

Medial column fusion for midfoot deformity correction



# VLP<sup>\*</sup> FOOT Variable Angle Locked Plating System Medial column fusion for midfoot deformity correction

Surgical Technique

### Table of Contents

### Product overview

System overview	2
Indications	3
Design features and benefits	4

### Implant overview

Design rationale	5
Column Fusion Plate	5
Screw options	6
Surgical technique	6
Catalog information	13

#### Nota Bene

The technique description herein is made available to the healthcare professional to illustrate the author's suggested treatment for the uncomplicated procedure. In the final analysis, the preferred treatment is that which addresses the needs of the specific patient.

## System overview

## Introduction

The VLP° FOOT Variable-Angle Locked Plating System addresses the varying requirements of surgeons who treat fractures, arthrodesis and deformity correction of the foot. This comprehensive system provides flexible and fast fixation solutions to meet these needs.

## Indication specific plate

The VLP FOOT Column Fusion Plate was designed specifically for patients presenting with Charcot or flatfoot deformities. This plate provides greater stability in patients with soft bone, and is pre-curved to match the typical curvature of the medial column.

### Flexible screw options

The VLP FOOT system includes screws designed to address the different bone densities found in the foot. The screws available for use with the VLP FOOT Column Fusion Plate include: 3.5mm Non-locking Cortex Screws, 3.5mm Locking Cortex Screws, 5.0mm Non-locking Osteopenia Screws, and 5.0mm Locking Osteopenia Screws. In addition, 5.0mm Partially Threaded Osteopenia Screws are available separately.

Osteopenia Screws enhance fixation in soft bone by increasing stripping torque by 34% and pull-out strength by 40% compared to 4.0mm cancellous screws.<sup>1</sup>

## Streamlined Instrumentation

Easy-to-use instrumentation allows for minimal steps during the procedure. Compression slots and reduction instrumentation allow the surgeon to easily achieve the reduction needed to best treat the patient.

# Indications

The Smith & Nephew VLP° FOOT Plating System can be used in adolescent (12-18 years) and transitional adolescent (18-21 years) subpopulations and adults, as well as patients with osteopenic bone. The VLP FOOT Plating System is indicated for fracture fixation, reconstruction or arthrodesis of small bones, including those in the forefoot, midfoot and hindfoot.



# Design features and benefits

## Polyaxial locking plate

Each VLP° FOOT screw hole contains five separate tabs that engage with the threads of the locking screw head to form a fixed angle construct. Locking screws can be angled and locked up to 15° in any direction allowing for the creation of customized, multi-directional locked plating constructs.



## Compression slots

The VLP FOOT Column Fusion plate incorporates two slots used to assist in compression of fusions. Various reduction clamps are available to be used in conjunction with the slots to achieve maximum compression.



### Plate contour

The VLP FOOT Column Fusion plate is contoured to fit the anatomy of the medial column to facilitate fusion.



# Product overview

## Design rationale

There is a need for an extended medial column plate that can be used to assist in the correction of difficult deformities for varying degrees of osteopenic bone. Plates in the VLP° FOOT system allow a surgeon to compress, reduce, and stabilize the medial column of the foot. When deformities alter the arch, the plate can be used to rebuild the arch of the foot. These plates are designed to be used as neutralization plates, and thus minimal contouring is required.

## **Column Fusion Plate**

- Large plate profile specifically designed to provide extra stability in patients with soft bone (e.g. Charcot)
- Multiple compression slots that achieve up to 4mm of compression through the plate
- 1.5mm thickness

## **Multifragment Plates**

- Ability to fuse multiple joints across medial and lateral columns from talus to metatarsals
- Can be bent to address specific needs of varying patient anatomy
- 4 Hole, 6 Hole, 10 Hole and 14 Hole options
- 1.5mm thickness

## One-Third Tubular Compression Plates

- Compression slots allow for up to 2mm of compression through slot
- Available in multiple lengths ranging from 38mm 86mm
- 1.5mm thickness

