



Smith+Nephew

LEOS 
Plating System

Surgical Technique
TMT Fusion Procedure

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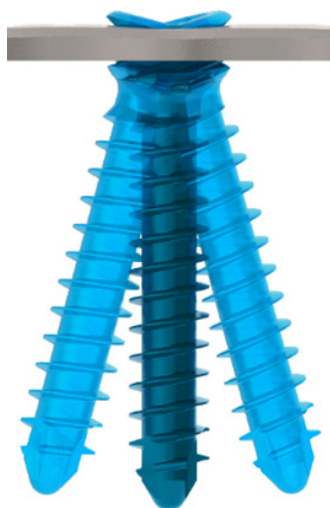
Nota Bene

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 found at LEOS-eIFU.info.

Overview

Features

The Smith & Nephew LEOS[®] Plating System offers a wide variety of features and benefits.



Variable angle locking 30°



Low screw head prominence



Up to three screw insertions without locking strength degradation¹



Plate Thickness 1.3mm+

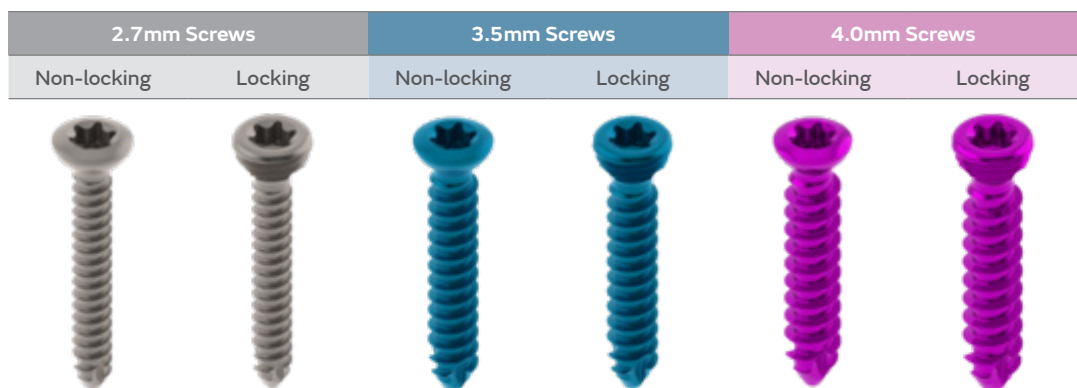


Anatomic Plate Design²



Type II Anodization

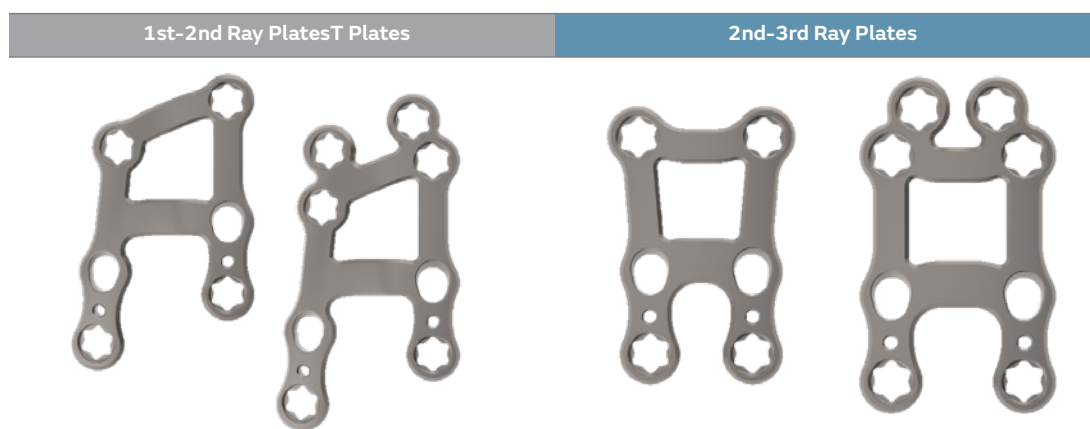
Screw options



Part number	7620-27XX	7621-27XX	7620-35XX	7621-35XX	7620-40XX	7621-40XX
Thread Diameter	2.7	2.7	3.5	3.5	4.0	4.0
Core Diameter	2.0	2.0	2.4	2.4	2.7	2.7
Drill	2.0	2.0	2.4	2.4	2.4	2.4
Thread Pitch	1.0	1.0	1.25	1.25	1.5	1.5
Driver	T15	T15	T15	T15	T15	T15
Screw Lengths	8-40 (2mm increments)		8-40 (2mm increments) 45-60 (5mm increments)		10-40 (2mm increments) 45-60 (5mm increments)	




(Units in mm)

Plate options




Part number	7622-312X	7622-323X
Left/Right specific	Yes	No
Plate thickness	1.5mm	1.5mm
# of hole options	6 8	6 8
# of plate options	4	2

Instrument options

Drill compatibility			
Drill		Screw compatibility	Color coding
2.0mm 7624-2920		2.7mm	Grey
2.4mm 7624-2924		3.5mm and 4.0mm	Blue and Magenta
