



# 4.0 CANNULATED SCREW SYSTEM

## Surgical technique

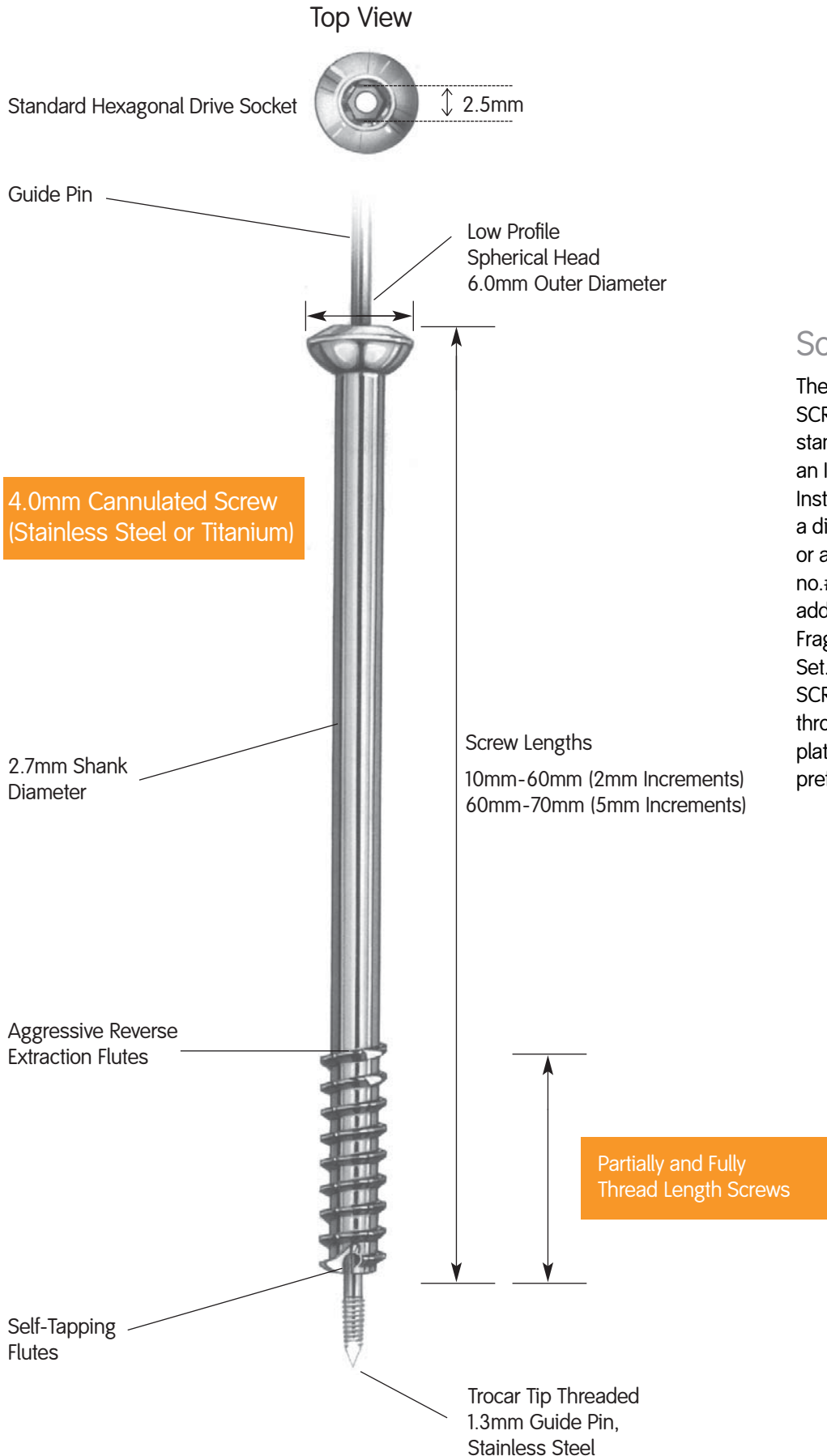
### Table of contents

<b>Design features</b> .....	2
<b>Indications</b> .....	3
<b>Surgical technique</b> .....	4
Inserting the screw .....	4
Extracting the screw .....	6
<b>Catalog information</b> .....	7

#### **Nota Bene**

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

# Design features – 4.0mm CANNULATED SCREW



## Screw description

The 4.0mm CANNULATED SCREWS are offered as a stand-alone module that contains an Implant set (7111-7800), Instrument set (7111-7801), and a disposable set (7111-7802) or as an optional caddy (set no.# 7111-7800) that can be added into the PERI-LOC<sup>®</sup> Small Fragment Instrument and Implant Set. The 4.0mm CANNULATED SCREWS may be used either through the plate, or outside the plate depending on surgeon's preference.