## **One-Third Tubular Plates**

- Available in multiple lengths ranging from 38mm 98mm
- 1.5mm thickness









### Screw options

The following screws are available to be used with the 3.5mm VLP° FOOT Plates:

- Standard 2.5mm hex head recess for all screws
- Low profile heads to reduce soft tissue irritation
- Optional 5.0mm Partially Threaded Osteopenia Screws available

Screw type	Screw Angulation	Drill Bit	Drive mechanism	
3.5mm Cortex	20°	2.7mm	2.5mm Hex	
3.5mm Locking	15°	2.7mm	2.5mm Hex	
5.0mm Osteopenia	15°	2.7mm	2.5mm Hex	
5.0mm Locking Osteopenia	15°	2.7mm	2.5mm Hex	

# Surgical Technique

## Step 1: Exposure

Patient is placed supine on well-padded surgical table. Thigh tourniquet is applied. Leg is prepped and draped to allow exposure to the knee.

Initial procedure is usually performed under tourniquet control.

Consider completing a teno-achilles lengthening at the start. Typically the hind foot is fixed in equinus. This will facilitate later reduction of the deformity

Make a medial incision based from tip of medial malleolus to mid-portion of 1st ray. Develop full thickness flaps, limiting any handling of the soft tissue. A sub-periosteal dissection is carried out to expose the midfoot deformity.

### Step 2: Osteotomy

Initial Drill Wires can be placed to define the area of resection. Typically a bi-planar wedge that is medial and plantar based is used to correct the midfoot architecture.

A wedge resection can be completed with large flat osteotomes or power-saw (osteotomes are preferred to limit thermal injury to the bone).

Once wedge is resected, the closing wedge osteotomy is reduced and temporarily stabilized with Drill Wires or Guide Wires if fixation is being supplemented with 6.5mm or 7.0mm Cannulated Screws.

# Step 3: Bone preparation and plate placement

The medial bone is then smoothed and prepared for the placement of the medial column plate. The plate may be gently contoured to better match the anatomy if needed (see Plate Bending Handler 7117-3816, Plate Bending Irons 7117-3815 and Plate Bending Rods 7117-3864). This is often not needed.

Position the VLP° FOOT Column Fusion Plate on the medial column of the foot, with the point of the plate directed distally. The plate should be aligned with the proximal three holes positioned on the navicular bone.

Note: The plate is designed to be used as a guide in reshaping the arch of the foot. Thus, pre-contouring the plate should be unnecessary. If plate bending is desired, tools are available in the VLP FOOT system.



### Drill Tip Wires\*

Cat No

Drill Tip Wires are made of cobalt chrome with a fluted tip to provide greater stiffness and easier insertion.

Description

G			

 7110-1413
 1.1mm x 150mm Drill Tip Wire

 7110-1503
 1.25mm x 150mm Drill Tip Wire

 7110-1506
 1.25mm x 150mm Threaded Drill Tip Wire

 7110-1502
 1.6mm x 150mm Drill Tip Wire

 7110-1505
 1.6mm x 150mm Threaded Drill Tip Wire

 7110-1501
 2.0mm x 150mm Drill Tip Wire

 7110-1504
 2.0mm x 150mm Threaded Drill Tip Wire

### **Provisional Fixation Pins**

Cat No	Description
7117-1228	2.7mm x 14mm
7117-1229	2.7mm x 25mm



### **Reduction Clamps**

Cat No	Description
7117-3377	Reduction Forceps, Broad
7117-0044	Reduction Forceps, 205mm
7117-3817	Redler Pin Clamp
7117-3818	Compression Forceps with Screw Holders
7117-3863	Compression Forceps with Sharp Point





\*Located in the Smith & Nephew Drill Wire Module

9

## Step 4: Provisional Fixation

Once the plate and bone are ready for application, the plate can be provisionally fixed to the bone using 2.7mm Provisional Fixation Pins (7117-1228 and 7117-1229) and reduction clamps.

## Step 5: Plate fixation

Based on the deformity and plate position combinations of locked and non-locked screws are placed through the plate to secure the medial column. These screws range in diameter from 3.5mm non-locking to 5.0mm locking osteopenia screws.