4.0mm 7624-2940		LAG technique for all screws	Double-Banded Magenta

Instrument options *continued*

Drill Guide compatibility				
Drill Guide		Drill Bit compatibility	Plate Hole compatibility	Ability to measure screw length
Locking Drill Guide 7624-4900		2.0mm 2.4mm	Plate Locking Holes (on axis only)	Yes
Variable and Fixed Drill Guide 7624-4901		2.0mm, 2.4mm,	Plate Locking Holes (on and off axis)	Fixed side only
Compression Drill Guide 7624-4940		2.0mm, 2.4mm, 4.0mm*	Compression Slot *LAG technique outside of plate	Yes

Provisional fixation

K-Wires	Ø1.6mm Smooth K-Wire 7624-2016	Ø1.6mm Threaded K-Wire 7624-2116	Ø2.0mm Smooth K-Wire 7624-2020
Overall length	100mm	100mm	150mm

Plate Tacks	Plate Tack, 10mm 7624-2210	Plate Tack, 20mm 7624-2220
Working dimensions	Ø1.6mm x 10mm	Ø1.6mm x 20mm

Joint Preparation Disposables

Ø2.0mm Subchondral Drill 7624-2820	Cartilage Scraper 7624-3208
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Surgical Technique

Incision

Make an incision in line with the medial border of the third metatarsal shaft. Cut the Extensor Digitorum Longus (EDL) sheath and retract laterally. Depending upon surgical preference, the Extensor Hallucis Brevis (EHB) muscle can be incised or retracted.

Incisions and retractions should be done carefully to avoid both the Neurovascular Bundle of the Dorsalis Pedis Artery and Deep Peroneal Nerve.



Joint preparation

Prepare the joints per surgeon preference.

