



# OPERATIVE TECHNIQUE

**FOREFOOT** 

Nexis® MIS Ø 2.7: beveled compressive screws

Nexis® Ø 2 / Ø 2.3 / Ø 2.9 / Ø 4: compressive screws & snap-off screws



- Complete & versatile range
- . Self-drilling & Self-tapping
- . Comprehensive et modular instrumentation

Creating Better Together™

# nexis<sup>®</sup> nexis<sup>®</sup> MIS

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# Introduction

# **Indications & Contraindications**

## Indications

The osteosynthesis screws are indicated for arthrosis, hallux valgus and other bone alignment defaults (pes cavus, flatfoot, malalignment secondary to previous trauma).

**Note:** Detailed information on each medical device is provided in the instruction for use. Refer to the instruction for use for a complete list of side effects, warnings, precautions for use and directions for use.

#### Contraindications

- Severe muscular, neurological or vascular deficiency in the extremity concerned.
- Bone destruction or poor bone quality, likely to impair implant stability.
- . Hypersensitivity to vanadium and/or aluminium.

# **Examples of use**



#### Snap-off Ø 2 mm:

Weil osteotomy.



#### MIS Ø 2.7 mm Ø 2.3 & Ø 2.9 mm:

Scarf & Chevron Osteotomies, P1 osteotomy.



#### Ø 4 mm:

MTP & Cuneo-metatarsal arthrodesis.



# 1 - Nexis® MIS Ø 2.7

- 1 Cannulated screw: Extra-Sharp Ø 1.2 K-Wire
- 2 Elliptic beveled head



Maximization of cortical anchorage and preservatition of soft tissue



Elliptic bevel: Allows for additional angular rotation to preserve the burial of the head



3 Exact2-T Recess Specific & universal



4 Positive locking channels



5 Self-drilling & self-tapping

- Penetrating sharp tips
- Facilitated insertion



.Maximized anchorage & compression







Optimized range Screws available in lengths of 14 to 30 mm

# 2 - Nexis® MIS instrumentation

#### Extra-Sharp Ø 1.2 K-Wire

Ø 1.2 mm: provides greater stiffness\* Sharpened tip: allows for angulated insertion



# Exact2-T8 AO screwdriver tip

#### Exact2-T8 recess:

- . Specific: easy indexing of the Exact2-T8 AO screwdriver tip
- . Universal: possible removal with standard instrumentation



Exact2-T8 recess ensures the unique positioning of the screwdriver tip.

The laser marking and bevel of the Exact2-T8 AO screwdriver tip facilitate the proper placement of the screw head.



\*Greater stiffness than a Ø0.9 k-wire



# Nexis® MIS Mini Tray



Extra-sharp K-wire & Exact2-T8 AO screwdriver tip: optional in the Nexis® ForefootCOMPLETE & ForefootEXACT trays

# **3 -** Nexis<sup>®</sup> Ø 2 / Ø 2.3 / Ø 2.9 / Ø 4s



	Ø2 N nexis	Ø2.3 nexis	Ø2.9 N nexis	Ø4 N nexis
Screwdriver tip	Weil	Т7	Т8	T10
Distal thread diameter	Ø 2 mm	Ø 2.3 mm	Ø 2.9 mm	Ø 4mm
Length	11 - 16 mm <sup>(1)</sup>	10 - 30 mm <sup>(2)</sup>	10 - 34 mm <sup>(2)</sup>	18 - 60 mm <sup>(3)</sup>
K-wire	N/A	Ø 0.9 x 80 mm	Ø 1.0 x 80 mm	Ø 1.4 x 100 mm
Screwdriver	N/A	Self-retaining / Non self-retaining (4)	Self-retaining / Non self-retaining (4)	Self-retaining

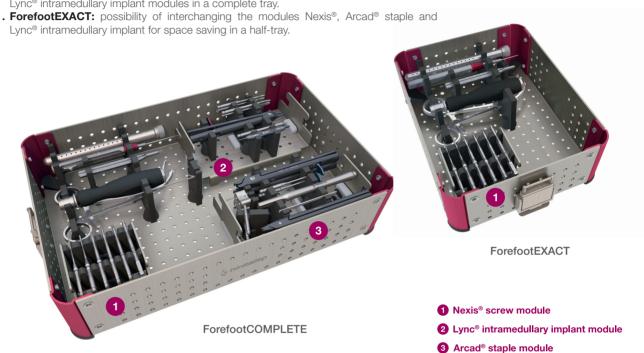
 $<sup>^{(1)}</sup>$  1 mm increments.  $^{(2)}$  2 mm increments.  $^{(3)}$  2 mm increments up to 50 mm, then 5 mm increments.  $^{(4)}$  Optional.

