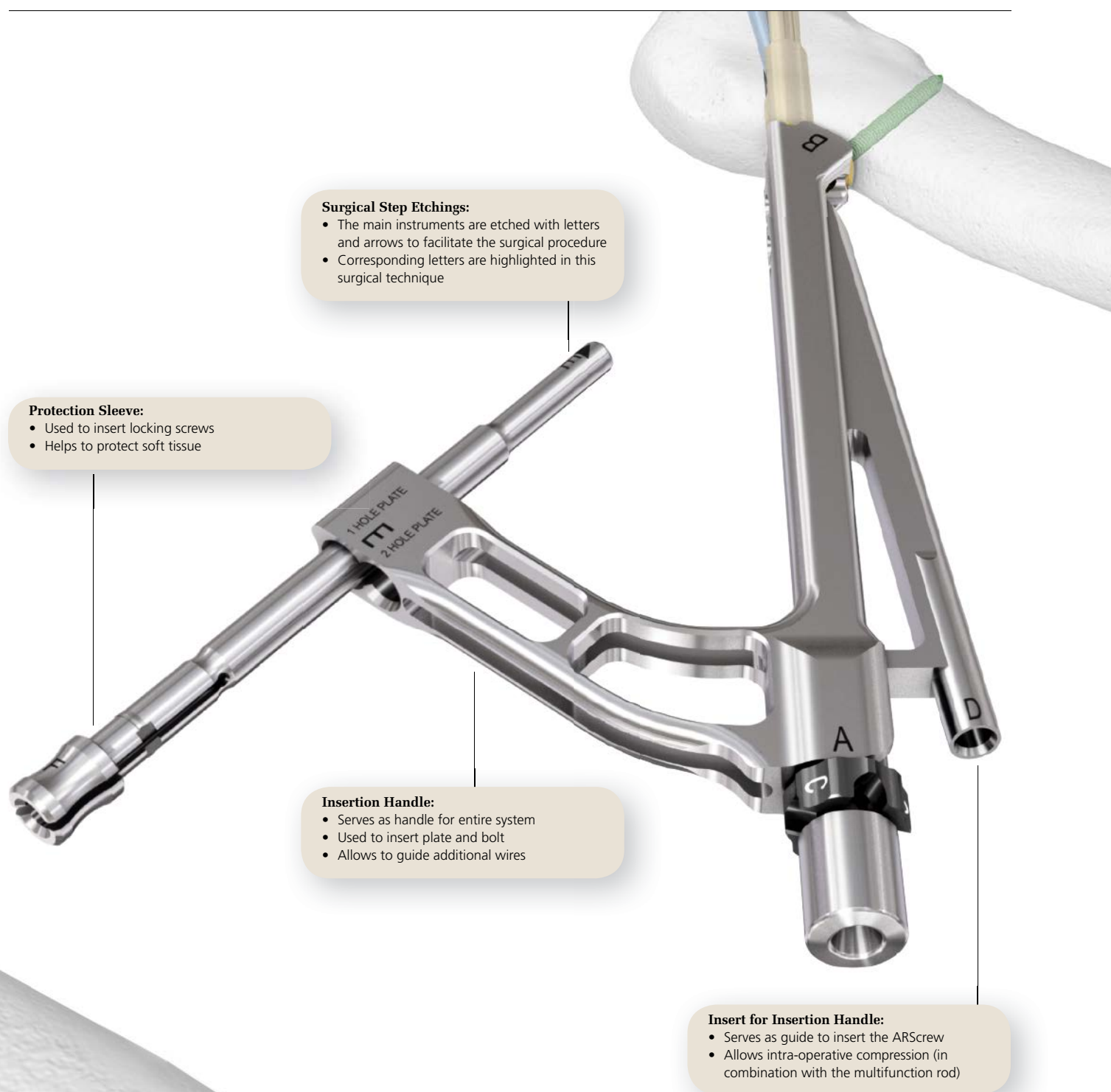
Bolt:

- Cylindrical bolt design intended to maintain reduction during insertion
- Provides angular stability (fixed angle between Bolt and ARScrew)
- Dynamic design of integrated Bolt and ARScrew allows for 20 mm of guided collapse
- Designed to reduce lateral protrusion

Plate:

- Provides angular stability (fixed angle between Bolt and ARScrew)
- Accommodates standard 5.0 mm Locking Screws
- Designed to provide optimal implant footprint



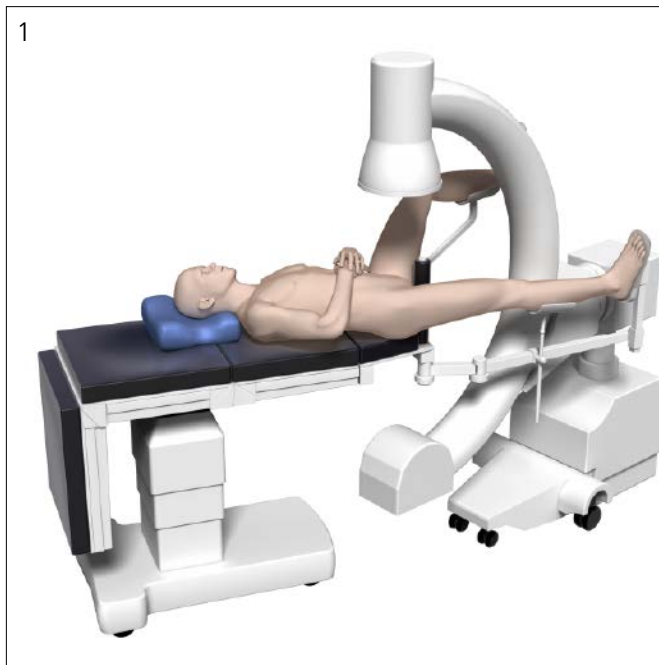


Preparation

1. Position patient

Place the patient in a supine position on the operating table.

- Position the image intensifier to enable visualization of the proximal femur in both the AP and lateral planes. (1)



2. Reduce fracture

Instrument

357.399 3.2 mm Guide Wire 400 mm

Note: Proper reduction of the fracture is crucial for good bone healing and function as well as reduction of complications.

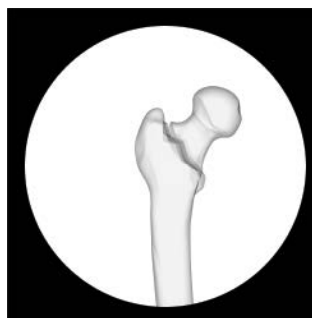
Reduce the fracture by means of gentle traction/flexion, adduction/abduction and internal rotation (about 15°, so the femoral neck is parallel to the operating table).

- Check the reduction in two planes under image intensifier control. If the reduction is insufficient consider open reduction.

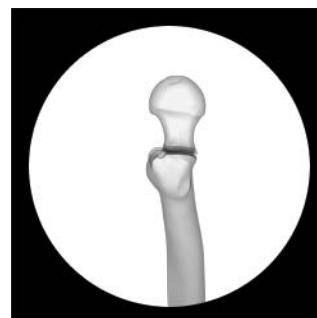
Insert an unused wire as an antirotation wire in the superior/anterior part of the femoral neck to prevent any inadvertent rotation of the femoral head.

Notes:

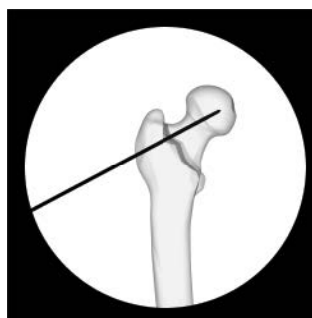
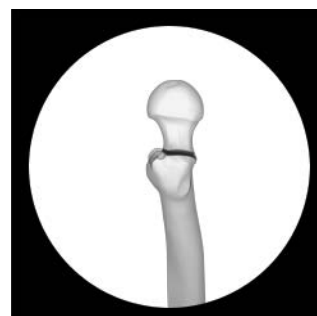
- An inappropriate position of the antirotation wire may interfere with the proper placement of the implant.
 - The antirotation wire can be placed percutaneous or through the lateral incision.
- Precaution: Monitor the position of the wire during insertion and confirm the final position using the image intensifier. Over inserting guide wires could lead to damage to vital organs.**



Before Reduction



After Reduction



Temp. Fixation



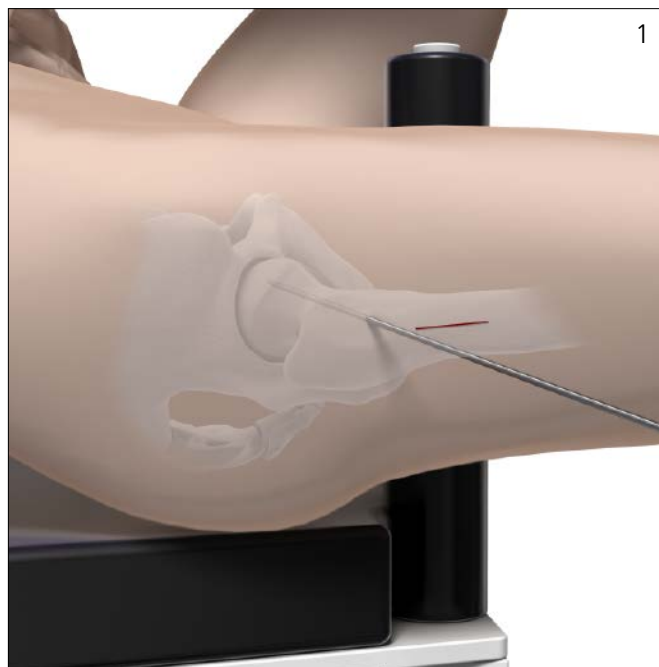
3. Approach

Make a straight lateral skin incision of approximately 6 cm in length, starting 2 to 3 cm proximal to the center of the femoral neck axis. (1)

Access and expose the lateral femoral surface accordingly for satisfactory hardware placement.

