Smith+Nephew

CAPTURE

4.0/5.0/7.0mm High-Torque
Cannulated Screw System

Surgical Technique

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Nota Bene

The following technique is for informational and educational purposes only. It is not intended to serve as medical advice. It is the responsibility of treating physicians to determine and utilize the appropriate products and techniques according to their own clinical judgment for each of their patients. For more information on the product, including its indications for use, contraindications, and product safety information, please refer to the product's label and the Instructions for Use packaged with the product.

System Features and Benefits

The CAPTURE High-Torque Cannulated Screw System is a complete internal fixation system for the midfoot and rearfoot. The self-drilling and self-tapping titanium screws provide easy insertion using straight-forward, streamlined cannulated instruments.

- Partially threaded lag screws for compression across fusion and fracture sites
- Titanium screws
- Combination depth gauge/countersink allows for streamlined surgical technique
- Optional washers provided to help prevent subsidence into osteopenic bone
- 7.0mm screws feature short and long distal thread for purchase across osteotomy and fusion sites

4.0/5.0mm High-Torque Cannulated Screw Surgical Technique

Step 1 ▪ Exposure and Preparation

Preparation of joint surfaces for fusion is performed by sharply debriding the articular cartilage until bleeding subchondral bone is visualized. A stab incision through soft tissue down to bone should be made for placement of the screw.

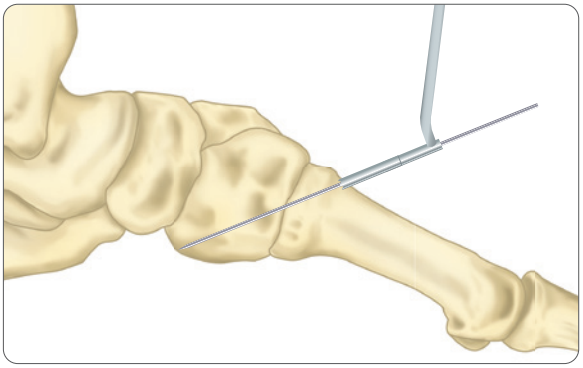


Figure 2-1

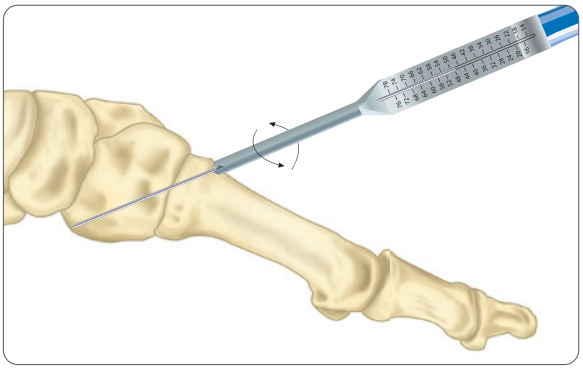


Figure 3-1

Step 2 ▪ Guide Pin Placement

	Double Guide Pin Sleeve 1.6/2.0 Wires
4.0mm Screw	Trocar Tip Plain Guide Wires (1.6 X 150mm)
5.0mm Screw	Trocar Tip Plain Guide Wires (2.0 X 150mm)

2-1 Insert the appropriate side of the guide pin sleeve into the stab incision until the sleeve is resting on bone. Angle the sleeve to the orientation desired and place the proper guide pin through the sleeve. Using power, insert the guide pin until the preferred depth is reached. The guide pin sleeve may now be removed. Using fluoroscopy, confirm the guide wire positioning.

Step 3 ▪ Countersink and Screw Sizing

3-1 Slide the cannulated countersink/depth gauge over the guide pin. Turn by hand, using a reciprocating motion, until adequate countersinking is achieved. It is recommended to penetrate the proximal cortex. Once countersinking is complete, read the measurement at the end of the guide pin to determine screw length.

