# **Smith**Nephew

LARGE QWIX Fixation and Positioning Screw

Surgical Technique



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## System Description

The LARGE QWIX<sup>o</sup> fixation and positioning screw system consists of headless, cannulated screws designed for reconstruction of the midfoot and hindfoot.

- Two thread lengths:
  - Partially-threaded fixation screw
  - Fully-threaded positioning screw
- Selection of two different diameters and range of screw lengths:
  - 5.5mm diameter: lengths 30–80mm in 5mm increments
  - 7.5mm diameter: lengths 40–120mm in 5mm increments
- Self-drilling and self-tapping
- Completely intra-osseous fixation
- Optional K-wire guided drilling and insertion
- Manufactured from Titanium alloy: Ti-6Al-4V, ISO 5832-3 ASTM F136

#### **Note Bena**

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.

## Instruments

Modular handle with AO attachment.





## **Fixation Screws**

## Cannulated screw and Hexagon screw head



QWIX° diam. 5.5mm\* Conical head with 3 self-tapping notches



QWIX diam. 7.5mm\* Conical head with 3 self-tapping notches

#### Note:

\*QWIX 5.5 and 7.5 are designed with self-drilling flutes, but bone hardness can greatly vary by patient and anatomic area.

The surgeon is responsible for assessing this hardness before using the self-drilling feature of the QWIX screws. Pre-drilling is advisable for dense or hard bone.



- Self-drilling and self-tapping\*
- Fluted distal tip allow easy insertion
- Variable Lag Lengths
- Variable Lengths
- Constant Sizes

# Surgical Technique

## Patient positioning

The LARGE QWIX<sup>o</sup> screws and instrumentation are color coded:





### Step 1 • Positioning Guide Pin

1-1 A 1.6 or 2.5mm (115 516ND / 529 061ND) K-wire should be introduced to achieve temporary fixation and maintain alignment. A drill guide (119 151ND / 119 152ND / 119 153ND) and soft tissue protector (119 151ND / 119 172ND / 119 173ND) is offered to prevent entrapment of the soft tissues during insertion.

**Note:** The use of X-rays is recommended to check the positioning and depth of the K-wire.



**2-1** The measuring device is graduated in accordance with the various K-wires included within the set.

The measuring device should be placed along the K-wire such that the tip is in contact with the surgical site. The appropriate screw length is determined directly from the measuring device on the side marked. (K-wire 200mm/ K-wire 250mm)

**Note:** The measurement taken from the measuring device is directly related to the positioning of the guide pin and therefore, is not considered accurate unless the guide pin is positioned correctly. The surgeon may decide to add or deduct a few millimeters depending on the position of the guide pin and the desire to obtain mono or bi-cortical fixation.

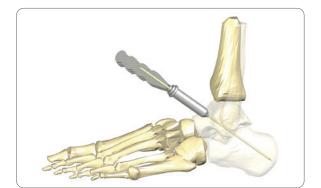


Figure 1-1

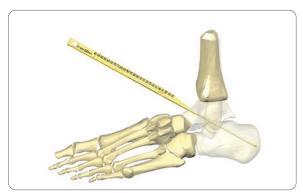


Figure 2-1

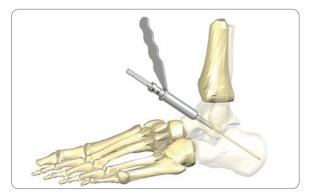


Figure 3-1

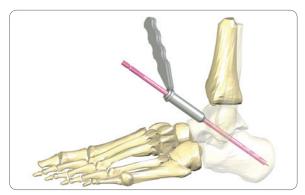


Figure 3-2

#### **Step 3 • Bone Preparation**

Once the 1.6 / 2.5mm diameter K-wire is in place, the drills are used to prepare for insertion of the screw. Although the LARGE QWIX $^{\circ}$  screws are self-drilling and self-tapping, pre-drilling is recommended, in the case of sclerotic bone.

## Bone Preparation - Mono-cortical fixation

**3-1** The short cannulated drill (119 155ND / 119 175ND) is attached to the T-handle (119 177ND) or surgical power driver to prepare a hole for the head of the screw. An external protection sleeve is provided for the soft tissues during this stage (119 153ND / 119 173ND).