# Indications

The 4.0mm CANNULATED SCREWS and associated washers are additionally intended for arthrodesis and osteotomies of small bones and small joints, including scaphoid and other carpal bones, metacarpals, tarsals, metatarsals, patella, ulnar styloid, capitellum, radial head and radial styloid.

# Surgical technique

## Inserting the screw

### 1. Insert the Guide Pin “Refer to Figure 1”

- Position the 1.3mm side of the 1.3mm x 2.7mm Drill Guide (7117-3576) against the bone.
- Insert a 1.3mm Guide Pin (128039) through the Drill Guide to the desired depth.



Figure 1

### 2. Countersink the head “Refer to Figure 2”

Note: Countersinking the head reduces the implant’s profile.

- Prepare the bone surface by placing the 1.3mm Cannulated Countersink (7117-7188) over the guide pin and against the bone.
- Using a manual tool, such as the Small T-handle (7117-3542) in the PERI-LOC® Small Fragment set or the Large Screwdriver Handle (7117-3547) in the 4.0mm CANNULATED SCREW module, turn the countersink to the right.

**CAUTION: Do not countersink on power.**



Figure 2

### 3. Determine the required screw length

- Place the K-wire Direct Measuring Gauge (7111-7083) over the wire and against the bone.
- Read the exposed calibrations on the gauge to determine the required screw length.

### 4. Ream the bone (Optional)

Note: Due to the self-drilling tip of the 4.0mm CANNULATED SCREWS, it is not necessary to ream prior to screw insertion. However, in areas of increased bone density, reaming prior to screw insertion may be beneficial.

- Using the 2.7mm side of the 1.3mm x 2.7mm Drill Guide (7117-3576) as a soft tissue protector, insert the 2.7mm Cannulated Drill Bit (7117-3581) over the guide pin. “Refer to Figure 3.”
- Ream to the desired depth.

Note: Reaming 5mm short of the screw measurement performed in Step 3 prevents the reamer from engaging the tip of the pin, avoiding inadvertent guide pin removal.



Figure 3

**5. Tap the screw head (Optional)**

**Note:** In areas of increased bone density, it may be beneficial to tap prior to screw insertion.

Using the 4.0mm Cannulated Tap (7117-3584), manually tap on the screw. "Refer to Figure 3".

You may use the Small T-handle available in the PERI-LOC® Small Frag set or the Large Screwdriver Handle available in the 4.0mm CANNULATED SCREW Module for this purpose.

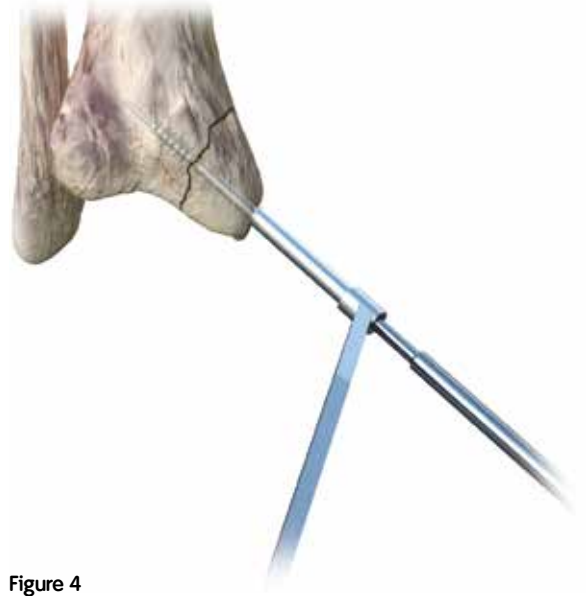


Figure 4

**6. Insert the screw**

- a. Load the appropriate length 4.0mm CANNULATED SCREW onto the 2.5mm Cannulated Hexdriver (7117-3580) with Holding Sleeve (7117-0031).
- b. Using the Large Screwdriver Handle, manually insert the screw over the guide pin into the bone. "Refer to Figure 5"