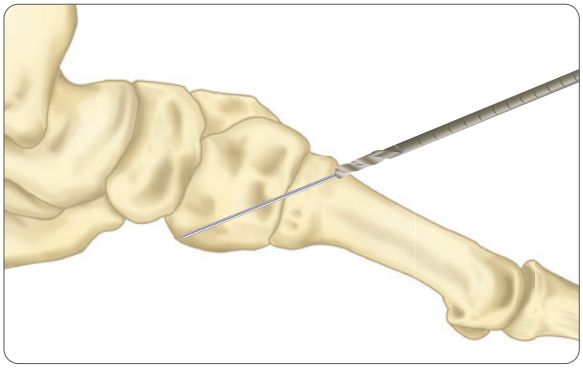


Figure 4-1

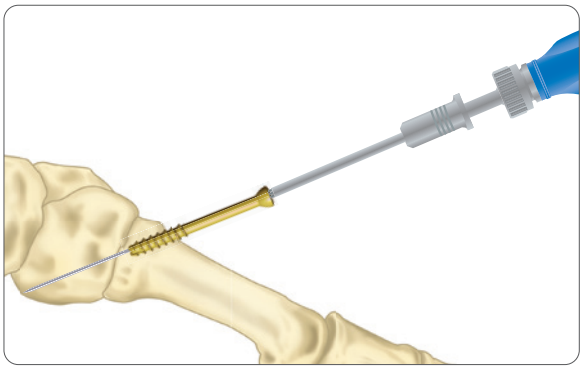


Figure 5-1

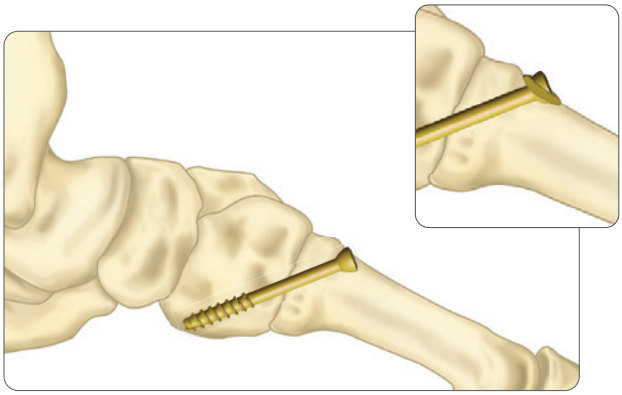


Figure 5-2

Step 4 ▪ Optional Drill and Tap

4-1

4.0mm Screw	2.8mm Drill
	Tap, 4.0mm Screw
5.0mm Screw	3.6mm Drill
	Tap, 5.0mm Screw

Note: CAPTURE High-Torque Screws are self-drilling and self-tapping and do not typically require pre-drilling. However, drilling and occasionally tapping is recommended for use in dense bone.

4-2 Place the appropriate cannulated drill over the guide wire and advance the drill until screw depth is achieved. Remove the drill and, if necessary, place the appropriate tap over the guide wire and advance until screw depth is reached.

Step 5 ▪ Screw Insertion

5-1

4.0mm Screw	T20 Hex Driver
5.0mm Screw	T25 Hex Driver

Remove the correlating color-coded screw from the caddy and place over the guide pin.

5-2 Attach the appropriate hex driver to the driver handle and advance the screw until fully seated. If use of a washer is desired, slide the color-coded washer on to the screw, place the screw over the guide pin, and advance the screw until fully seated. (Inset). It is recommended to confirm screw placement using fluoroscopy.

Cannulated Instrument Cleaning

4.0/5.0mm Instruments	Cannula Cleaning Stylet 1.6mm diameter

Instrument function is dependent on maintaining clean cannulation.

It is important to clean all cannulated instruments with the cleaning stylet intraoperatively and postoperatively.

7.0mm High-Torque Cannulated Screw Surgical Technique

Introduction

CAPTURE 7.0mm High-Torque Cannulated Screws are available in short and long distal thread lengths from sizes 80-120mm. Reduced thread length screws provide ideal lag fixation in procedures with a small surface area on the distal fragment of the fracture or osteotomy site.

Standard screw length available in sizes 30-120mm

Reduced thread length available in sizes 80-120mm

Step 1 ▪ Exposure and Preparation

Preparation of joint surfaces for fusion is performed by sharply debriding the articular cartilage until bleeding subchondral bone is visualized. A stab incision through soft tissue down to bone should be made for placement of the screw.

Step 2 ▪ Guide Pin Placement

2-1 Insert the tissue protector, containing the trocar pin sleeve and trocar, and seat against the bone surface. Remove the trocar, and insert a 3.2mm threaded or non-threaded guide wire. Proceed to insert the guide pin to the appropriate depth. Check pin placement through fluoroscopy.