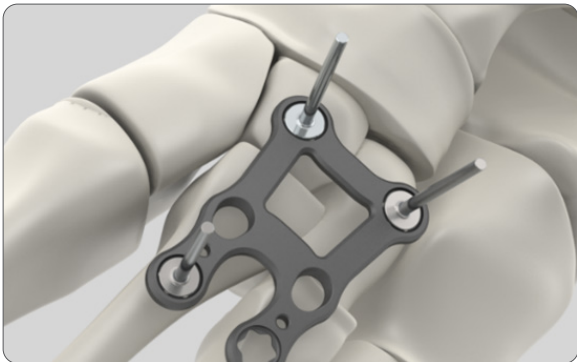


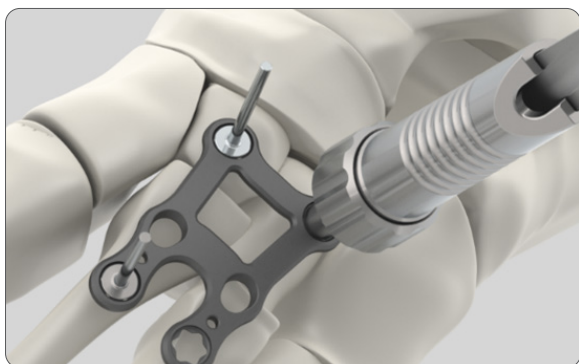
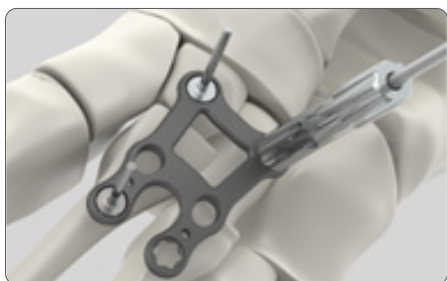
Plate selection

Choose the applicable plate based on surgeon discretion, orient the plate, and temporarily fixate the plate in place using plate tacks or K-wires.

Proximal Screw placement

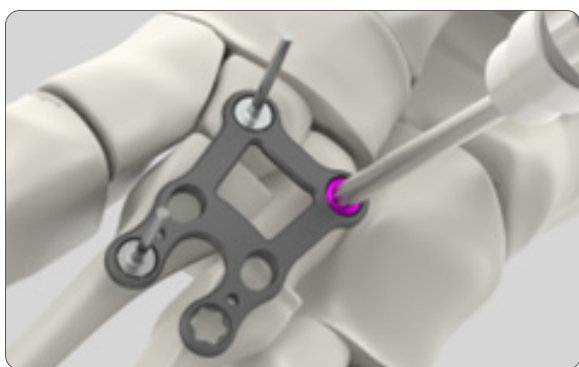
Select a locking hole to insert a screw into. If planning to use a compression slot to generate compression between the bone fragments, your first locking hole should be on the opposite side of the fusion site as the compression slot and compression should be in the direction of the text on the plate.

The LEOS[®] Plate System contains Drill Guides allowing for both fixed-angle and variable-angle drilling. Place chosen Drill Guide into hole and drill to desired depth using the appropriate drill for the desired screw diameter.

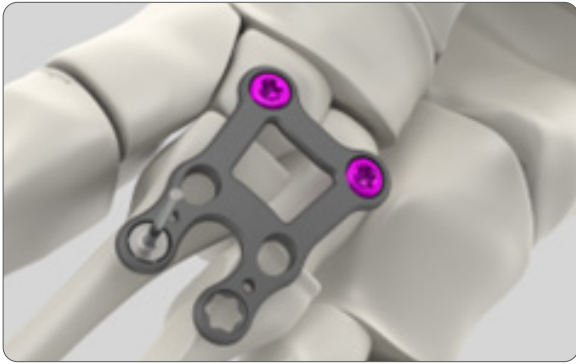


If using the Locking Drill Guide or the fixed side of the double drill guide, screw length can be measured by either using the Depth Gauge or by using the drill guide to read the measurement marks on the drill.

If using the variable angle side of the double drill guide, screw length can be measured using the Depth Gauge.



Use the T15 Driver to implant an appropriately sized screw.

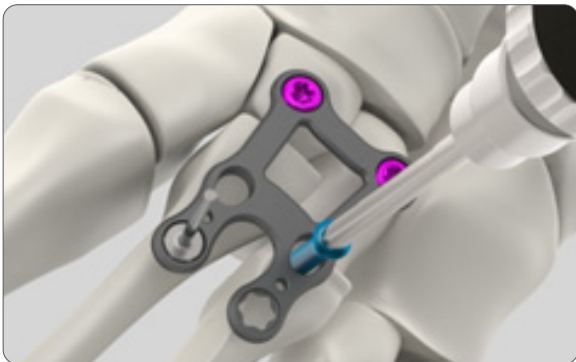


Repeat the previous process to insert the remaining proximal locking or non-locking screw to fill the proximal locking hole.