Option:

In obese patients, consider making a second incision during locking screw insertion. The second incision needs to be at the entry point of the protection sleeve, proximal to the main incision (see ANTIROTATION-SCREW AND LOCKING SCREW INSERTION step for additional information on attaching the protection sleeve).



Implant Insertion

Irrigate and apply suction for removal of debris potentially generated during implant insertion.

1. Insert guide wire

Instruments

357.399	3.2 mm Guide Wire 400 mm
03.168.001	130° Angled Guide for 3.2 mm Guide Wires

Insert a second, unused guide wire as central guide wire, using the 130° angled guide. (1)

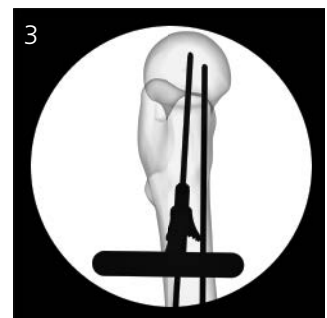
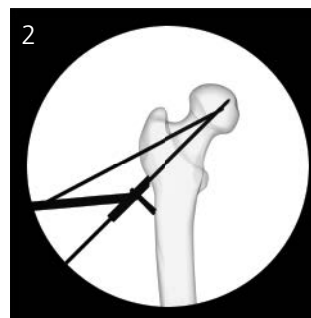
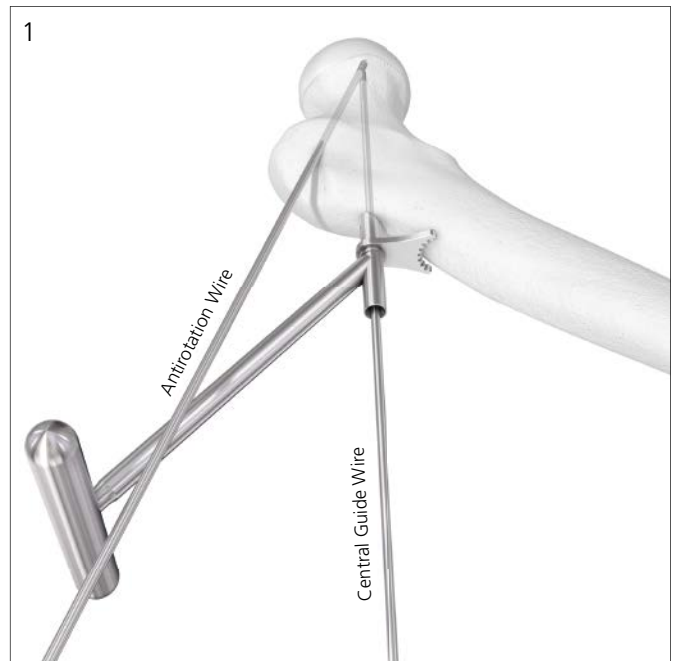
- Use image intensification to place the guide wire slightly inferior to the apex of the femoral head, extending into the subchondral bone on the AP view. (2)

In the lateral view, the guide wire should be central in the femoral neck and head. (3)

Note: The position of the guide wire within the femoral neck and head should be chosen according to the patient's anatomy before fracture. The implant plate allows a placement of about $\pm 5^\circ$ compared to the 130° angle.

Precautions:

- Monitor the position of the wire during insertion and confirm the final position using the image intensifier. Over inserting guide wires could lead to damage to vital organs.
- Replace wires if they are bent after insertion.



2. Option: adjust guide wire

Instruments

357.399	3.2 mm Guide Wire 400 mm
03.168.002	Correction Guide for 3.2 mm Guide Wires (optional)

Use the correction guide and an unused guide wire to adjust the position of the central guide wire in reference to the initial central guide wire. The following three types of adjustments are possible:

1. Parallel Correction (5 mm)

Insert the correction guide over the initial wire (orange) and turn the correction guide to define the new entry point (anterior/posterior or inferior/superior). Then use a new wire in the parallel hole (green) and remove the initial wire.

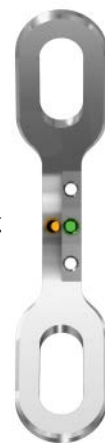
2. Angle Correction (5°) and Entry Point Correction (5 mm)

Insert the correction guide over the initial wire (orange) and turn the correction guide to define the new entry point. Then use a new wire in either the left or the right 5°-hole (green).

1. Example:
Parallel correction
with new entry
point anterior.



Parallel Wire – new entry point anterior.



2. Example:
Angle correction
towards anterior
with new entry
point superior.



Wire towards anterior – new entry point superior.



3. Angle Correction (5°) and Same Entry Point

Insert the correction guide over the initial wire (orange hole in side-view), turn the correction guide to choose the new temporary entry point, insert a new wire in the parallel hole (blue) and remove the initial wire. Then use a new wire in either the left or the right 5°-hole (green) to correct the angle.

Precautions:

- **Monitor the position of the wire during insertion and confirm the final position using the image intensifier. Over inserting guide wires could lead to damage to vital organs.**
- **Replace wires if they are bent after insertion.**

3. Example:

Angle correction towards anterior with same entry point. Initial wire (orange) only shown in side-view.



Wire towards anterior – same entry point.



3. Determine length

Instrument

03.168.003 Direct Measuring Device for 3.2 mm Guide Wires

Slide the direct measuring device over the central guide wire. (1)

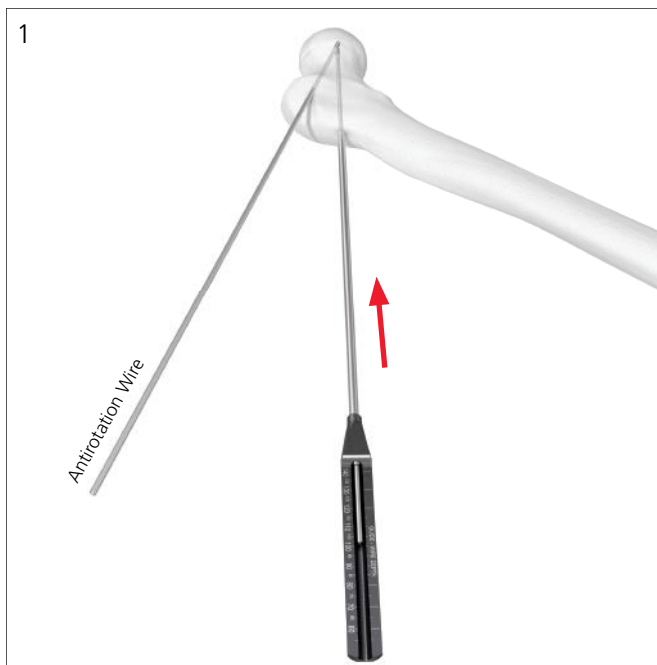
Read the depth of the guide wire on the direct measuring device. (2)

As the guide wire is inserted into the subchondral bone (in the AP view), remove 5 mm from the value seen on the direct measuring device and choose the next shorter construct size.

The available construct sizes are:

75 mm	95 mm	115 mm
80 mm	100 mm	120 mm
85 mm	105 mm	125 mm
90 mm	110 mm	130 mm

Example: If you read 102 mm on the direct measuring device, the construct size of the implant should be 95 mm ($102 - 5 = 97 \rightarrow$ choose 95 mm).



4. Ream for insertion of plate and bolt

Instrument

03.168.004	Complete Opening Drill Bit/Reamer Assembly
Consisting of:	
03.168.005	10.2 mm Cannulated Drill Bit Length 251 mm
03.168.006	12.5 mm Reamer
03.168.007	Nut for Reamer

Assemble the reamer by sliding the reamer-component over the drill bit until it clicks into place at the selected construct size (95 mm in the example before). Secure the reamer by tightening the nut. (1)

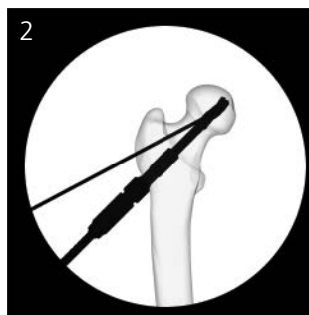
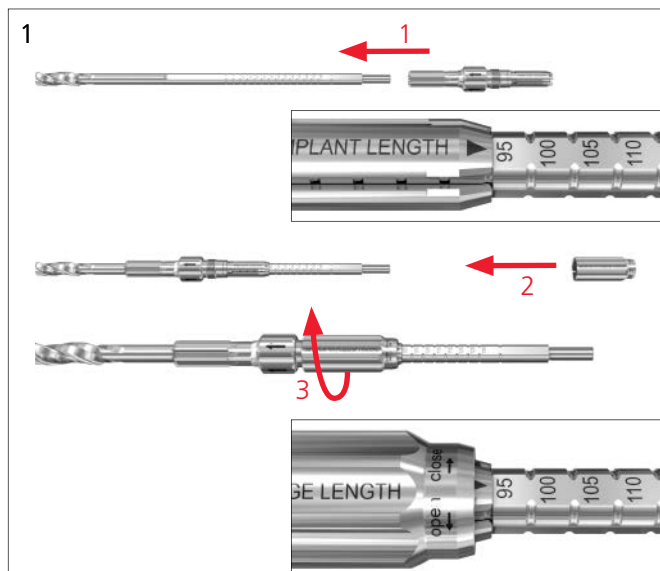
Ream down until the reamer stops on the bone. (2)

Notes:

- It is recommended that the femoral head is temporarily fixated with an antirotation wire prior to reaming.
- Control guide wire migration and check reaming depth during reaming using the image intensifier.
- When reaming in dense bone, use of continuous irrigation is recommended.
- Avoid excessive reaming force during reaming.