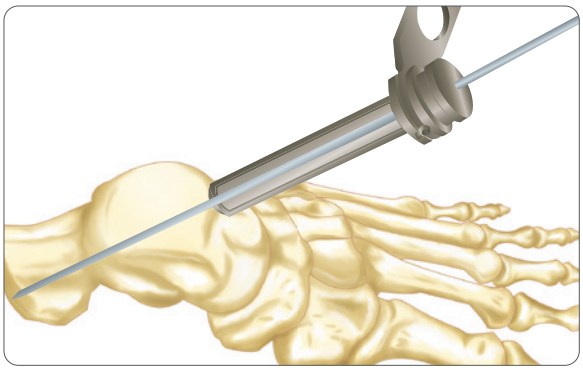


Figure 2-1

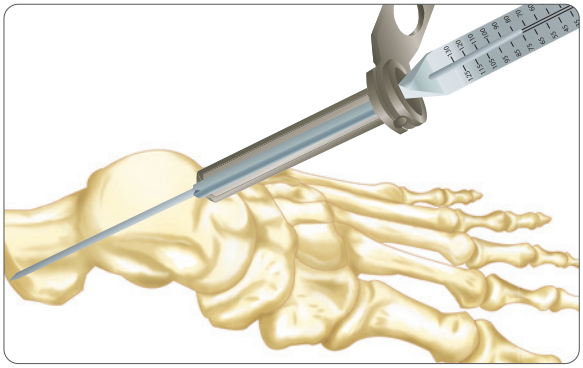


Figure 3-1

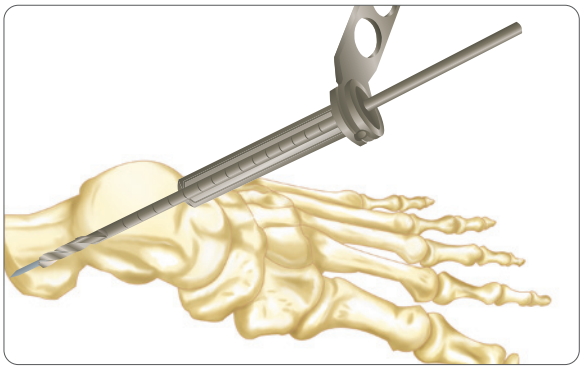


Figure 4-1

Step 3 ▪ Countersink and Screw Sizing

3-1 Slide the cannulated combination countersink/depth gauge over the guide wire and turn by hand until proper depth is achieved. It is recommended to penetrate the proximal cortex. Using the built-in depth gauge, determine the correct size screw.

Step 4 ▪ Optional Drill and Tap

4-1 Remove the trocar pin sleeve. CAPTURE High-Torque screws are self-drilling and self-tapping and typically do not need to be pre-drilled. However, depending on bone quality, the cannulated drill can be placed over the guide wire and inserted using a powered device.

Note: CAPTURE High-Torque Screws are self-drilling and self-tapping and do not typically require pre-drilling. However, drilling and occasionally tapping is recommended for use in dense bone.

Place the appropriate cannulated drill over the guide wire and advance the drill until screw depth is achieved. Remove the drill and, if necessary, place the appropriate tap over the guide wire and advance until screw depth is reached.