# 4 - Nexis® instrumentation

#### **Modularity**

A modular concept allowing customization of the ancillary according to the preferences of the practitioner or the indication. Two versions available:

. ForefootCOMPLETE: possibility of accommodating Nexis® screw, Arcad® staple and Lync® intramedullary implant modules in a complete tray.



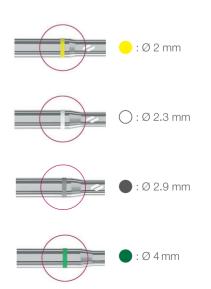


Dedicated instrumentation for each osteotomy: Weil, Scarf, Chevron,  ${\rm M1}\,.$ 



## **Color code identification**

Color coded equipment permits at-a-glance instrument identification.



Novastep® does not practice medicine and does not recommend this or any other surgical technique. Each surgeon must consider the specific needs of each patient and is responsible for making applicable adjustment and determining and using the appropriate technique for implanting the device in each cases.

# 1 - Chevron Osteotomy

## 1.1 - Incision & exposure

A medial incision is performed (2 to 3 cm) for first metatarsal-phalangeal joint exposure. The first metatarsal-phalangeal joint capsule is incised according to the surgeon's preference to expose the first metatarsal medial eminence.

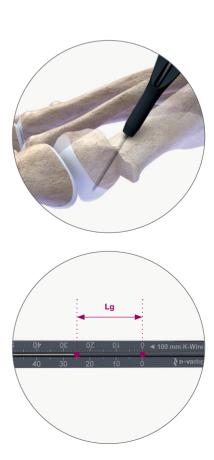
## 1.2 - Osteotomy & K-Wire insertion

Perform the Chevron Osteotomy with an oscillating saw blade. When reduction is achieved, stabilize the two bone fragments with a *extra-sharp* K-wire Ø 1.2 mm placed through the osteotomy to fix the position and for an accurate screw positioning.



## 1.3 - Screw length identification

Determine the appropriate Nexis® MIS screw length using the ruler.



#### 1.4 - Screw insertion

**Option:** Depending on the bone quality, use the Nexis® MIS countersink Ø 2.8 in order to prepare the screw head room.

Use the Exact2-T8 AO screwdriver tip to insert the Nexis® MIS screw with a power tool or by hand until the screw is flush with the dorsal cortex.

Once the screw is inserted, it is recommended to check the stability of the osteotomy and the final insertion under fluoroscopy.

Remove the K-Wire.



Option: The procedure can also be performed with Nexis® Ø 2.3 or Ø 2.9 screws and their associated instruments:



K-wire Ø 0.9 lg 80 mm Ruler Lg 80 Countersink Ø 2.75 T7 AO screwdriver tip



K-wire Ø 1.0 lg 80 mm Ruler Lg 80 Countersink Ø 2.75 T8 AO screwdriver tip

Remove the medial eminence of the first metatarsal bone with an oscillating saw blade.

# 2 - Mini-invasive Scarf osteotomy

## 2.1 - Incision & exposure

Perform an incision centered at the exostosis of the first metatarsal. The joint capsule of the first metatarsal is incised according to the surgeon's preference.

## 2.2 - Osteotomy & K-Wire insertion

Perform the mini-invasive Scarf osteotomy thanks to an oscillating saw blade. Once the reduction of M1 deformity is achieved, stabilize the fragments and place a <code>extra-sharp</code> K-wire  $\emptyset$  1.2 through the osteotomy to fix the position and to allow accurate screw positioning.

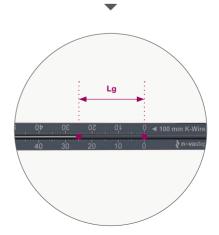
Option: A Scarf forceps is available on request.



## 2.3 - Screw length identification

Place the ruler over the K-Wire and determine the screw length.





#### 2.4 - Screws insertion

**Option:** Depending on the bone quality, use the Nexis® MIS countersink Ø 2.8 in order to prepare the screw head room.

Use the Exact2-T8 AO screwdriver tip to insert the Nexis® MIS screw with a power tool or by hand until the screw is flush with the dorsal cortex.

Once the screw is inserted, it is recommended to check the stability of the osteotomy and the final insertion under fluoroscopy.

Remove the K-Wire.



Option: The procedure can also be performed with Nexis® Ø 2.3 or Ø 2.9 screws and their associated instruments:



K-wire Ø 0.9 lg 80 mm Ruler Lg 80 Countersink Ø 2.75 T7 AO screwdriver tip



K-wire Ø 1.0 lg 80 mm Ruler Lg 80 Countersink Ø 2.75 T8 AO screwdriver tip

Remove the medial eminence of the first metatarsal bone with an oscillating saw blade.