Remove the reamer.

It is important to reinsert the guide wire if it is removed accidentally. To reinsert the wire, push the reamer back into the reamed hole (without the use of a power tool) and use the cannulation to reinsert the guide wire into the original position.



5. Assemble implant and insertion instruments

Instruments

03.168.008	Femoral Neck System Insertion Handle
03.168.009	Insert for FNS Insertion Handle

- A** Slide the insert into the insertion handle, without tightening the black screw. (1)

Fully insert the bolt with the selected construct size (95 mm in the example before) into the plate. (2)

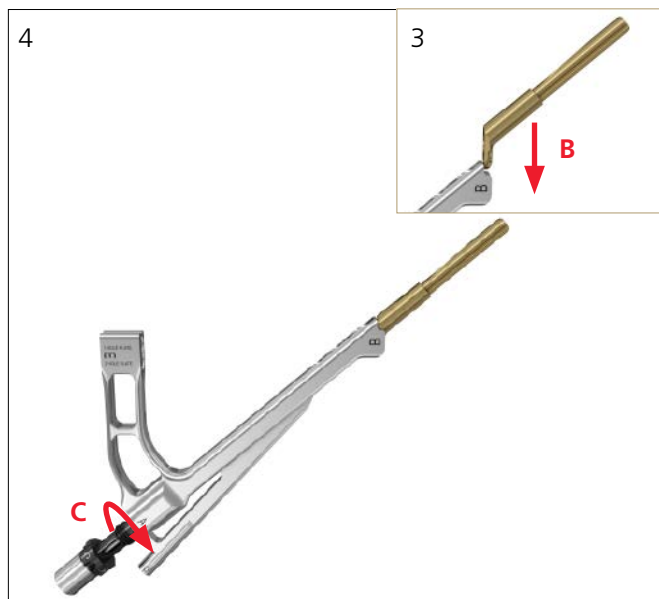
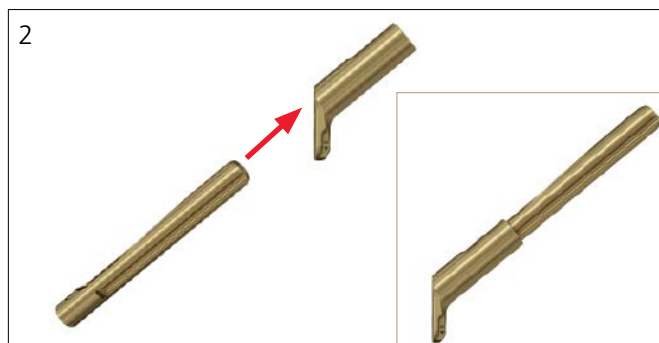
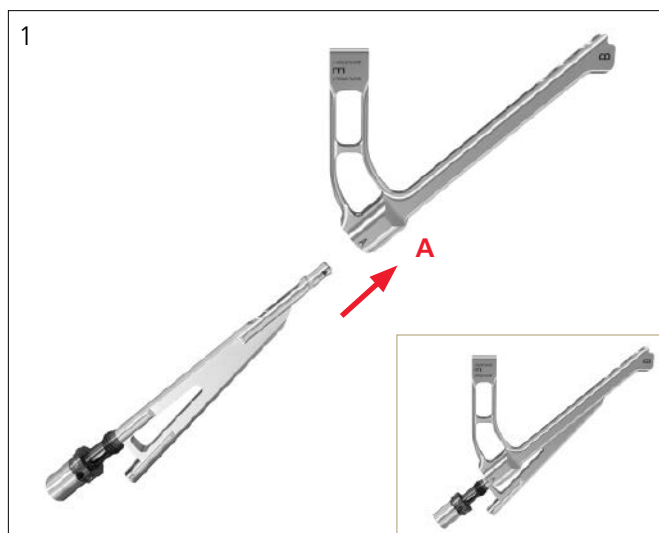
- B** Mount the implant onto the insertion handle. (3)

Note: Ensure that the implant is correctly fixed to the insertion instrument and that the bolt is in the completely extended position.

- C** Manually tighten the black screw of the insert to attach the implant. (4)

Precaution: Hand-tightening the black screw is sufficient. Using additional tools might cause overtightening.

Option: A longer side plate with two locking holes (2-hole plate) is available as option.



6. Insert implant

Instrument

03.168.015 Cylinder for Insertion Instruments (optional)

Insert the implant over the central guide wire into the pre-reamed hole. (1)

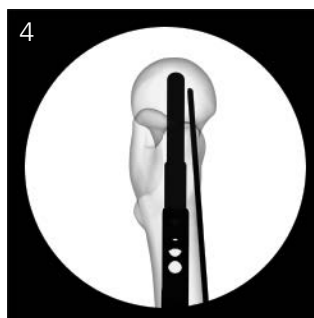
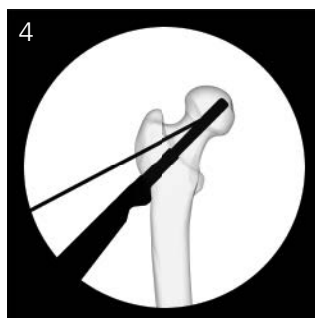
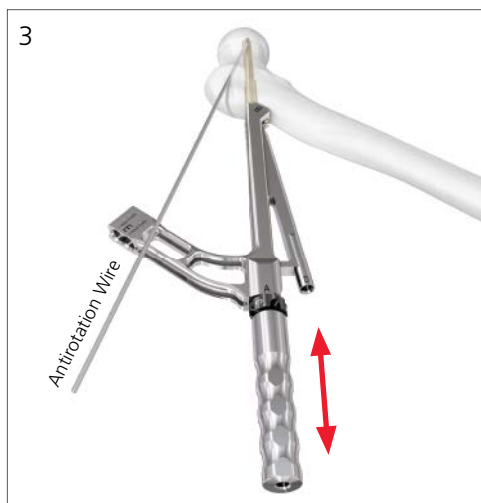
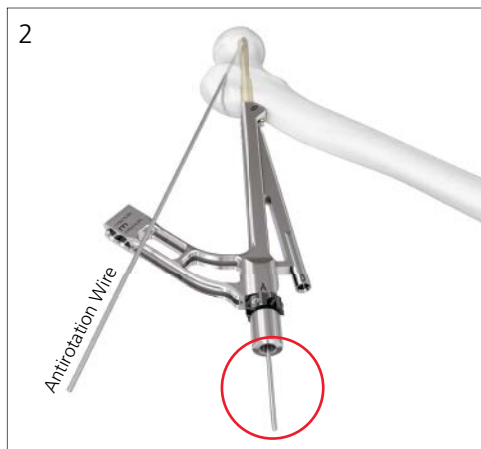
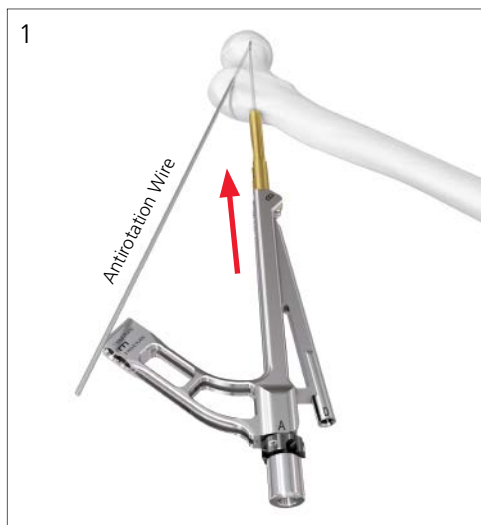
Precaution: When not using the cylinder, the guide wire will become visible on the outer side of the insert. Ensure not to move the guide wire. (2)

Option: The cylinder can be used to manually tap the plate onto the bone. (3) If additional tapping is required, use a standard surgical hammer to slightly tap onto the cylinder.

- Use image intensification to confirm the insertion depth and ensure that the plate is inserted down to the bone as well as aligned with the axis of the femoral shaft. (4)

Notes:

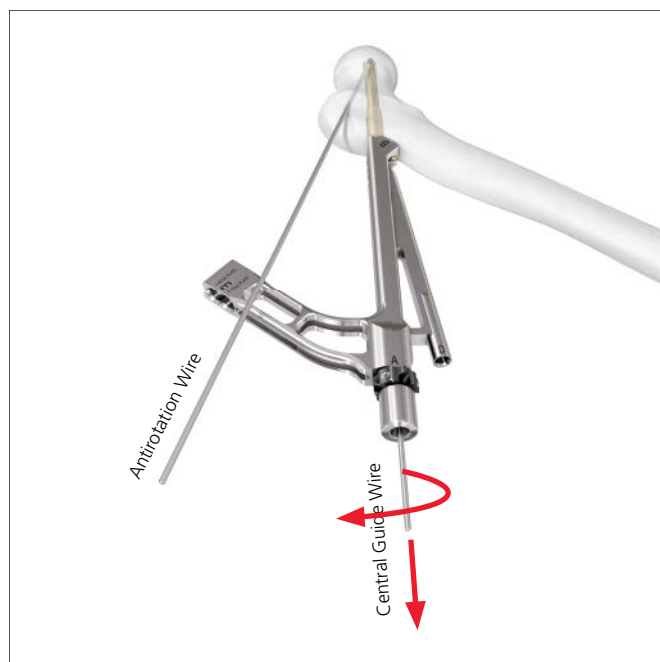
- It is recommended that the femoral head is temporarily fixated with an antirotation wire prior to implant insertion.
- Avoid excessive insertion force.
- After insertion, ensure that the instruments are still correctly fixed to the implant.