### For plate compression:

Insert the 2.7mm Angled Drill Guide (7117-3812) into the proximal hole. The drill guide is correctly aligned when the star-shaped tip engages with the tabs in the hole. Screw trajectory can be adjusted by rotating the tip of the variable angle drill guide up to 360° within the plate hole and aligning the drill up to 15° in any direction.

Drill with the 2.7mm Drill, 130mm (7117-3803) or 2.7mm Drill, 191mm (7117-3804) depending on surgeon preference.

Measure for screw length using the 2.7mm / 3.5mm Depth Gauge (7117-1231). The depth gauge, plate, and bone must be flush for correct measurement.

Partially insert the appropriate length 5.0mm Non-locking Osteopenia screw or 3.5mm Cortex screw using the 2.5mm Hex Screwdriver (7117-0029).





Insert the 2.0mm x 2.7mm Drill Guide (7117-3809) into the distal end of the center compression slot. Drill with the 2.7mm Drill, 130mm (7117-3803) or 2.7mm Drill, 191mm (7117-3804) depending on surgeon preference. repeat step 5 to partially insert a 5.0mm Osteopenia screw or 3.5mm Cortex screw in the center compression slot.





Use the Compression Forceps with Screw Holders (7117-3818) to compress across the plate.



Insert the 2.7mm Angled Drill Guide into a locking hole proximal to the osteotomy site. Drill accordingly with a 2.7mm drill.

Measure for the appropriate length of screw by reading the drill bit calibrations off the back of the 2.7mm Angled Drill Guide, and fully insert a 5.0mm locking osteopenia screw of the desired length.

Note: For all locking screws, the 1.7Nm Torque Limiting Handle\* (7117-1238) and the 2.5mm Hexdriver Shaft (7117-0033) must be used to prevent over-insertion of the locking screw through the locking hole.

Fully seat non-locking screws used for compression.



Insert the 2.7mm Angled Drill Guide (7117-3812) into the proximal hole. The drill guide is correctly aligned when the star-shaped tip engages with the tabs in the hole. Screw trajectory can be adjusted by rotating the tip of the variable angle drill guide up to 360° within the plate hole and aligning the drill up to 15° in any direction. Drill with the 2.7mm Drill, 130mm (7117-3803) or 2.7mm Drill, 191mm (7117-3804) depending on surgeon preference.

Measure for screw length using the 2.7mm/3.5mm Depth Gauge (7117-1231. The depth gauge, plate, and bone must be flush for correct measurement. Fully insert the appropriate length 5.0mm Non-locking Osteopenia screw or 3.5mm Cortex screw using the 2.5mm Hex Screwdriver (7117-0029).

### For locking screws:

Insert the 2.7mm Angled Drill Guide into a locking hole proximal to the osteotomy site. Drill accordingly with a 2.7mm drill.

Measure for the appropriate length of screw by reading the drill bit calibrations off the back of the 2.7mm Angled Drill Guide, and fully insert either a 3.5mm locking screw or a 5.0mm locking osteopenia screw of the desired length.

Note: For all locking screws, the 1.7Nm Torque Limiting Handle\* (7117-1238) and the 2.5mm Hexdriver Shaft (7117-0033) must be used to prevent over-insertion of the locking screw through the locking hole.





### Stripped Hex Screw removal

In the event that a screw strips, attach the 2.5mm Screw Extractor (7117-1237) to either the Small Quick Coupling Handle (7117-0015) or the 1.7Nm Torque Limiting Handle (7117-1238) and insert into the recess of the screw. Turn the extractor assembly counter-clockwise to remove the screw. The Screw Extractor is compatible with all VLP° FOOT screws.



Using fluoroscopy, obtain final images to confirm proper placement of implants.

## Step 6: Closure

Once the deformity is secured, copious irrigation is completed and bone graft may be back-filled into any areas as desired.

A layered closure is then completed.

The tourniquet if inflated is deflated at this time.