**Note:** The drill has three markings, «30/45/90 degrees», which correspond to the top of the protective sleeve. If the desired screw will be placed at a 90 degree angle relative to the bone surface, it is recommended to drill until the 90 degree marker on the drill reaches the top of the protective sleeve. The same applies if you are placing the screw at 30 and 45 degrees relative to the bone surface.

### Bone Preparation - Bi-cortical fixation

**3-2** Following step 3-1, it is recommended that a long drill (119 154ND / 119 174ND) be used for bi-cortical fixation to prepare the distal cortex for introduction of the screw. The long drill is introduced over the guide wire and should be inserted until the far cortex is prepared. In order to confirm proper screw length, the long drill is graduated, allowing the screw length to be determined from the drill at the bone surface closest to the protection sleeve.





# Step 4 • Screw Insertion

**4-1** Following proper bone preparation, the LARGE QWIX<sup>⋄</sup> screw can be introduced over the guide pin with a cannulated Hex screwdriver (119 156ND / 119 176ND) and T-handle or straight handle (529 061ND)

**Note:** The head of the screw should be flush with the outer cortex upon final placement.





# Ordering information

5.5mm QWIX Fixation Screw

Catalog Number	Description
111 530SND	30mm
111 535SND	35mm
111 540SND	40mm
111 545SND	45mm
111 550SND	50mm
111 555SND	55mm
111 560SND	60mm
111 565SND	65mm
111 570SND	70mm
111 575SND	75mm
111 580SND	80mm

5.5mm QWIX Positioning Screw

Catalog Number	Description
121 530SND	30mm
121 535SND	35mm
121 540SND	40mm
121 545SND	45mm
121 550SND	50mm
121 555SND	55mm
121 560SND	60mm
121 565SND	65mm
121 570SND	70mm
121 575SND	75mm
121 580SND	80mm

# Ordering information (continued)

#### 7.5mm QWIX<sup>o</sup> Fixation Screw

Catalog Number	Description
111 740SND	40mm
111 745SND	45mm
111 750SND	50mm
111 755SND	55mm
111 760SND	60mm
111 765SND	65mm
111 770SND	70mm
111 775SND	75mm
111 780SND	80mm
111 785SND	85mm
111 790SND	90mm
111 795SND	95mm
111 800SND	100mm
111 805SND	105mm
111 810SND	110mm
111 815SND	115mm
111 820SND	120mm

#### 7.5mm QWIX Positioning Screw

Catalog Number	Description
121 740SND	40mm
121 745SND	45mm
121 750SND	50mm
121 755SND	55mm
121 760SND	60mm
121 765SND	65mm
121 770SND	70mm
121 775SND	75mm
121 780SND	80mm
121 785SND	85mm
121 790SND	90mm
121 795SND	95mm
121 800SND	100mm
121 805SND	105mm
121 810SND	110mm
121 815SND	115mm
121 820SND	120mm

#### Instrumentation

Catalog Number	Description
115 516ND	K-wire diam. 1.6mm / L. 200mm
119 150ND	Measurer 200 and 250mm
119 151ND	Internal protection sleeve for 5.5mm screws
119 152ND	Drilling guide for 5.5mm screws
119 153ND	External protection sleeve for 5.5mm screws
119 154ND	Cannulated drill diam. 4.2-1.8mm / L. 180mm
119 155ND	Short cannulated drill for 5.5mm screws
119 156ND	Hex screwdriver 3mm
119 170ND	Cylinder

#### Instrumentation

Catalog Number	Description
119 171ND	Internal protection sleeve for 7.5mm screws
119 172ND	Drilling guide for 7.5mm screws
119 173ND	External protection sleeve for 7.5mm screws
119 174ND	Cannulated drill diam. 5.5-2.7mm / L. 210mm
119 175ND	Short cannulated drill for 7.5 screws
119 176ND	Hex screwdriver 4mm
119 177ND	T-handle quick coupling
119 157ND	Straight handle quick coupling
529 061ND	K-wire diam. 2.5mm / L. 250mm
121 950ND	Instrumentation set, composed of:
121 951ND	Stainless steel rack (Base)
996 200ND	Lid

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#### Manufacturer:



Newdeal SAS Immeuble Sequoia 2 97 allee Alexandre Borodine Parc technologique de la Porte des Alpes 69800 Saint Priest | France Phone: +33 (0) 800 111 220 Fax: +33 (0) 4 37 47 51 53