7. Remove guide wire

Remove the central guide wire. (1)

Keep the antirotation wire to prevent loss of reduction and rotation of the head.



Antirotation-Screw and Locking Screw Insertion

Irrigate and apply suction for removal of debris potentially generated during antirotation-screw and locking screw insertion.

1. Drill for antirotation-screw

Instruments

03.168.011 4.3 mm Drill Bit Length 413 mm

03.168.012 Drill Stop

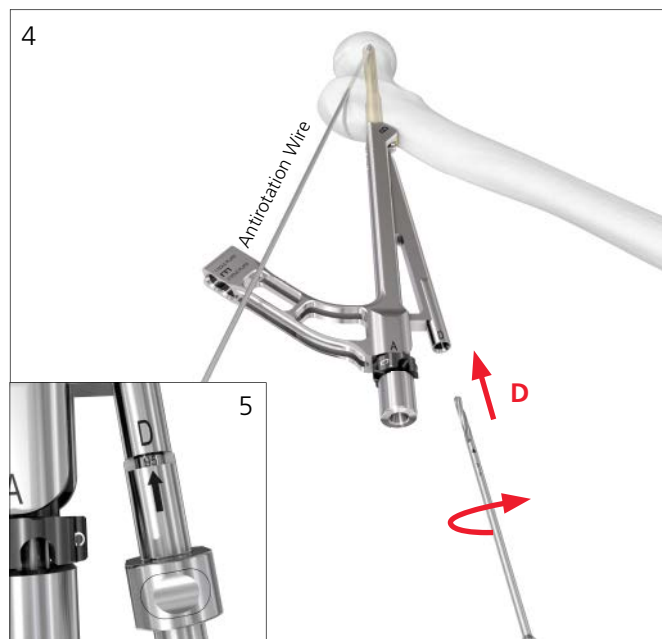
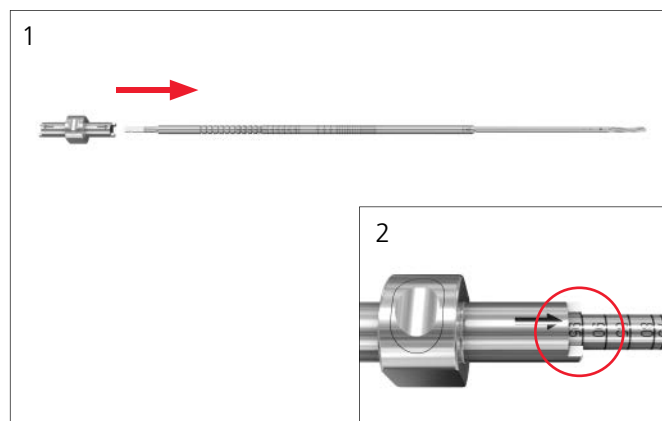
Pass the drill stop over the back end of the drill bit and check the drill stop for wear per the instructions on page 33. (1) Adjust the setting to the chosen construct size (95 mm in the example). (2)

Notes:

- The length of the bolt and the antirotation-screw are pre-defined based on the selected construct size.
- Ensure that the central guide wire is removed before drilling.
- Confirm that the insertion handle and plate are aligned with the femoral shaft before drilling for the antirotation-screw. (3)

D Use the guide of the insert to drill the hole for the antirotation-screw. (4)

Drill until the drill stop stops on the guide of the insert. (5)



2. Insert antirotation-screw

Instruments

03.168.014	T25 StarDrive Screwdriver Shaft 241 mm
511.774	Torque Limiting Attachment, 4 Nm, for AO Reaming Coupler
03.140.027	Large Cannulated Handle w/Quick Coupling – 12 mm Hex

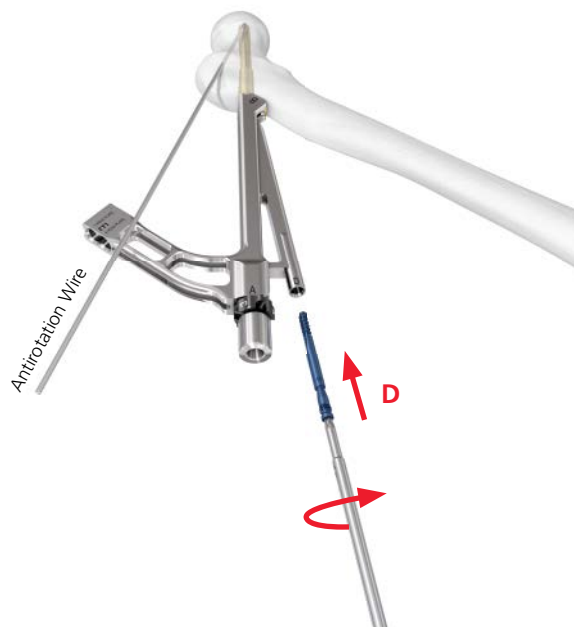
Note: Confirm that the insertion handle and plate are aligned with the femoral shaft.

D Insert the antirotation-screw with the selected construct size (95 mm in the example). (1)

Insertion as well as final tightening should be done slowly and by hand using the screwdriver shaft, together with the 4 Nm torque limiter and the appropriate handle.

(2) If dense bone is preventing antirotation-screw insertion, then carefully use the handle without torque limiter for insertion.

1



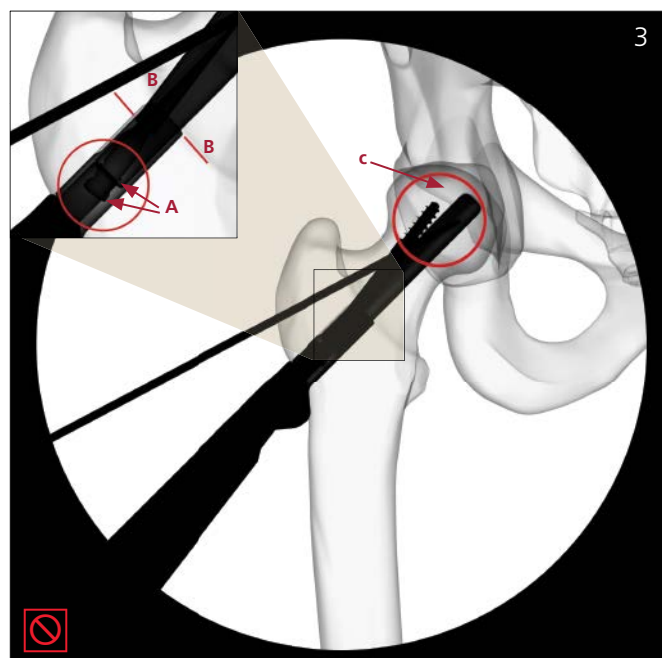
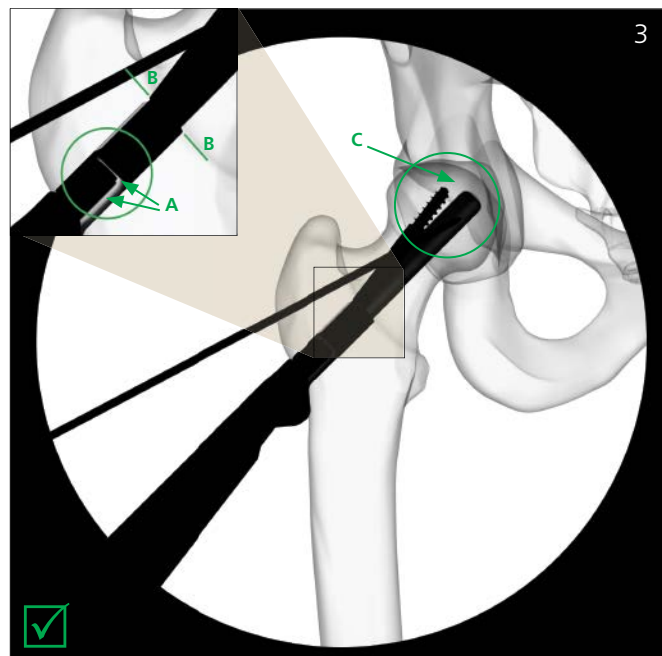
2



Precautions:

- Monitor antirotation-screw insertion and confirm screw position using the image intensifier prior to final tightening.
- Confirm that the femoral head is temporarily fixated with an antirotation wire and hold the position of the handle during final tightening to prevent any inadvertent rotation.
- After final tightening, use the image intensifier to check that the antirotation-screw is fully inserted. (3) If not, then loosen and reinsert the antirotation-screw. Use the 4 Nm torque limiter and the appropriate handle for final tightening.

- A** The head of the antirotation-screw should not appear outside of the bolt.
- B** The notch of the antirotation-screw should be at the same level as the notch of the plate.
- C** The tip of the antirotation-screw should be in a similar insertion depth when compared to the tip of the bolt.



3. Attach protection sleeve for locking screw insertion

Instrument

03.168.013	Protection Sleeve for FNS Insertion Instruments
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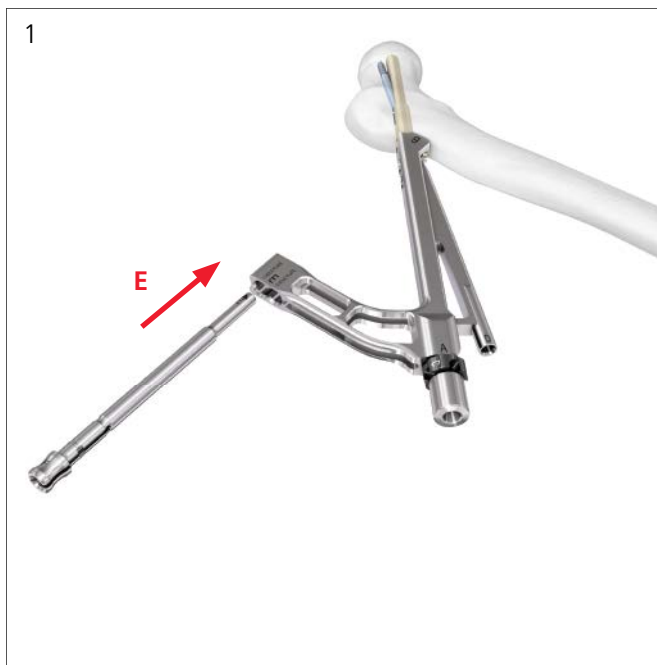
Remove any antirotation wires.