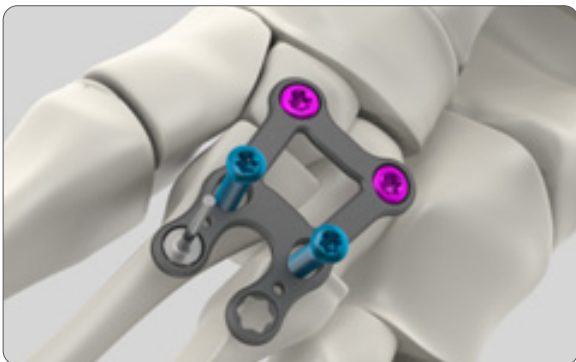


Compression Screw placement

Once the proximal screws are fully inserted, the compression slots may be used to achieve compression of the TMT joints. Using the 2.4mm end of the Compression Drill Guide, drill a hole eccentrically away from the joint and toward the distal end of the selected compression slot using the appropriate drill for the desired screw diameter. Screw length can be measured by either using the Depth Gauge or by using the drill guide to read the measurements on the drill.



Partially drive non-locking screw into pilot hole without contacting the plate



Repeat this process on the 2nd compression slot



Once both non-locking screws are partially engaged in the metatarsals, remove any remaining temporary fixation. Fully drive screws into bone to achieve desired compression of the joints.



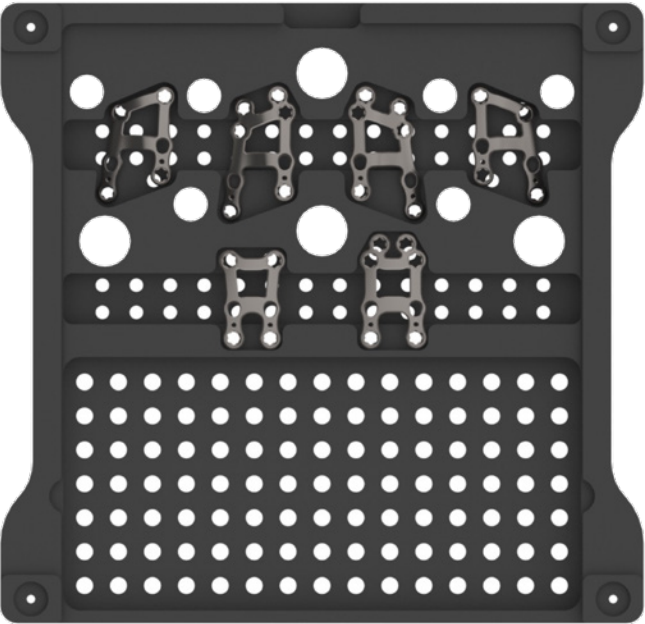
Distal Screw placement

Fill in remaining desired holes as needed using locking or non-locking screws utilizing the same technique as proximal screw placement.