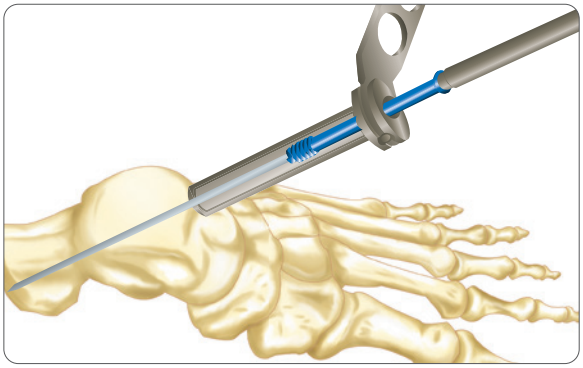


Figure 5-1

Step 5 ▪ Screw Insertion

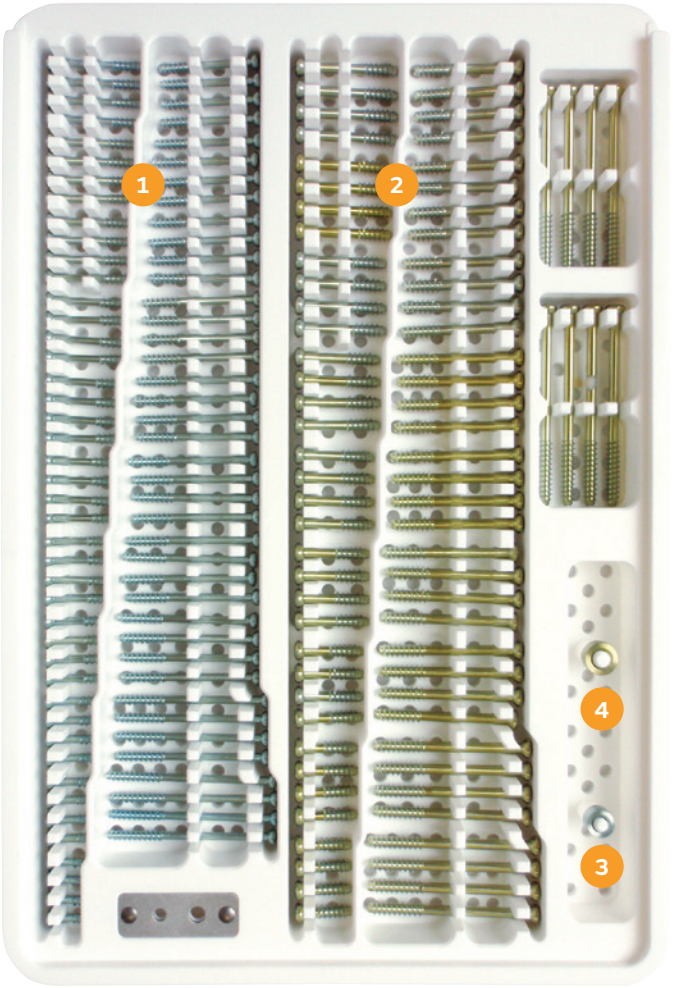
5-1 Remove the correlating screw from caddy and place over the guide wire. Advance the screw with the cannulated Torx driver until fully seated. If use of a washer is desired, slide the color-coded washer on to the screw, place the screw over the guide pin, and advance the screw until fully seated.

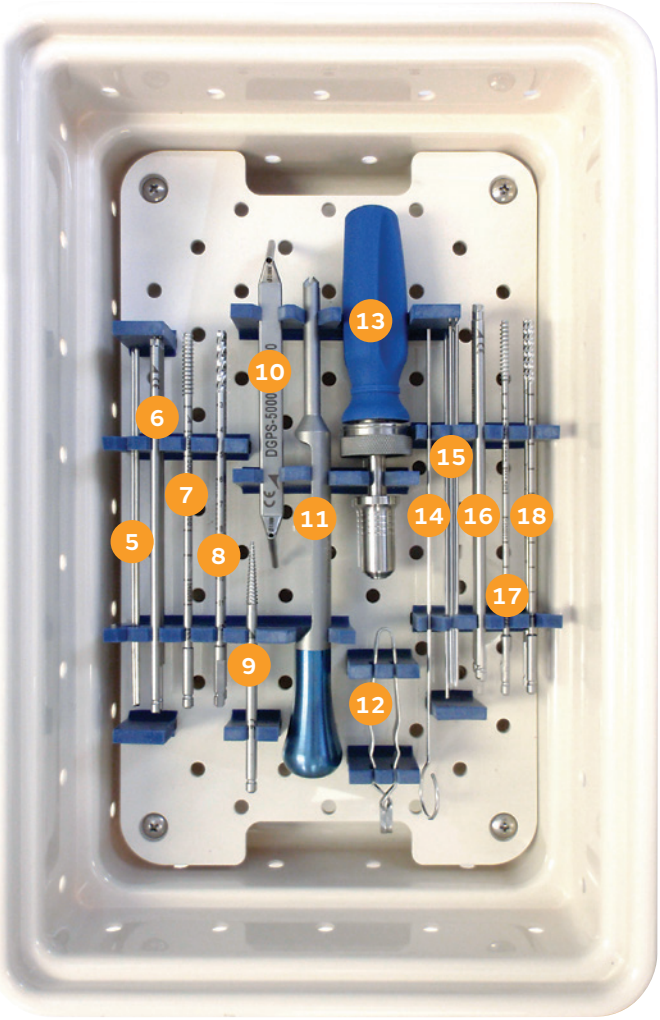
Cannulated Instrument Cleaning

It is important that the cannulation of each instrument is clean and free of debris. Clean the instruments intraoperatively using the 3.2mm Cannula Cleaning Stylet to help prevent instrument malfunction or binding.