## Step 7: Additional fixation

Once the medial column is secured. Additional fixation on the lateral column may be considered. This could include additional cannulated screws or plate fixation laterally.

For further stability, an ILIZAROV<sup>™</sup> Circular Frame may also be considered.



# Catalog information





**Base Instrument Set** 



Drill Wire Module

## Base Instrument Set

Set No 7117-0018

Cat No	Description	Qty
7117-3845	Base Instrument Tray	1
7117-3856	Base Instrument Tray Lid	1
7117-3801	2.0mm Drill, 130mm	2
7117-3802	2.0mm Drill, 191mm	2
7117-3803	2.7mm Drill, 130mm	2
7117-3804	2.7mm Drill, 191mm	2
7117-3805	3.5mm Drill, 130mm	2
7117-3806	3.5mm Drill, 191mm	2
7117-3807	2.0mm PF Pin, 14mm	2
7117-3808	2.0mm PF Pin, 25mm	2
7117-1228	2.7mm PF Pin, 14mm	2
7117-1229	2.7mm PF Pin, 25mm	2
7117-1231	2.7mm/3.5mm Depth Gauge	1
7117-3809	2.0mm/2.7mm Drill Guide	1



Ancillary Instrument Set

Cat No	Description	Qty
7117-3810	2.7mm/3.5mm Drill Guide	1
7117-3811	2.0mm Angled Drill Guide	1
7117-0033	2.5mm Hexdriver with AO	2
7117-3812	2.7mm Angled Drill Guide	1
7117-1238	1.7Nm Torque Limiting Handle	1
7117-0031	2.7mm/3.5mm Holding Sleeve/ Screw Capture	1
7117-3344	2.7mm/3.5mm Countersink	1
7117-3366	2.7mm Tap	1
7117-0029	2.5mm Hexdriver with Handle	1
7117-3528	AO-Trinkle	1
7117-1237	2.5mm Hex Screw Extractor	1
7117-3318	3.5mm Tap	1

### Ancillary Instrument Set Set No 7117-0020

Cat No	Description	Qty
7117-3846	Ancillary Instrument Tray	1
7117-3857	Ancillary Instrument Tray Lid	1
7110-1530	Freer Elevator	1
7117-0043	Sharp Hook	1
7117-3369	Bent Hohmann	2
7117-0057	Straight 8mm Hohmann	2
7117-3814	Wire Bending/Cutting Pliers	1
7117-3815	Plate Bending Irons	2
7117-3816	Plate Bending Handle	1

Cat No	Description	Qty
7117-3377	Reduction Forceps, broad	2
7117-0044	Reduction Forceps, 205mm	2
7117-3817	Redler Pin Clamp	1
7117-0015	Small Quick-Coupling Handle	1
7117-3818	Compression Forceps with Screw Holders	1
7117-3863	Compression Forceps with Sharp Point	1
7117-3819	McGlamry Elevator	1
7117-3864	2.7mm/3.5mm Plate Bending Rod	2

### Drill Wire Set

Set No 7110-1600

Cat No	Description	Qty
7110-1531	Drill Wire Module	1
7110-1532	Drill Wire Module Lid	1
7110-1533	Wire Cap Tray	1
7110-1534	Wire Cap Lid	1
7110-1401	1.1mm Wire Cap	6
7110-1402	1.25mm Wire Cap	6
7110-1403	1.6mm Wire Cap	6
7110-1404	2.0mm Wire Cap	6
7110-1413	1.1mm Drill Tip Wire, 150mm	6
7110-1414	1.1mm Trocar Tip Wire 2X Ended, 150mm	6
7110-1506	1.25mm Drill Tip Threaded Wire, 150mm	6