Closure

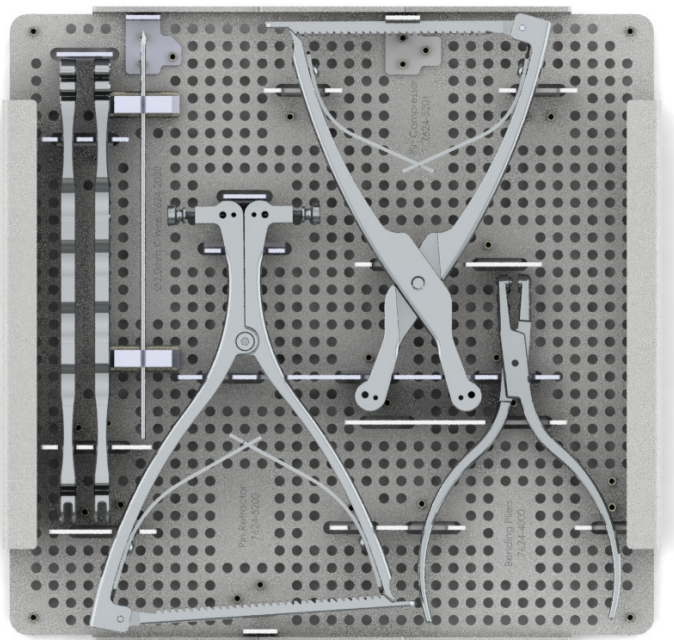
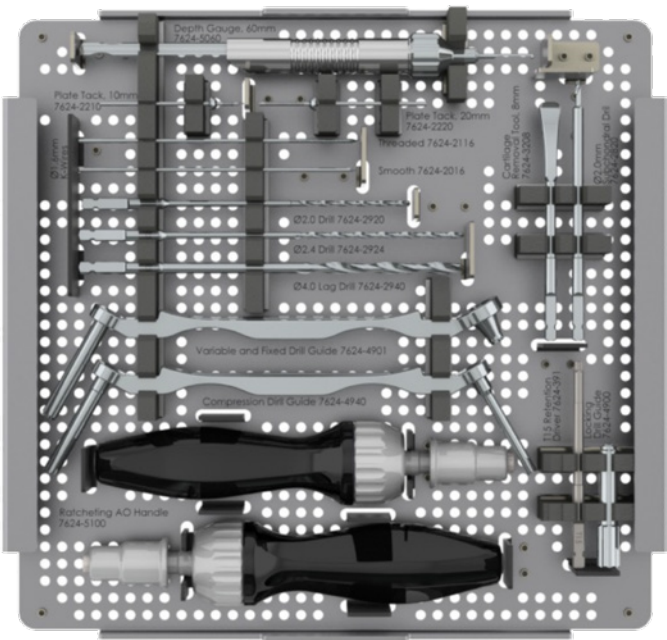
Close in layers based on surgeon preference

Catalog information



TMT System Plate Caddy

Plates		
Cat no	Description	Qty
7622-3120	LEOS TMT 1st-2nd Plate, 6 Hole, Lt	2
7622-3122	LEOS TMT 1st-2nd Plate, 6 Hole, Rt	2
7622-3121	LEOS TMT 1st-2nd Plate, 8 Hole, Lt	2
7622-3123	LEOS TMT 1st-2nd Plate, 8 Hole, Rt	2
7622-3230	LEOS TMT 2nd-3rd Plate, 6 Hole	2
7622-3231	LEOS TMT 2nd-3rd Plate, 8 Hole	2