4.0/5.0mm Screw Caddy and Instrument Tray

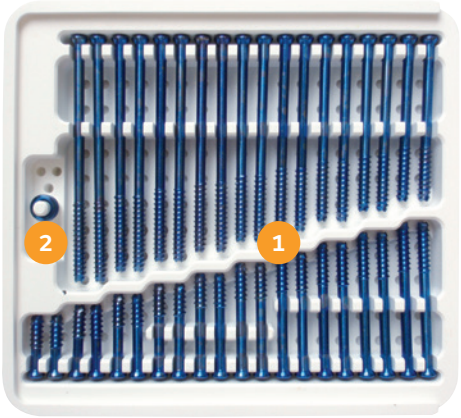
1. 4.0mm High-Torque Cannulated Screws
2. 5.0mm High-Torque Cannulated Screws
3. 4.0mm Washers
4. 5.0mm Washers
5. Plain Guidewire
6. T25 Driver
7. 5mm Tap
8. 3.6mm Drill
9. Screw Removal Tool
10. Double Pin Gage
11. Countersink/Depth Gage
12. Screw Forceps
13. Driver Handle
14. 1.6mm Stylet
15. Plain Guidewire
16. T20 Driver
17. 4mm Tap
18. 2.8mm Drill

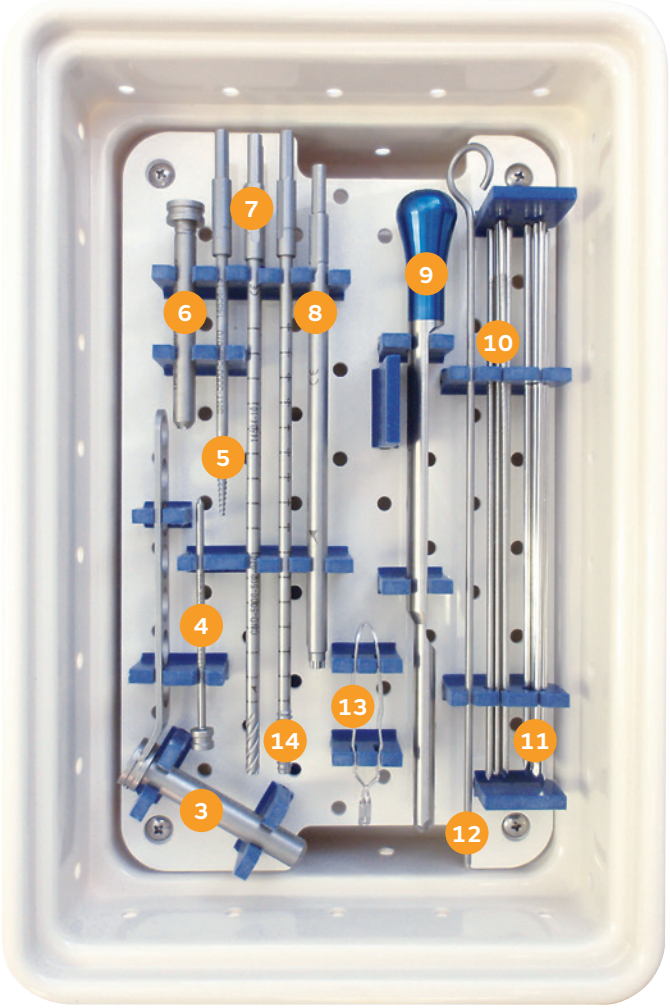




7.0mm Screw Caddy and Instrument Tray

1. 7.0mm High-Torque Cannulated Screws
2. 7.0mm Washers
3. Tissue Protector
4. Trocar
5. Screw Removal Tool
6. Trocar Pin Sleeve
7. 5.2mm Drill
8. T40 Driver
9. Countersink/Depth Gage
10. Threaded Guidewire
11. Plain Guidewire
12. 3.2mm Stylet
13. Screw Forceps
14. Tap
15. Rachet Handle