E Attach the protection sleeve to the insertion handle. (1)

Notes:

- In obese patients, the use of a second incision to insert the protection sleeve should be considered.
- Check that the protection sleeve is inserted in the correct position (1-hole plate or 2-hole plate) of the insertion handle.
- Insert the proximal locking screw first if using a 2-hole plate.

Check that the protection sleeve is fully inserted. (2)



4. Drill for locking screw

Instruments

03.168.011	4.3 mm Drill Bit Length 413 mm
03.168.017	Depth Gauge up to 100 mm (optional)

Check that the drill stop is removed from the drill bit.

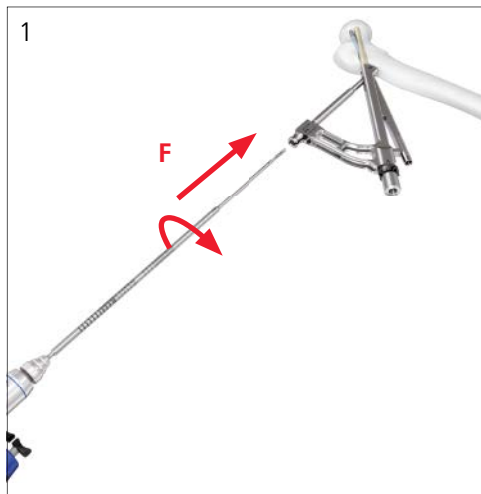
Note: Confirm that the insertion handle and plate are still aligned with the femoral shaft.

F Drill the hole for the bi-cortical locking screw through the protection sleeve. (1)

Read the screw length directly off the etching on the drill bit. (2)

Option:

Use the depth gauge through the protection sleeve to determine the depth of the drilled hole. The screw length should be chosen at least 4 mm longer than the determined depth of the hole. (3)



5. Insert locking screw

Instruments

03.168.014	T25 StarDrive Screwdriver Shaft 241 mm or
03.168.016	3.5 mm Hexagonal Screwdriver Shaft 241 mm
511.774	Torque Limiting Attachment, 4 Nm, for AO Reaming Coupler
03.140.027	Large Cannulated Handle w/Quick Coupling – 12 mm Hex

Note: Confirm that the insertion handle and plate are still aligned with the femoral shaft.

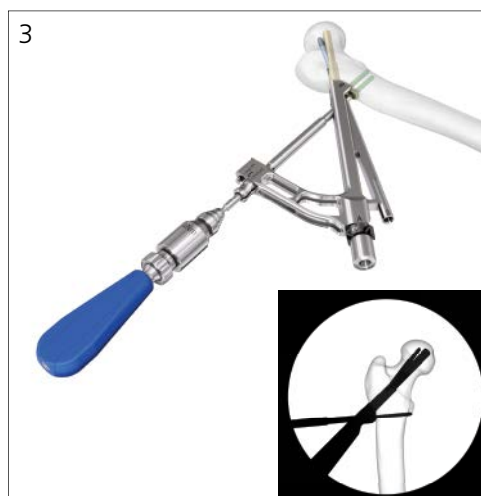
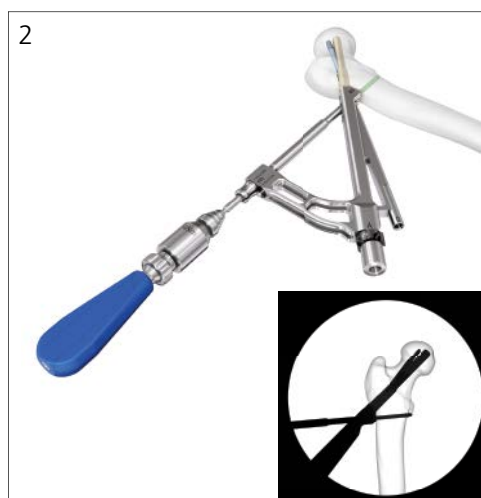
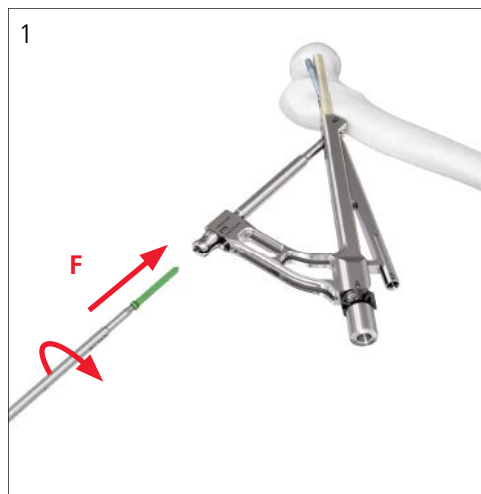
F Insert the locking screw with the determined length, as read from the drill bit or depth gauge. (1)

The locking screw may be inserted using power equipment. Final tightening must be done slowly and by hand using the screwdriver shaft, together with the 4 Nm torque limiter and the appropriate handle. (2)

Note: Monitor locking screw insertion and confirm screw position as well as length using the image intensifier prior to final tightening.

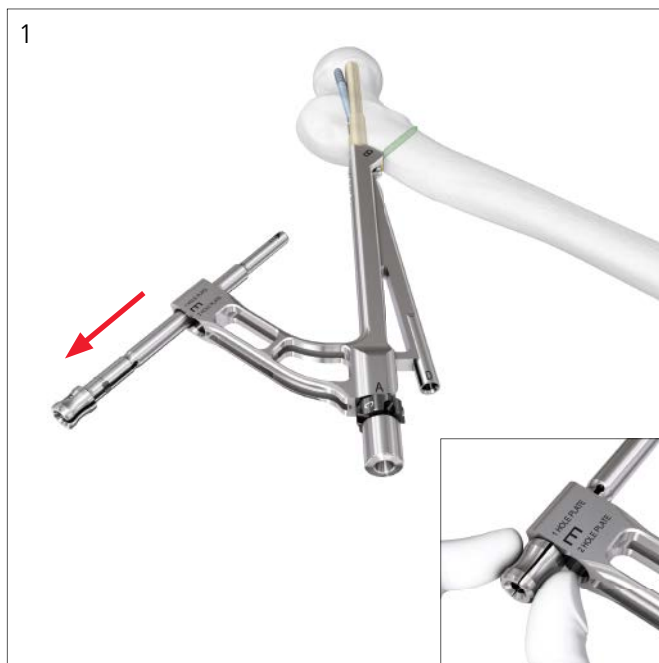
Option:

If using a 2-hole plate, repeat steps 3 to 5 to insert the distal screw. (3)



6. Remove protection sleeve

Remove the protection sleeve by pressing together the head of the sleeve while pulling. (1)



Option: Intra-Operative Compression

Inter-fragmentary compression may be applied intra-operatively. The locking screw as well as the antirotation-screw need to be inserted prior to applying compression.

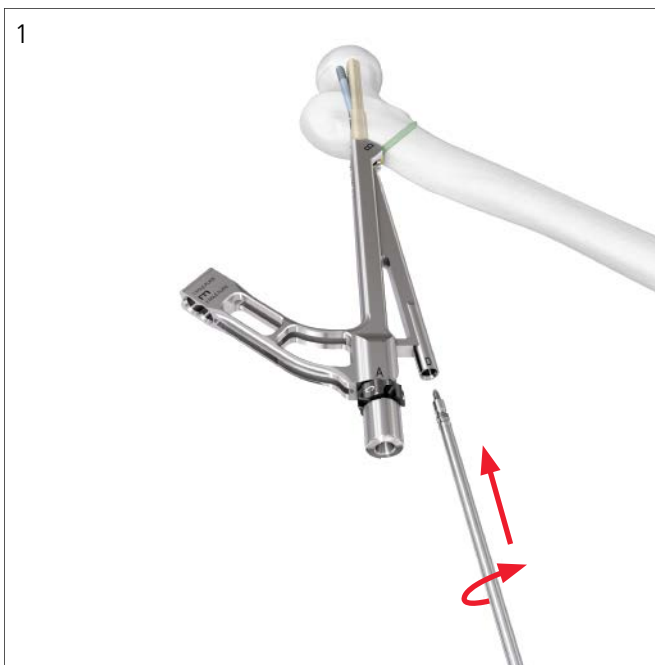
1. Attach multifunction rod for compression

Instrument

03.168.010	Multifunction Rod for Insertion Instruments
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Insert the multifunction rod through the guide of the antirotation-screw. (1)

Hand-tighten the rod by turning it clockwise until the rod is fully inserted. (2)