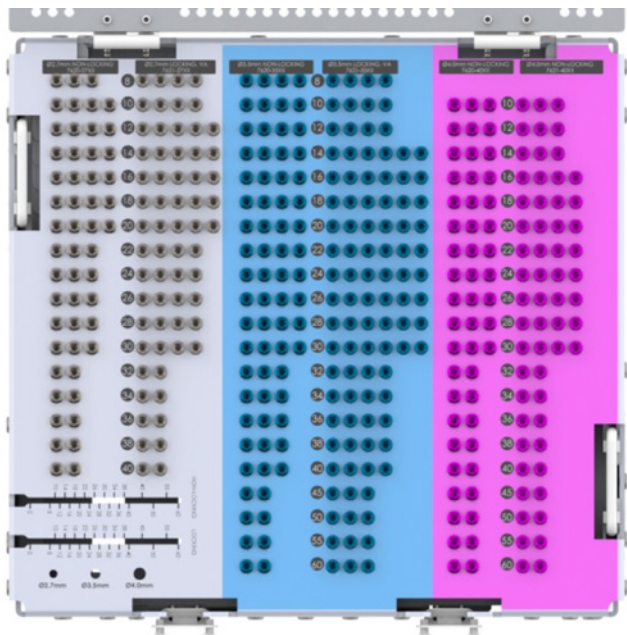


General Instrument Set

General Instrument Set		
Cat no	Description	Qty
7624-1002	LEOS® Ø2.7/3.5/4.0mm Instrument Caddy	1
7624-1003	LEOS Generic Instrument Caddy	1
Instrument Set		
7624-2016	LEOS Ø1.6mm Smooth K-Wire	6
7624-2020	LEOS Ø2.0mm K-Wire	6
7624-2116	LEOS Ø1.6mm Threaded K-Wire	6
7624-2210	LEOS Plate Tack, 10mm	4
7624-2220	LEOS Plate Tack, 20mm	4
7624-2820	LEOS Ø2.0mm Subchondral Drill	1
7624-2920	LEOS Ø2.0 Drill	2
7624-2924	LEOS Ø2.4 Drill	2
7624-2940	LEOS Ø4.0 Lag Drill	1

Instrument Set		
Cat no	Description	Qty
7624-3208	LEOS Cartilage removal tool, 8mm	1
7624-3915	LEOS T15 Retention Driver	3
7624-4000	LEOS Bending Pliers	2
7624-4001	LEOS Bending Iron, Large	2
7624-4900	LEOS Locking Drill Guide	3
7624-4901	LEOS Variable and Fixed Drill Guide	1
7624-4940	LEOS Compression Drill Guide	1
7624-5060	LEOS Depth Gauge, 60mm	1
7624-5100	LEOS Ratcheting AO Handle	2
7624-5200	LEOS Pin Retractor	1
7624-5201	LEOS Pin Compressor	1

Catalog information *continued*



Screw Caddy

Screw set		
Cat no	Description	Qty
7620-2708	LEOS Ø2.7mm Non-locking Screw, 8mm	3
7620-2710	LEOS Ø2.7mm Non-locking Screw, 10mm	4
7620-2712	LEOS Ø2.7mm Non-locking Screw, 12mm	4
7620-2714	LEOS Ø2.7mm Non-locking Screw, 14mm	4
7620-2716	LEOS Ø2.7mm Non-locking Screw, 16mm	4
7620-2718	LEOS Ø2.7mm Non-locking Screw, 18mm	4
7620-2720	LEOS Ø2.7mm Non-locking Screw, 20mm	4
7620-2722	LEOS Ø2.7mm Non-locking Screw, 22mm	3
7620-2724	LEOS Ø2.7mm Non-locking Screw, 24mm	3
7620-2726	LEOS Ø2.7mm Non-locking Screw, 26mm	3
7620-2728	LEOS Ø2.7mm Non-locking Screw, 28mm	3
7620-2730	LEOS Ø2.7mm Non-locking Screw, 30mm	3
7620-2732	LEOS Ø2.7mm Non-locking Screw, 32mm	2
7620-2734	LEOS Ø2.7mm Non-locking Screw, 34mm	2
7620-2736	LEOS Ø2.7mm Non-locking Screw, 36mm	2
7620-2738	LEOS Ø2.7mm Non-locking Screw, 38mm	2
7620-2740	LEOS Ø2.7mm Non-locking Screw, 40mm	2
7621-2708	LEOS Ø2.7mm Locking Screw, VA 8mm	4
7621-2710	LEOS Ø2.7mm Locking Screw, VA 10mm	4

Cat no	Description	Qty
7621-2712	LEOS Ø2.7mm Locking Screw, VA 12mm	5
7621-2714	LEOS Ø2.7mm Locking Screw, VA 14mm	5
7621-2716	LEOS Ø2.7mm Locking Screw, VA 16mm	5
7621-2718	LEOS Ø2.7mm Locking Screw, VA 18mm	5
7621-2720	LEOS Ø2.7mm Locking Screw, VA 20mm	5
7621-2722	LEOS Ø2.7mm Locking Screw, VA 22mm	4
7621-2724	LEOS Ø2.7mm Locking Screw, VA 24mm	4
7621-2726	LEOS Ø2.7mm Locking Screw, VA 26mm	4
7621-2728	LEOS Ø2.7mm Locking Screw, VA 28mm	4
7621-2730	LEOS Ø2.7mm Locking Screw, VA 30mm	4
7621-2732	LEOS Ø2.7mm Locking Screw, VA 32mm	2
7621-2734	LEOS Ø2.7mm Locking Screw, VA 34mm	2
7621-2736	LEOS Ø2.7mm Locking Screw, VA 36mm	2
7621-2738	LEOS Ø2.7mm Locking Screw, VA 38mm	2
7621-2740	LEOS Ø2.7mm Locking Screw, VA 40mm	2
7620-3508	LEOS Ø3.5mm Non-locking Screw, 8mm	4
7620-3510	LEOS Ø3.5mm Non-locking Screw, 10mm	4
7620-3512	LEOS Ø3.5mm Non-locking Screw, 12mm	4
7620-3514	LEOS Ø3.5mm Non-locking Screw, 14mm	4