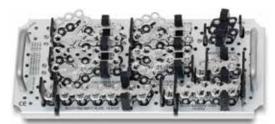
Cat No	Description	Qty
7110-1503	1.25mm Drill Tip Wire, 150mm	6
7110-1509	1.25mm Trocar Tip Wire 2X Ended, 150mm	6
7110-1505	1.6mm Drill Tip Threaded Wire, 150mm	6
7110-1502	1.6mm Drill Tip Wire, 150mm	6
7110-1508	1.6mm Trocar Tip Wire 2X Ended, 150mm	6
7110-1504	2.0mm Drill Tip Threaded Wire, 150mm	6
7110-1501	2.0mm Drill Tip Wire, 150mm	6
7110-1507	2.0mm Trocar Tip Wire 2X Ended, 150mm	6

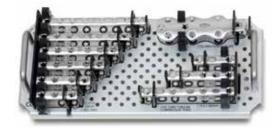
### Complete Outer Case Set Set No 7117-0060

Cat No	Description Qty		Cat No	Description	Qty
7117-3848	VLP° 2.7mm/3.5mm Instrument Tray	1	7117-3859	VLP 2.7mm/3.5mm Instrument Tray Lid	1
7117-3849	VLP FOOT Implant Tray	1	7117-3860	VLP FOOT Implant Tray Lid	1

### Outer Instruments Case Set Set No 7117-0070

Cat No	Description	Qty
7117-3848	VLP 2.7mm/3.5mm Instrument Tray	1
7117-3859	VLP 2.7mm/3.5mm Instrument Tray Lid	1





Midfoot/Hindfoot Plate Set

### Midfoot/Hindfoot Plate Set

Set No 7282-4100

\*Midfoot/Hindfoot Plate Set available without trays and lid as set 7282-6100

Cat No	Description	Qty	Cat No	Description	Qty
7117-3843	3.5mm/5.0mm Implant Tray	1	7282-4028S	3.5mm Calcaneus Plate, Small Left	1
7117-3854	3.5mm/5.0mm Implant Tray Lid	1	7282-4029S	3.5mm Calcaneus Plate, Small Right	1
7282-4102	VLP° FOOT 3.5mm Lower Plate Tray	1	7282-4030S	3.5mm Calcaneus Plate, Large Left	1
7282-4103	VLP FOOT 3.5mm Upper Plate Tray	1	7282-4031S	3.5mm Calcaneus Plate, Large Right	1
7282-3003S	3.5mm One-Third Tubular Plate, 3 Hole	1	7282-4034S	3.5mm Column Fusion Plate	1
7282-3004S	3.5mm One-Third Tubular Plate, 4 Hole	1	7282-4038S	3.5mm Multifragment Plate, 4 Hole	1
7280-3005	3.5mm One-Third Tubular Plate, 5 Hole	1	7282-4035S	3.5mm Multifragment Plate, 6 Hole	1
7280-3006	3.5mm One-Third Tubular Plate, 6 Hole	1	7282-4036S	3.5mm Multifragment Plate, 10 Hole	1
7280-3007	3.5mm One-Third Tubular Plate, 7 Hole	1	7282-4037S	3.5mm Multifragment Plate, 14 Hole	1
7280-3008	3.5mm One-Third Tubular Plate, 8 Hole	1			
7282-4025S	3.5mm One-Third Tubular Compression	1	7282-4032S	3.5mm Fusion Plate	0*
	Plate, 3 Hole		7282-4033S	3.5mm Fusion Plate, Long	0*
7282-4026S	3.5mm One-Third Tubular Compression	1	7282-4039S	3.5mm Calcaneus Plate, Medium Left	0*
	Plate, 5 Hole		7282-4040S	3.5mm Calcaneus Plate, Medium Right	0*
7282-4027S	3.5mm One-Third Tubular Compression Plate, 7 Hole	1	7282-4041S	3.5mm Calcaneus Plate, Extra-Large Left	0*
			7282-4042S	3.5mm Calcaneus Plate, Extra-Large Right	0*