Figure 5

## Extracting the screw

1. If complications arise lightly tap the 4.0mm CANNULATED SCREW Extractor (7111-7084) into the cannulation of the screw with a mallet.
2. Turn the Extractor counterclockwise.
3. Continue turning until the screw is removed.



# Catalog

## 4.0mm CANNULATED SCREWS

### 4.0mm CANNULATED SCREWS

Titanium Partially Threaded (Sterile Package)

Cat No.	Screw length	Thread length
7110-1020	20mm	8mm
7110-1022	22mm	9mm
7110-1024	24mm	10mm
7110-1026	26mm	12mm
7110-1028	28mm	14mm
7110-1030	30mm	14mm
7110-1032	32mm	14mm
7110-1034	34mm	14mm
7110-1036	36mm	14mm
7110-1038	38mm	14mm
7110-1040	40mm	14mm
7110-1042	42mm	14mm



Cat No.	Screw length	Thread length
7110-1044	44mm	15mm
7110-1046	46mm	15mm
7110-1048	48mm	15mm
7110-1050	50mm	15mm
7110-1052	52mm	15mm
7110-1054	54mm	15mm
7110-1056	56mm	15mm
7110-1058	58mm	15mm
7110-1060	60mm	15mm
7110-1065	65mm	15mm
7110-1070	70mm	15mm

### 4.0mm CANNULATED SCREWS

Stainless Steel Partially Threaded (Sterile Package)

Cat No.	Screw length	Thread length
121810	10mm	5mm
121812	12mm	5mm
121814	14mm	5mm
121816	16mm	6mm
121818	18mm	7mm
121820	20mm	8mm
121822	22mm	9mm
121824	24mm	10mm
121826	26mm	12mm
121828	28mm	14mm
121830	30mm	14mm
121832	32mm	14mm
121834	34mm	14mm
121836	36mm	14mm



Cat No.	Screw length	Thread length
121838	38mm	14mm
121840	40mm	14mm
121842	42mm	14mm
121844	44mm	15mm
121846	46mm	15mm
121848	48mm	15mm
121850	50mm	15mm
121852	52mm	15mm
121854	54mm	15mm
121856	56mm	15mm
121858	58mm	15mm
121860	60mm	15mm
121865	65mm	15mm
121870	70mm	15mm

### Stainless Steel Fully Threaded

(Sterile Package)

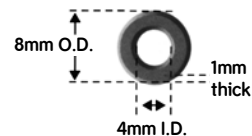


Cat No.	Screw length	Cat No.	Screw length
222820	20mm	222840	40mm
222822	22mm	222845	45mm
222824	24mm	222850	50mm
222826	26mm	222855	55mm
222828	28mm	222860	60mm
222830	30mm	222865	65mm
222835	35mm	222870	70mm

### 4.0mm Titanium Washer

(Sterile packaged) 6 per box

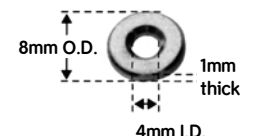
Cat. No. 7110-1000



### 4.0mm Stainless Steel Washer

(Sterile packaged) 6 per box

Cat. No. 7112-0006



## 4.0mm CANNULATED SCREW Instrument Set

### Stainless Steel

Cat. No. 7111-7801

<b>Cat. No.</b>	<b>Description</b>	<b>Qty.</b>
7117-7326	4.0mm CANNULATED SCREW Tray	1
7117-7327	4.0mm CANNULATED SCREW Tray Lid	1
7117-0031	Holding Sleeve	1
7117-3576	1.3mm x 2.7mm Drill Guide	1
7117-3580	2.5mm Cannulated Hexdriver Shaft – 120mm	1
7117-7083	Direct Measure 4.0mm	1
7117-7188	1.3mm Cannulated Countersink w/QC	1
7117-3547	Large Screw Driver Handle	1
7117-7328	4.0mm Cannulated Screw Caddy - PT	1
7117-7330	4.0mm Cannulated Screw Caddy - FT	1