Screw set		
Cat no	Description	Qty
7620-3516	LEOS® Ø3.5mm Non-locking Screw, 16mm	4
7620-3518	LEOS Ø3.5mm Non-locking Screw, 18mm	4
7620-3520	LEOS Ø3.5mm Non-locking Screw, 20mm	4
7620-3522	LEOS Ø3.5mm Non-locking Screw, 22mm	4
7620-3524	LEOS Ø3.5mm Non-locking Screw, 24mm	4
7620-3526	LEOS Ø3.5mm Non-locking Screw, 26mm	4
7620-3528	LEOS Ø3.5mm Non-locking Screw, 28mm	4
7620-3530	LEOS Ø3.5mm Non-locking Screw, 30mm	4
7620-3532	LEOS Ø3.5mm Non-locking Screw, 32mm	3
7620-3534	LEOS Ø3.5mm Non-locking Screw, 34mm	3
7620-3536	LEOS Ø3.5mm Non-locking Screw, 36mm	3
7620-3538	LEOS Ø3.5mm Non-locking Screw, 38mm	3
7620-3540	LEOS Ø3.5mm Non-locking Screw, 40mm	3
7620-3545	LEOS Ø3.5mm Non-locking Screw, 45mm	2
7620-3550	LEOS Ø3.5mm Non-locking Screw, 50mm	2
7620-3555	LEOS Ø3.5mm Non-locking Screw, 55mm	2
7620-3560	LEOS Ø3.5mm Non-locking Screw, 60mm	2
7621-3508	LEOS Ø3.5mm Locking Screw, VA 8mm	4
7621-3510	LEOS Ø3.5mm Locking Screw, VA 10mm	4
7621-3512	LEOS Ø3.5mm Locking Screw, VA 12mm	4
7621-3514	LEOS Ø3.5mm Locking Screw, VA 14mm	6
7621-3516	LEOS Ø3.5mm Locking Screw, VA 16mm	6
7621-3518	LEOS Ø3.5mm Locking Screw, VA 18mm	6
7621-3520	LEOS Ø3.5mm Locking Screw, VA 20mm	6
7621-3522	LEOS Ø3.5mm Locking Screw, VA 22mm	6
7621-3524	LEOS Ø3.5mm Locking Screw, VA 24mm	6
7621-3526	LEOS Ø3.5mm Locking Screw, VA 26mm	6
7621-3528	LEOS Ø3.5mm Locking Screw, VA 28mm	6
7621-3530	LEOS Ø3.5mm Locking Screw, VA 30mm	6
7621-3532	LEOS Ø3.5mm Locking Screw, VA 32mm	4
7621-3534	LEOS Ø3.5mm Locking Screw, VA 34mm	4
7621-3536	LEOS Ø3.5mm Locking Screw, VA 36mm	4
7621-3538	LEOS Ø3.5mm Locking Screw, VA 38mm	4
7621-3540	LEOS Ø3.5mm Locking Screw, VA 40mm	4
7621-3545	LEOS Ø3.5mm Locking Screw, VA 45mm	2
7621-3550	LEOS Ø3.5mm Locking Screw, VA 50mm	2
7621-3555	LEOS Ø3.5mm Locking Screw, VA 55mm	2
7621-3560	LEOS Ø3.5mm Locking Screw, VA 60mm	2
7620-4010	LEOS Ø4.0mm Non-locking Screw, 10mm	3