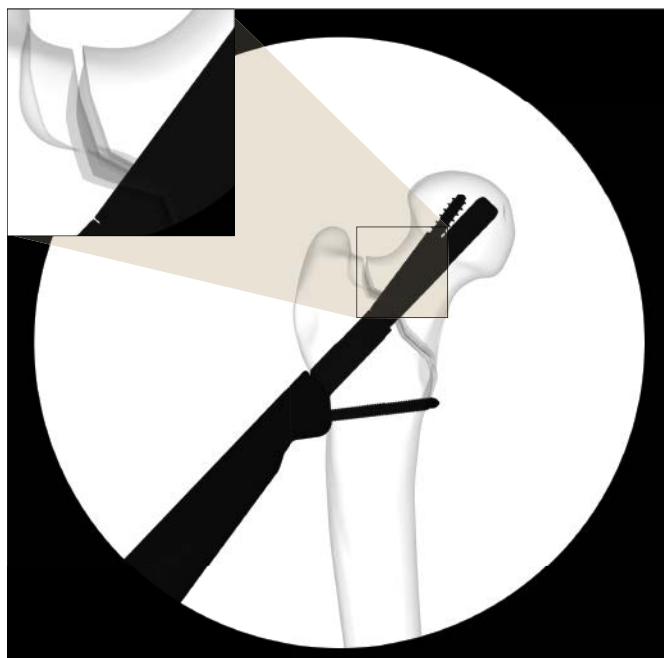
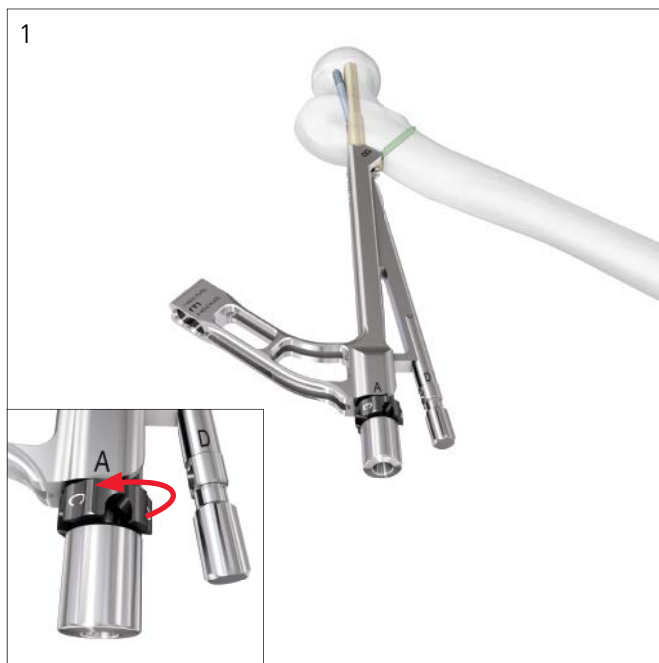


2. Apply compression

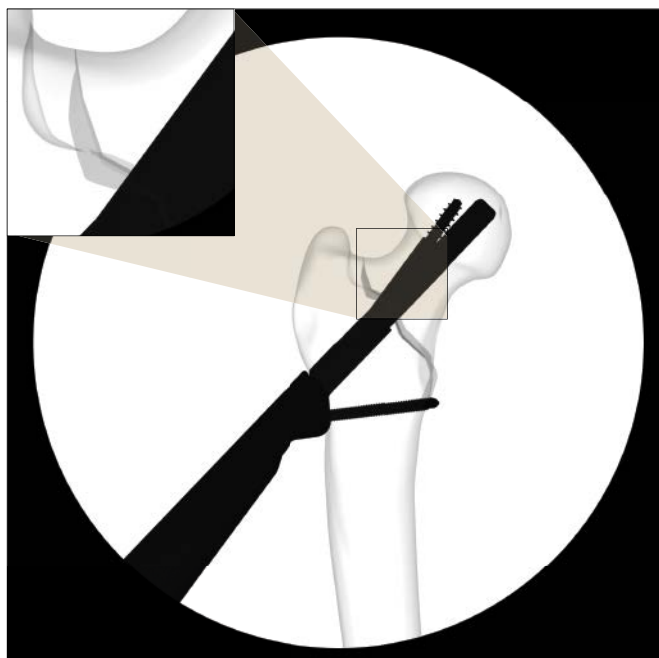
- **Note:** If applicable, consider to loosen traction before applying compression. Monitor the implant position during compression using the image intensifier.

Apply inter-fragmentary compression by turning the screw of the insert counter-clockwise. (1)

Precaution: Applying compression by hand is sufficient. Using additional tools for compression might cause excessive forces.



Before Compression



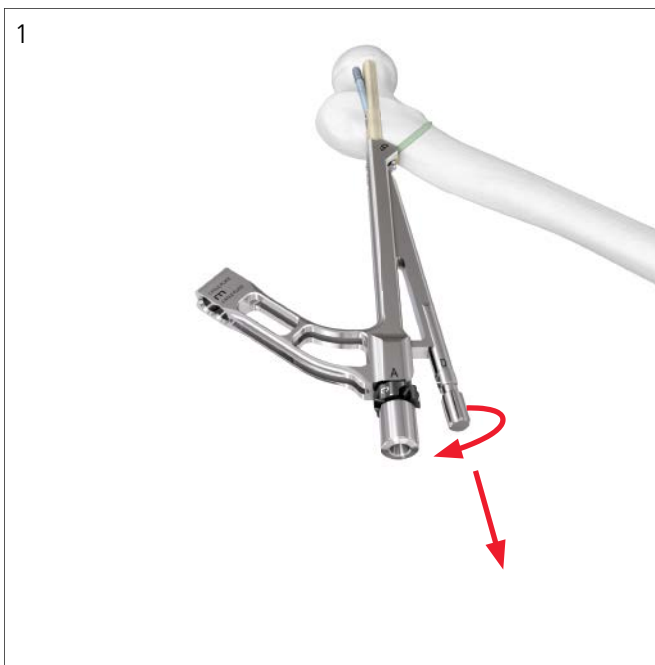
After Compression

3. Remove Multifunction Rod

Remove the multifunction rod by turning it counterclockwise. (1)

Note: If loosening by hand is not possible, then use another instrument (eg, a screwdriver shaft) through the hole in the multifunction rod to untighten it.

- Use image intensification to confirm that the antirotation-screw remains locked in the implant.



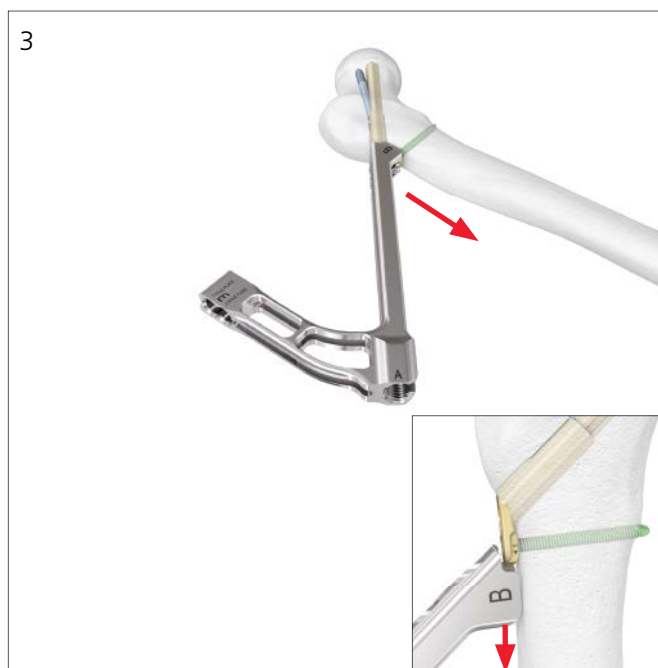
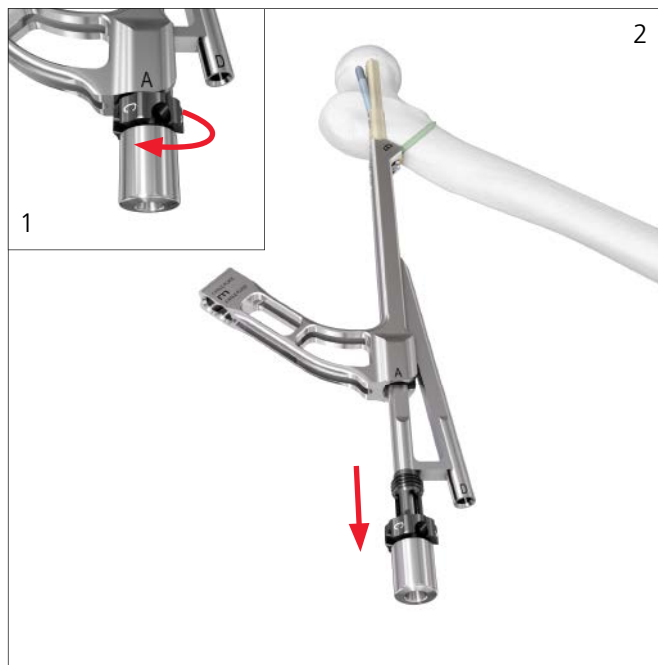
Instrument Disassembly and Final Check

1. Remove insertion instruments

Unscrew (counterclockwise) the insert from the insertion handle by completely loosening the screw of the insert. (1)

Remove the insert from the insertion handle. (2)