## 4.0mm CANNULATED SCREW Implant Set

### Stainless Steel

Cat. No. 7111-7800

Cat. No.	Description	Qty.
121820	Cannulated Screw 20mm 4.0	3
121822	Cannulated Screw 22mm 4.0	3
121824	Cannulated Screw 24mm 4.0	3
121826	Cannulated Screw 26mm 4.0	3
121828	Cannulated Screw 28mm 4.0	3
121830	Cannulated Screw 30mm 4.0	3
121832	Cannulated Screw 32mm 4.0	3
121834	Cannulated Screw 34mm 4.0	3
121836	Cannulated Screw 36mm 4.0	3
121838	Cannulated Screw 38mm 4.0	3
121840	Cannulated Screw 40mm 4.0	3
121842	Cannulated Screw 42mm 4.0	3
121844	Cannulated Screw 44mm 4.0	3
121846	Cannulated Screw 46mm 4.0	3
121848	Cannulated Screw 48mm 4.0	3
121850	Cannulated Screw 50mm 4.0	3
121852	Cannulated Screw 52mm 4.0	3
121854	Cannulated Screw 54mm 4.0	3
121856	Cannulated Screw 56mm 4.0	3
121858	Cannulated Screw 58mm 4.0	3
121860	Cannulated Screw 60mm 4.0	3
121865	Cannulated Screw 65mm 4.0	3
121870	Cannulated Screw 70mm 4.0	3
222830	CANN SC Fully Th 4.0 30mm	2
222835	CANN SC Fully Th 4.0 35mm	2
222840	CANN SC Fully Th 4.0 40mm	2
222845	CANN SC Fully Th 4.0 45mm	2
222850	CANN SC Fully Th 4.0 50mm	2
222855	CANN SC Fully Th 4.0 55mm	2
222860	CANN SC Fully Th 4.0 60mm	2
7112-0006	Washer 8mm O.D. 4mm I.D	6

### Titanium

Cat. No. 7110-0001

Cat. No.	Description	Qty.
7110-1000	TI Washer 8mm OD 4mm ID	6
7110-1020	CANN SC 20mm Titanium 4.0	4
7110-1022	CANN SC 22mm Titanium 4.0	4
7110-1024	CANN SC 24mm Titanium 4.0	4
7110-1026	CANN SC 26mm Titanium 4.0	4
7110-1028	CANN SC 28mm Titanium 4.0	4
7110-1030	CANN SC 30mm Titanium 4.0	4
7110-1032	CANN SC 32mm Titanium 4.0	4
7110-1034	CANN SC 34mm Titanium 4.0	4
7110-1036	CANN SC 36mm Titanium 4.0	4
7110-1038	CANN SC 38mm Titanium 4.0	4
7110-1040	CANN SC 40mm Titanium 4.0	4
7110-1042	CANN SC 42mm Titanium 4.0	4
7110-1044	CANN SC 44mm Titanium 4.0	4
7110-1046	CANN SC 46mm Titanium 4.0	4
7110-1048	CANN SC 48mm Titanium 4.0	4
7110-1050	CANN SC 50mm Titanium 4.0	4
7110-1052	CANN SC 52mm Titanium 4.0	4
7110-1054	CANN SC 54mm Titanium 4.0	4
7110-1056	CANN SC 56mm Titanium 4.0	4
7110-1058	CANN SC 58mm Titanium 4.0	4
7110-1060	CANN SC 60mm Titanium 4.0	4
7110-1065	CANN SC 65mm Titanium 4.0	4
7110-1070	CANN SC 70mm Titanium 4.0	4

## 4.0mm CANNULATED SCREW Disposable Set

Cat. No. 7111-7802

Cat. No.	Description	Qty.
128039	Guide Pin Bayonet Point 1.3mm x 140mm	6
7117-3584	4.0mm Cannulated Tap with QC	1
7117-3581	2.7mm Cannulated Drill Bit – 155mm	2

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

[www.smith-nephew.com](http://www.smith-nephew.com)

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