Cat no	Description	Qty
7620-4012	LEOS Ø4.0mm Non-locking Screw, 12mm	3
7620-4014	LEOS Ø4.0mm Non-locking Screw, 14mm	3
7620-4016	LEOS Ø4.0mm Non-locking Screw, 16mm	3
7620-4018	LEOS Ø4.0mm Non-locking Screw, 18mm	3
7620-4020	LEOS Ø4.0mm Non-locking Screw, 20mm	3
7620-4022	LEOS Ø4.0mm Non-locking Screw, 22mm	3
7620-4024	LEOS Ø4.0mm Non-locking Screw, 24mm	3
7620-4026	LEOS Ø4.0mm Non-locking Screw, 26mm	3
7620-4028	LEOS Ø4.0mm Non-locking Screw, 28mm	3
7620-4030	LEOS Ø4.0mm Non-locking Screw, 30mm	3
7620-4032	LEOS Ø4.0mm Non-locking Screw, 32mm	2
7620-4034	LEOS Ø4.0mm Non-locking Screw, 34mm	2
7620-4036	LEOS Ø4.0mm Non-locking Screw, 36mm	2
7620-4038	LEOS Ø4.0mm Non-locking Screw, 38mm	2
7620-4040	LEOS Ø4.0mm Non-locking Screw, 40mm	2
7620-4045	LEOS Ø4.0mm Non-locking Screw, 45mm	2
7620-4050	LEOS Ø4.0mm Non-locking Screw, 50mm	2
7620-4055	LEOS Ø4.0mm Non-locking Screw, 55mm	2
7620-4060	LEOS Ø4.0mm Non-locking Screw, 60mm	2
7621-4010	LEOS Ø4.0mm Locking Screw, VA 10mm	3
7621-4012	LEOS Ø4.0mm Locking Screw, VA 12mm	3
7621-4014	LEOS Ø4.0mm Locking Screw, VA 14mm	3
7621-4016	LEOS Ø4.0mm Locking Screw, VA 16mm	4
7621-4018	LEOS Ø4.0mm Locking Screw, VA 18mm	4
7621-4020	LEOS Ø4.0mm Locking Screw, VA 20mm	4
7621-4022	LEOS Ø4.0mm Locking Screw, VA 22mm	4
7621-4024	LEOS Ø4.0mm Locking Screw, VA 24mm	4
7621-4026	LEOS Ø4.0mm Locking Screw, VA 26mm	4
7621-4028	LEOS Ø4.0mm Locking Screw, VA 28mm	4
7621-4030	LEOS Ø4.0mm Locking Screw, VA 30mm	4
7621-4032	LEOS Ø4.0mm Locking Screw, VA 32mm	2
7621-4034	LEOS Ø4.0mm Locking Screw, VA 34mm	2
7621-4036	LEOS Ø4.0mm Locking Screw, VA 36mm	2
7621-4038	LEOS Ø4.0mm Locking Screw, VA 38mm	2
7621-4040	LEOS Ø4.0mm Locking Screw, VA 40mm	2
7621-4045	LEOS Ø4.0mm Locking Screw, VA 45mm	2
7621-4050	LEOS Ø4.0mm Locking Screw, VA 50mm	2
7621-4055	LEOS Ø4.0mm Locking Screw, VA 55mm	2
7621-4060	LEOS Ø4.0mm Locking Screw, VA 60mm	2



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.

Products may not be available in all markets because product availability is subject to the regulatory and/or medical practices in individual markets. Please contact your Smith+Nephew representative or distributor if you have questions about the availability of Smith+Nephew products in your area.

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References

1. Tyber Medical Data on file. Memo-X25-02-09. **2.** Tyber Medical Data on file. Memo-X25-02-010.