4.0/5.0mm High-Torque Screws & Instrumentation

Catalog Number	Description
CSS-5000-002-5020T	Cannulated Screw, 5.0mm x 20mm
CSS-5000-002-5022T	Cannulated Screw, 5.0mm x 22mm
CSS -5000-002-5024T	Cannulated Screw, 5.0mm x 24mm
CSS-5000-002-5026T	Cannulated Screw, 5.0mm x 26mm
CSS-5000-002-5028T	Cannulated Screw, 5.0mm x 28mm
CSS-5000-002-5030T	Cannulated Screw, 5.0mm x 30mm
CSS-5000-002-5032T	Cannulated Screw, 5.0mm x 32mm
CSS-5000-002-5034T	Cannulated Screw, 5.0mm x 34mm
CSS-5000-002-5036T	Cannulated Screw, 5.0mm x 36mm
CSS-5000-002-5038T	Cannulated Screw, 5.0mm x 38mm
CSS-5000-002-5040T	Cannulated Screw, 5.0mm x 40mm
CSS-5000-002-5042T	Cannulated Screw, 5.0mm x 42mm
CSS-5000-002-5044T	Cannulated Screw, 5.0mm x 44mm
CSS-5000-002-5046T	Cannulated Screw, 5.0mm x 46mm
CSS-5000-002-5048T	Cannulated Screw, 5.0mm x 48mm
CSS-5000-002-5050T	Cannulated Screw, 5.0mm x 50mm
CSS-5000-002-5055T	Cannulated Screw, 5.0mm x 55mm
CSS-5000-002-5060T	Cannulated Screw, 5.0mm x 60mm
CSS-5000-002-5065T	Cannulated Screw, 5.0mm x 65mm
CSS-5000-002-5070T	Cannulated Screw, 5.0mm x 70mm
CSS-5000-003-4014T	Cannulated Screw, 4.0mm x 14mm
CSS-5000-003-4016T	Cannulated Screw, 4.0mm x 16mm
CSS-5000-003-4018T	Cannulated Screw, 4.0mm x 18mm
CSS-5000-003-4020T	Cannulated Screw, 4.0mm x 20mm
CSS-5000-003-4022T	Cannulated Screw, 4.0mm x 22mm
CSS-5000-003-4024T	Cannulated Screw, 4.0mm x 24mm
CSS-5000-003-4026T	Cannulated Screw, 4.0mm x 26mm
CSS-5000-003-4028T	Cannulated Screw, 4.0mm x 28mm
CSS-5000-003-4030T	Cannulated Screw, 4.0mm x 30mm
CSS-5000-003-4032T	Cannulated Screw, 4.0mm x 32mm
CSS-5000-003-4034T	Cannulated Screw, 4.0mm x 34mm
CSS-5000-003-4036T	Cannulated Screw, 4.0mm x 36mm
CSS-5000-003-4038T	Cannulated Screw, 4.0mm x 38mm
CSS-5000-003-4040T	Cannulated Screw, 4.0mm x 40mm
CSS-5000-003-4042T	Cannulated Screw, 4.0mm x 42mm
CSS-5000-003-4044T	Cannulated Screw, 4.0mm x 44mm
CSS-5000-003-4046T	Cannulated Screw, 4.0mm x 46mm
CSS-5000-003-4048T	Cannulated Screw, 4.0mm x 48mm
CSS-5000-003-4050T	Cannulated Screw, 4.0mm x 50mm
CSS-5000-003-4055T	Cannulated Screw, 4.0mm x 55mm
CSS-5000-003-4060T	Cannulated Screw, 4.0mm x 60mm
CSS-5000-006-50WT	Washers 5.0mm
CSS-5000-006-40WT	Washers 4.0mm
AI-3201	Trocar Tip Plain Guide Wires (2.0 X 150mm)
AI-3202	Trocar Tip Plain Guide Wires (1.6 X 150mm)
DGPS-5000-505-050	Double Guide Pin Sleeve 1.6/2.0 wires
AI-5050	Countersink/Depth Gauge (4.0 & 5.0mm)
CND-5000-510-050	3.6mm Drill
CND-5000-510-040	2.8mm Drill
CNT-5000-511-050	Tap, 5.0mm screw
CNT-5000-511-040	Tap, 4.0mm screw
AI-1030	Screw Forceps
CTD-5000-512-050	T25 Driver, 5.0mm screw
CTD-5000-512-040	T20 Driver, 4.0mm screw