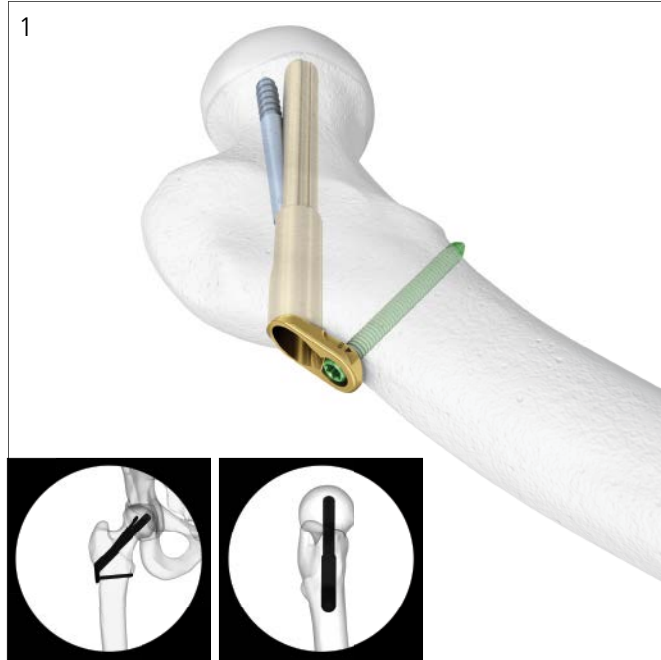
Remove the insertion handle by sliding it off the plate in a distal direction. (3)



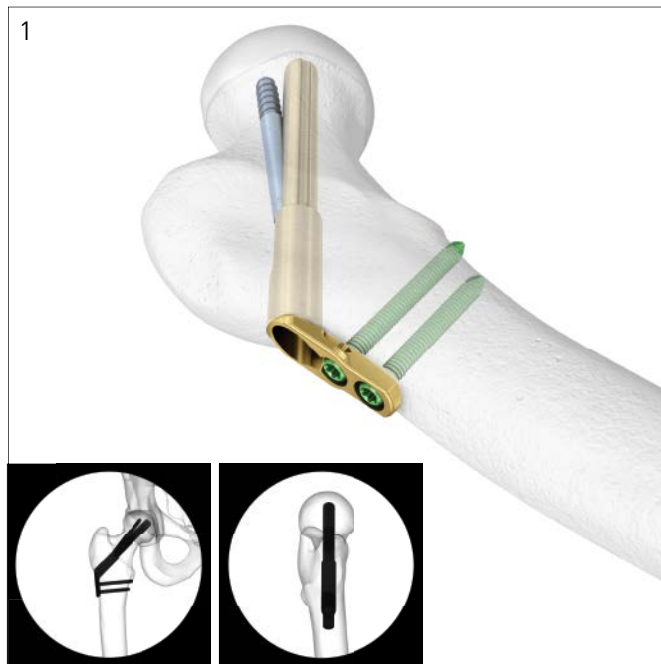
2. Final check

- Before closing the wound, confirm the implant size and positioning under image intensifier control. (1)

1



1



Option: Implant Removal

Irrigate and apply suction for removal of debris potentially generated during implant removal.

1. Remove locking screw(s)

Instruments

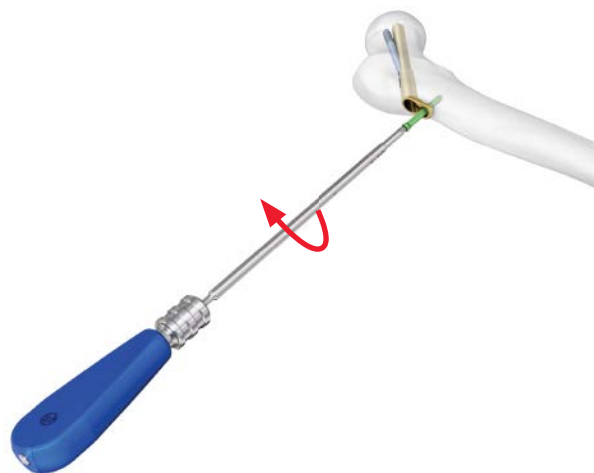
03.168.014	T25 StarDrive Screwdriver Shaft 241 mm or
03.168.016	3.5 mm Hexagonal Screwdriver Shaft 241 mm
03.010.516	Handle/Large with Quick Coupling

Remove the locking screw(s) by hand using the screwdriver shaft together with the appropriate handle and without torque limiter. (1)

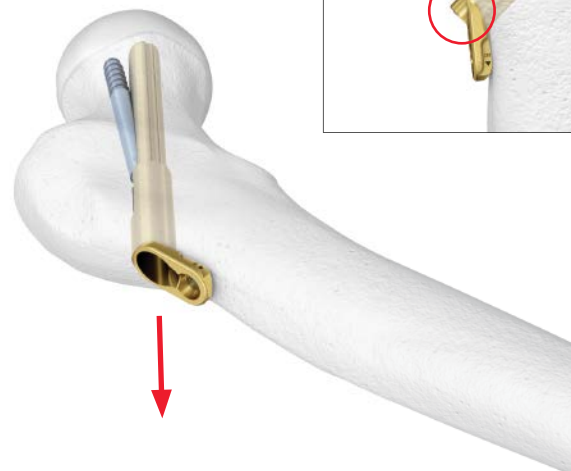
If the screw cannot be removed with the screwdriver, consult the separate publication "Screw Removal Set" (J8568-C).

Note: If the implant is fully telescoped, resulting in the bolt being more lateral than the plate (2), pull on the plate (eg, with surgical pliers) to extend it from the bolt (to about 5 mm) before conducting the steps on the following pages. (3)

1



3



2



2. Remove antirotation-screw

Instruments

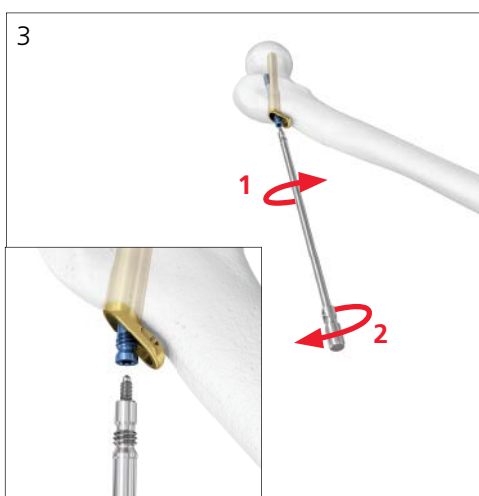
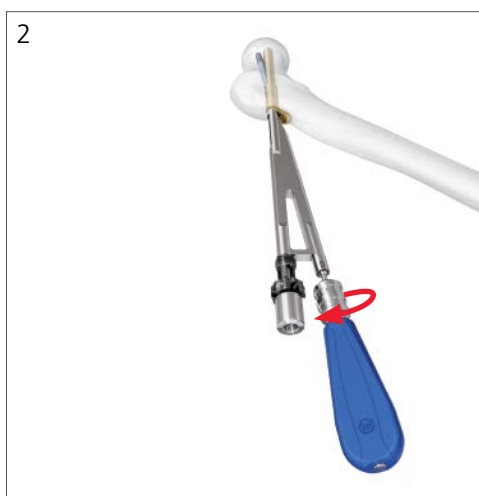
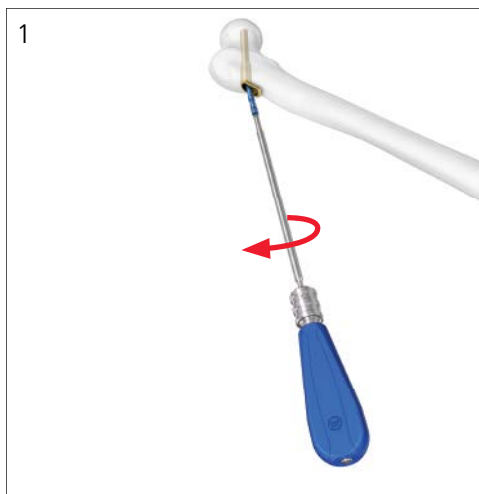
03.168.014	T25 StarDrive Screwdriver Shaft 241 mm
03.010.516	Handle/Large with Quick Coupling
03.168.009	Insert for FNS Insertion Handle (optional)
03.168.010	Multifunction Rod for Insertion Instruments (optional)

Remove the antirotation-screw by hand using the screwdriver shaft together with the appropriate handle and without torque limiter. (1)

Option:

- If it is difficult to find the recess of the antirotation-screw, then use the Insert (03.168.009) as a guide within the plate. (2)
- If the antirotation-screw gets detached from the screwdriver, then use the multifunction rod and turn it clockwise to catch the antirotation-screw. Pull on the multifunction rod and turn anti-clockwise to fully remove the antirotation-screw. (3)

If the antirotation-screw cannot be removed with the screwdriver or the multifunction rod, consult the separate publication "Screw Removal Set" (J8568-C).



3. Remove plate and bolt

Instruments

03.168.010 Multifunction Rod for Insertion Instruments

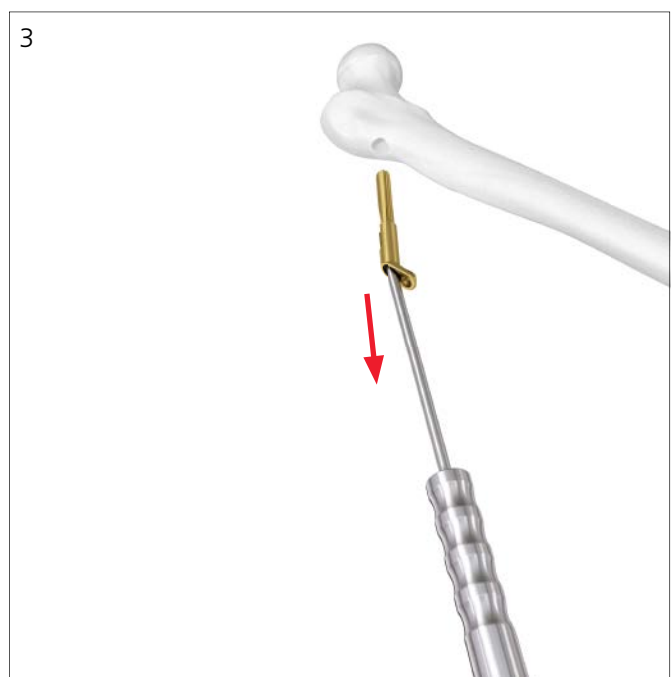
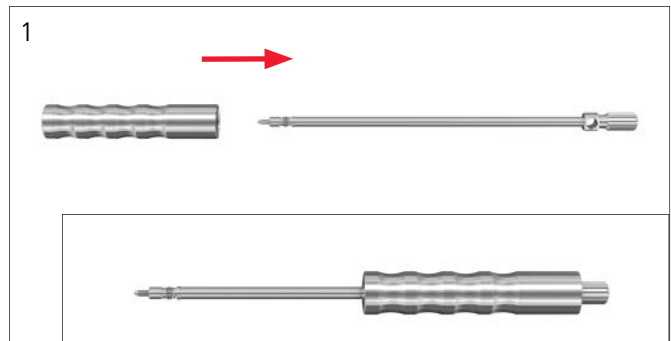
03.168.015 Cylinder for Insertion Instruments

Slide the cylinder over the multifunction rod. (1)

Attach the multifunction rod by turning it clockwise. Use the direction of the previously removed antirotation-screw. (2)

Tap outward with the cylinder to remove the plate and bolt simultaneously. (3)

Note: Avoid excessive forces during removal.