### Midfoot/Hindfoot Screw Set

Set No 7282-5010

Cat Na	Description	0
Cat No	Description	Qty
	Tapping Cortex S	
7182-1310	10mm	4
7182-1312	12mm	4
7182-1314	14mm	4
7182-1316	16mm	4
7182-1318	18mm	4
7182-1320	20mm	4
7182-1322	22mm	4
7182-1324	24mm	4
7182-1326	26mm	4
7182-1328	28mm	4
7182-1330	30mm	4
7182-1332	32mm	4
7182-1334	34mm	4
7182-1336	36mm	4
7182-1338	38mm	4
7182-1340	40mm	4
7182-1342	42mm	4
7182-1344	44mm	4
7182-1346	46mm	4
7182-1348	48mm	4
7182-1350	50mm	4
7182-1355	55mm	4
7182-1360	60mm	4
	Tapping Locking	
Cortex Scre		
7182-1210	10mm	4
7182-1212	12mm	4
7182-1214	14mm	4
7182-1216	16mm	4
7182-1218	18mm	4
7182-1220	20mm	4
7182-1222	22mm	4
7182-1224	24mm	4
7182-1226	26mm	4
7182-1228	28mm	4
7182-1230	30mm	4
7182-1232	32mm	4
7182-1234	34mm	4
7182-1236	36mm	4
7182-1238	38mm	4

Cat No	Description	Qty
3.5mm Self- Screws (con	Tapping Locking Cort tinued)	tex
7182-1240	40mm	4
7182-1242	42mm	4
7182-1244	44mm	4
7182-1246	46mm	4
7182-1248	48mm	4
7182-1250	50mm	4
7182-1255	55mm	4
7182-1260	60mm	4
5.0mm Fully		
Osteopenia		
7182-2010	10mm	3
7182-2012	12mm	3
7182-2014	14mm	3
7182-2016	16mm	3
7182-2018	18mm	3
7182-2020	20mm	3
7182-2022	22mm	3
7182-2024	24mm	3
7182-2026	26mm	3
7182-2028	28mm	3
7182-2030	30mm	3
7182-2032	32mm	3
7182-2034	34mm	3
7182-2036	36mm	3
7182-2038	38mm	3
7182-2040	40mm	3
7182-2042	42mm	3
7182-2044	44mm	3
7182-2046	46mm	3
7182-2048	48mm	3
7182-2050	50mm	3
7182-2055	55mm	3
7182-2060	60mm	3
	ing Osteopenia Screv	
7282-3510	10mm	3
7282-3512	12mm	3
7282-3514	14mm	3
7282-3516	16mm	3
7282-3518	18mm	3
7282-3520	20mm	3
7282-3522	22mm	3
7282-3524	24mm	3

Cat No	Description	Qty			
5.0mm Locking Osteopenia Screws (continued)					
7282-3526	26mm	3			
7282-3528	28mm	3			
7282-3530	30mm	3			
7282-3532	32mm	3			
7282-3534	34mm	3			
7282-3536	36mm	3			
7282-3538	38mm	3			
7282-3540	40mm	3			
7282-3542	42mm	3			
7282-3544	44mm	3			
7282-3546	46mm	3			
7282-3548	48mm	3			
7282-3550	50mm	2			
7282-3555	55mm	2			
7282-3560	60mm	2			
Additional Items					
7114-3107	7.0mm O.D. Washer	6			
7117-0002	Screw Forceps	1			

### 5.0mm Partially Threaded Osteopenia Screw Set Set No 7181-2205

	ially Threaded Screws (Sterile)	
7180-1126	26mm	2
7180-1128	28mm	2
7180-1130	30mm	2
7180-1132	32mm	2
7180-1134	34mm	2
7180-1136	36mm	2
7180-1138	38mm	2
7180-1140	40mm	2
7180-1142	42mm	2
7180-1144	44mm	2
7180-1146	46mm	2
7180-1148	48mm	2
7180-1150	50mm	2
7180-1155	55mm	2
7180-1160	60mm	2
7180-1165	65mm	2
7180-1170	70mm	2
7180-1175	75mm	2
7180-1180	80mm	2