7.0mm High-Torque Screws & Instrumentation

Catalog Number	Description
AI-1006	Quick Connect Ratchet Handle
NR118009-J-004	Quick Connect Driver Handle
SRT-5000-509-050	Screw Removal Tool
AI-3205	Cannula Cleaning Stylet 1.6mm Diameter
CSS-5000-001-7030T	Cannulated Screw, 7.0mm x 30mm
CSS-5000-001-7035T	Cannulated Screw, 7.0mm x 35mm
CSS-5000-001-7040T	Cannulated Screw, 7.0mm x 40mm
CSS-5000-001-7045T	Cannulated Screw, 7.0mm x 45mm
CSS-5000-001-7050T	Cannulated Screw, 7.0mm x 50mm
CSS-5000-001-7055T	Cannulated Screw, 7.0mm x 55mm
CSS-5000-001-7060T	Cannulated Screw, 7.0mm x 60mm
CSS-5000-001-7065T	Cannulated Screw, 7.0mm x 65mm
CSS-5000-001-7070T	Cannulated Screw, 7.0mm x 70mm
CSS-5000-001-7075T	Cannulated Screw, 7.0mm x 75mm
CSS-5000-001-7080T	Cannulated Screw, 7.0mm x 80mm
CSS-5000-001-7085T	Cannulated Screw, 7.0mm x 85mm
CSS-5000-001-7090T	Cannulated Screw, 7.0mm x 90mm
CSS-5000-001-7095T	Cannulated Screw, 7.0mm x 95mm
CSS-5000-001-70100T	Cannulated Screw, 7.0mm x 100mm
CSS-5000-001-70105T	Cannulated Screw, 7.0mm x 105mm
CSS-5000-001-70110T	Cannulated Screw, 7.0mm x 110mm
CSS-5000-001-70115T	Cannulated Screw, 7.0mm x 115mm
CSS-5000-001-70120T	Cannulated Screw, 7.0mm x 120mm
CSS-5000-001-7080PT	Cannulated Screw, 7.0mm x 80mm, 16mm PT
CSS-5000-001-7085PT	Cannulated Screw, 7.0mm x 85mm, 16mm PT
CSS-5000-001-7090PT	Cannulated Screw, 7.0mm x 90mm, 16mm PT
CSS-5000-001-7095PT	Cannulated Screw, 7.0mm x 95mm, 16mm PT
CSS-5000-001-70100PT	Cannulated Screw, 7.0mm x 100mm, 16mm PT
CSS-5000-001-70105PT	Cannulated Screw, 7.0mm x 105mm, 16mm PT
CSS-5000-001-70110PT	Cannulated Screw, 7.0mm x 110mm, 16mm PT
CSS-5000-001-70115PT	Cannulated Screw, 7.0mm x 115mm, 16mm PT
CSS-5000-001-70120PT	Cannulated Screw, 7.0mm x 120mm, 16mm PT
CSS-5000-006-70WT	Washers 7.0mm
AW-3001	Trocar Tip Threaded Guide Wires (3.2 X 230mm)
AW-3002	Trocar Tip Plain Guide Wires (3.2 X 230mm)
TPR-5000-506-070	Tissue Protector
TPS-5000-501-070	Trocar Pin Sleeve
TRC-5000-507-070	Trocar
AI-7070	Countersink/Depth Gauge
CND-5000-502-070	5.2mm Drill
CNT-5000-503-070	Tap
AI-1030	Screw Forceps
CTD-5000-504-070	T40 Driver
NR101007-J-004	Quick Connect Driver Handle
TR418001-J-004	Quick Connect Ratchet T-Handle
AF104100-004	Quick Connect Adaptor
SRT-5000-509-070	Screw Removal Tool
AW-3005	Cannula Cleaning Stylet 3.2mm Diameter

Surgical Technique
Smith+Nephew does not provide medical advice and does not recommend this or any other surgical technique for use on a specific patient. The surgeon who performs any implant procedure is responsible for determining and using the appropriate techniques for implanting the device in each patient.

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