Checking Drill Stop Wear

1. Perform drill stop wear test

Instruments

03.168.011 4.3 mm Drill Bit Length 413 mm

03.168.012 Drill Stop

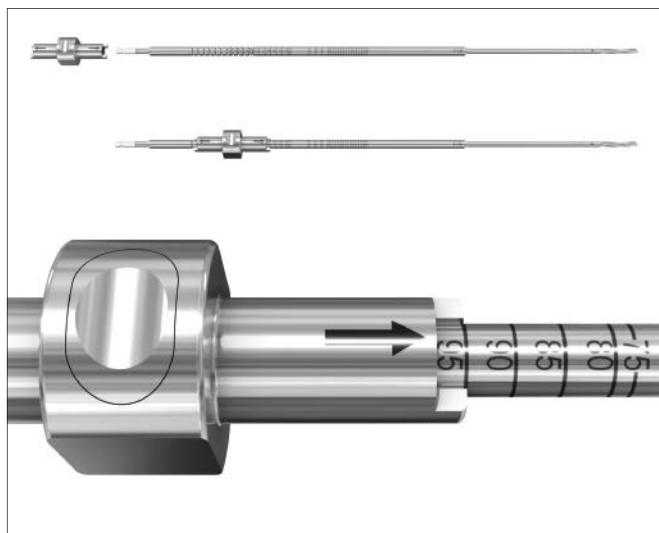
If excessive wear occurs, the drill stop can slip, resulting in incorrect drilling depth.

Before use:

- Slide drill stop onto the drill bit
- Press on the drill stop with the thumb without pressing the button. If the drill stop moves under pressure, replace it
- Do the same test in the opposite direction. If the drill stop moves, replace it

Precautions:

- **Drill only under periodic image intensifier control.**
- **While drilling, do not force.**
- **Replace drill stops that do not pass the described wear test.**



Implants

Features of the Femoral Neck System

Plate

- 130° CCD angle
- Material: Ti-6Al-7Nb (TAN)
- Color: Gold
- Lengths: 1-hole and 2-hole
- Sterile

Bolt

- Material: Ti-6Al-7Nb (TAN)
- Color: Gold
- Diameter: 10 mm
- Construct Lengths: 75 to 130 mm (5 mm increments)
- Sterile

Antirootation-Screw

- T25 StarDrive
- Material: Ti-6Al-7Nb (TAN)
- Color: Blue
- Diameter: 6.4 mm
- Construct Lengths: 75 to 130 mm (5 mm increments)
- Sterile

Locking Screw

- T25 StarDrive
- Material: Ti-6Al-7Nb (TAN)
- Color: Green
- Diameter: 5.0 mm
- Lengths: 30 to 60 mm (2 mm increments 30 to 50 mm, 5 mm increments 50 to 60 mm)
- Sterile or non-sterile



Implants in Kit Packaging

Implant Kit*

Implant Kit, for Femoral Neck System, sterile
Construct Length

04.168.075S	75 mm
04.168.080S	80 mm
04.168.085S	85 mm
04.168.090S	90 mm
04.168.095S	95 mm
04.168.100S	100 mm
04.168.105S	105 mm
04.168.110S	110 mm
04.168.115S	115 mm
04.168.120S	120 mm
04.168.125S	125 mm
04.168.130S	130 mm



*Available only with 1-hole plate.

Implants in Single Packaging

Plates

04.168.000S Femoral Neck System 1-Hole Plate, sterile



04.268.000S Femoral Neck System 2-Hole Plate, sterile



Bolts

Bolt, for Femoral Neck System, sterile
Construct Length

04.168.275S	75 mm
04.168.280S	80 mm
04.168.285S	85 mm
04.168.290S	90 mm
04.168.295S	95 mm
04.168.300S	100 mm
04.168.305S	105 mm
04.168.310S	110 mm
04.168.315S	115 mm
04.168.320S	120 mm
04.168.325S	125 mm
04.168.330S	130 mm



Antirootation-Screws

Antirootation Screw, for Femoral Neck System, sterile

	Construct Length
04.168.475S	75 mm
04.168.480S	80 mm
04.168.485S	85 mm
04.168.490S	90 mm
04.168.495S	95 mm
04.168.500S	100 mm
04.168.505S	105 mm
04.168.510S	110 mm
04.168.515S	115 mm
04.168.520S	120 mm
04.168.525S	125 mm
04.168.530S	130 mm



5.0 mm Locking Screws*

- 412.209– 5.0 mm Titanium Locking Screw,
- 412.221 self-tapping, with T25 StarDrive Recess



*Available non-sterile and sterile packed. Add "S" to the article number to order sterile products.

Instruments

03.168.001 130 Degree Angled Guide, for 3.2 mm Guide Wires, for Femoral Neck System



03.168.002 Correction Guide, for 3.2 mm Guide Wires, for Femoral Neck System



357.399 3.2 mm Guide Wire, 400 mm



03.168.003 Direct Measuring Device, for 3.2 mm Guide Wires, for Femoral Neck System



03.168.004 Complete Opening Drill Bit/Reamer Assembly



Consisting of:

03.168.005 10.2 mm Cannulated Drill Bit, 251 mm in Length, component of the 03.168.004

03.168.006 12.5 mm Reamer, component of the 03.168.004

03.168.007 Nut for Reamer, component of the 03.168.004

03.168.008 Insertion Handle, for Femoral Neck System



03.168.009 Insert, for Femoral Neck System
Insertion Handle



03.168.010 Multifunction Rod, for Insertion
Instruments, for Femoral Neck System



03.168.011 4.3 mm Drill Bit, 413 mm in Length



03.168.012 Drill Stop for Femoral Neck System



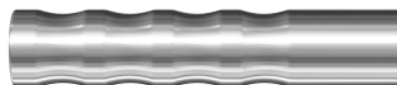
03.168.013 Protection Sleeve, for Femoral Neck
System Insertion Instruments



03.168.014 T25 StarDrive Screwdriver Shaft,
Length 241 mm



03.168.015 Cylinder, for Insertion Instruments,
for Femoral Neck System



03.168.016 3.5 mm Hexagonal Screwdriver Shaft,
Length 241 mm



03.168.017 Depth Gauge up to 100 mm,
for Femoral Neck System



03.140.027 Large Cannulated Handle,
Quick Coupling, 12 mm Hexagonal



511.774 Torque Limiting Attachment, 4 Nm,
for AO Reaming Coupler



03.010.516 Handle, Large, with Quick Coupling



Femoral Neck System Instrument Set (01.168.030)

Graphic Case

61.168.030 Graphic Case for Femoral Neck System

Instruments

03.168.001 130 Degree Angled Guide, for 3.2 mm Guide Wires, for Femoral Neck System

03.168.002 Correction Guide, for 3.2 mm Guide Wires, for Femoral Neck System

03.168.003 Direct Measuring Device, for 3.2 mm Guide Wires, for Femoral Neck System

03.168.004 Complete Opening Drill Bit/Reamer Assembly

03.168.008 Insertion Handle, for Femoral Neck System

03.168.009 Insert, for Femoral Neck System
Insertion Handle

03.168.010 Multifunction Rod, for Insertion Instruments, for Femoral Neck System

03.168.011 4.3 mm Drill Bit, 413 mm in Length

03.168.012 Drill Stop for Femoral Neck System

03.168.013 Protection Sleeve, for Femoral Neck System Insertion Instruments

03.168.014 T25 StarDrive Screwdriver Shaft, Length 241 mm

03.168.015 Cylinder, for Insertion Instruments, for Femoral Neck System

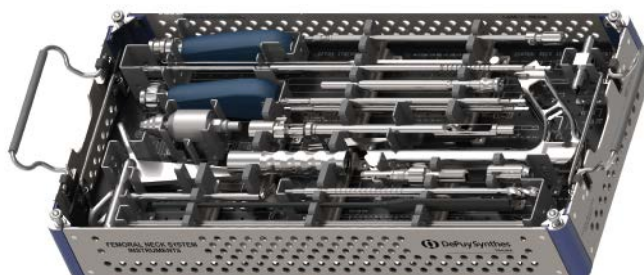
03.168.017 Depth Gauge up to 100 mm, for Femoral Neck System

03.140.027 Large Cannulated Handle, Quick Coupling, 12 mm Hexagonal

357.399 3.2 mm Guide Wire, 400 mm

511.774 Torque Limiting Attachment, 4 Nm, for AO Reaming Coupler

03.010.516 Handle, Large, with Quick Coupling



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