### Midfoot/Hindfoot Sterile Screw Set

Set No 7282-5015

Cat No	Description	Qty	Cat No	Description	Qty	Cat No	Description	Qty
3.5mm Self-Tapping Cortex Screws (Sterile)			Tapping Locking ile) <i>(continued</i> )	g Cortex	5.0mm Locki (Sterile)	ng Osteopenia Screw	crews	
7180-1306	6mm	3	7180-1230	30mm	3	7282-3510S	10mm	3
7180-1308	8mm	3	7180-1232	32mm	3	7282-3512S	12mm	3
7180-1310	10mm	3	7180-1234	34mm	3	7282-3514S	14mm	3
7180-1312	12mm	3	7180-1236	36mm	3	7282-3516S	16mm	3
7180-1314	14mm	3	7180-1238	38mm	3	7282-3518S	18mm	3
7180-1316	16mm	3	7180-1240	40mm	3	7282-3520S	20mm	3
7180-1318	18mm	3	7180-1242	42mm	2	7282-3522S	22mm	2
7180-1320	20mm	3	7180-1244	44mm	2	7282-3524S	24mm	2
7180-1322	22mm	3	7180-1246	46mm	2	7282-3526S	26mm	2
7180-1324	24mm	3	7180-1248	48mm	2	7282-3528S	28mm	2
7180-1326	26mm	3	7180-1250	50mm	2	7282-3530S	30mm	2
7180-1328	28mm	3	7180-1255	55mm	2	7282-3532S	32mm	2
7180-1330	30mm	3	7180-1260	60mm	2	7282-3534S	34mm	2
7180-1332	32mm	3	5.0mm Fully	Threaded		7282-3536S	36mm	2
7180-1334	34mm	3	Osteopenia	Screws (Sterile)		7282-3538S	38mm	2
7180-1336	36mm	3	7180-2010	10mm	3	7282-3540S	40mm	2
7180-1338	38mm	3	7180-2012	12mm	3	7282-3542S	42mm	2
7180-1340	40mm	3	7180-2014	14mm	3	7282-3544S	44mm	2
7180-1342	42mm	2	7180-2016	16mm	3	7282-3546S	46mm	2
7180-1344	44mm	2	7180-2018	18mm	3	7282-3548S	48mm	2
7180-1346	46mm	2	7180-2020	20mm	3	7282-3550S	50mm	2
7180-1348	48mm	2	7180-2022	22mm	2	7282-3555S	55mm	2
7180-1350	50mm	2	7180-2024	24mm	2	7282-3560S	60mm	2
7180-1355	55mm	2	7180-2026	26mm	2	Additional Ite	ems (Sterile)	
7180-1360	60mm	2	7180-2028	28mm	2	7114-3007	7.0mm O.D. Washer	6
3.5mm Self-	Tapping Locking		7180-2030	30mm	2			
Cortex Screw	vs (Sterile)		7180-2032	32mm	2			
7180-1206	6mm	3	7180-2034	34mm	2			
7180-1208	8mm	3	7180-2036	36mm	2			
7180-1210	10mm	3	7180-2038	38mm	2			
7180-1212	12mm	3	7180-2040	40mm	2			
7180-1214	14mm	3	7180-2042	42mm	2			
7180-1216	16mm	3	7180-2044	44mm	2			
7180-1218	18mm	3	7180-2046	46mm	2			
7180-1220	20mm	3	7180-2048	48mm	2			
7180-1222	22mm	3	7180-2050	50mm	2			
7180-1224	24mm	3	7180-2055	55mm	2			
7180-1226	26mm	3	7180-2060	60mm	2			
7180-1228	28mm	3						

### References

1. "Evaluation of Stripping Torque and Pull-Out Strength of an Osteopenia Bone Screw." South Lake Tahoe, CA: 11th Biennial International Society for Fracture Repair. Paper 8, 2008.

Smith & Nephew, Inc. 7135 Goodlett Farms Parkway Cordova, TN 38016 USA

www.smith-nephew.com

Cordova, TN 38016 USA Telephone: 1-901-396-2121

Ielephone: 1-901-396-2121 Information: 1-800-821-5700 Orders/Inquiries: 1-800-238-7538