# 3 - Phalangeal Osteotomy (P1)

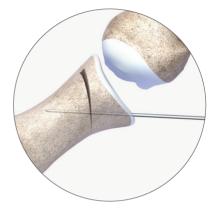
## 3.1 - Incision & exposure

Realize a medial incision at the metaphyseal junction of the proximal phalanx to expose the first metatarsophalangeal joint.

# 3.2 - Osteotomy & K-wire insertion

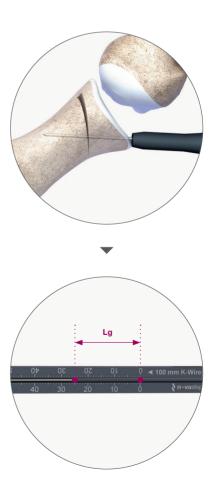
Perform the osteotomy with an oscillating saw blade and perform a varus movement.

Place the extra-sharp K-wire  $\emptyset$  1.2 to fix the position and allow precise placement of the screw.



## 3.3 - Screw length identification

Before the insertion, determine the screw length using the ruler.



#### 3.4 - Screw insertion

Use the Exact2-T8 AO screwdriver tip to insert the Nexis® MIS screw with a power tool or by hand until the lateral cortex has been reached. Check to ensure proper stability at the osteotomy site.



Option: The procedure can also be performed with Nexis® Ø 2.3 or Ø 2.9 screws and their associated instruments:



K-wire Ø 0.9 lg 80 mm Ruler Lg 80 Countersink Ø 2.75 T7 AO screwdriver tip



K-wire Ø 1.0 lg 80 mm Ruler Lg 80 Countersink Ø 2.75 T8 AO screwdriver tip

## **Optional steps**

## Pre-drilling:

Depending on the surgeon's preference, pre-drilling may be needed. Prepare the bone housing using the cannulated drill-bit(1) over the K-wire before screw insertion.

(1) A solid drill-bit is also available.



#### Screw length identification with a depth gauge:

After bone preparation and K-wire removal, a depth gauge is available to determine the screw length.



# 4 - Weil Osteotomy

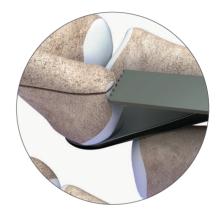
## 4.1 - Incision & exposure

Make an incision on the dorsal side of the foot, at the affected MTP joint and dislocate the metatarsal head.

Option: A Weil spoon in available on request.

## 4.2 - Osteotomy & K-wires insertion

Perform the Weil osteotomy with an appropriately sized saw blade. Push back the metatarsal head according to the chosen correction.



## 4.3 - Screw insertion

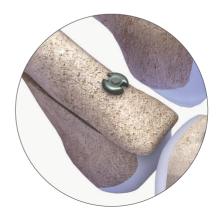
The Nexis® Ø2 snap-off screw have been designed to perform faster screw insertion without bone preparation steps.

Insert the screw directly with a wire driver. The snap-off area will break at the end of the insertion.



**Note:** In case of a poor bone quality, induce the breakage with a lateral movement.

If necessary, use the Weil screwdriver tip in order to complete the burying of the screw head. Check the stability of the osteotomy.



# 1 - Nexis® MIS Ø 2.7

Nexis® MIS screws	
Length (mm)	Reference
14 mm	SC090014
16 mm	SC090016
18 mm	SC090018
20 mm	SC090020
22 mm	SC090022
24 mm	SC090024
26 mm	SC090026
28 mm	SC090028
30 mm	SC090030

#### K-Wire Ø 1.2 mm

Compressive screws

Description	Reference
K-Wire Ø 1.2 lg 80 TR/RD *	CKW01017 <sup>(1)</sup>
K-Wire Ø 1.2 lg 100 TR/RD	CKW01014 <sup>(2)</sup>
K-Wire Ø 1.2 lg 150 TR/RD **	CKW01015 <sup>(3)</sup>

- (1) Medetechnik® K-wire (33-T10-R-12-080) is also available depending on your market.

  © Medetechnik® K-wire (33-T10-R-12-100) is also available depending on your market.
- Medetechnik® K-wire (33-110-R-12-100) is also available depending on your market.
   Medetechnik® K-wire (33-T10-R-12-150) is also available depending on your market.

4444444 1944

# **2 -** Nexis<sup>®</sup> Ø 2 / Ø 2.3 / Ø 2.9 / Ø 4

Snap-off screws				
Length (mm)	Ø 2 mm			
11	SC040011			
12	SC040012			
13	SC040013			
14	SC040014			
15	SC040015			
16	SC040016			

#### K-Wires

Ref	Description
CKW01009 <sup>(1)</sup>	K-Wire Ø 0.9 Lg 80 TR/RD
CKW01016 <sup>(2)</sup>	K-Wire Ø 1.0 Lg 80 TR/RD
CKW01002 <sup>(3)</sup>	K-Wire Ø 1.4 Lg 100 TR/RD

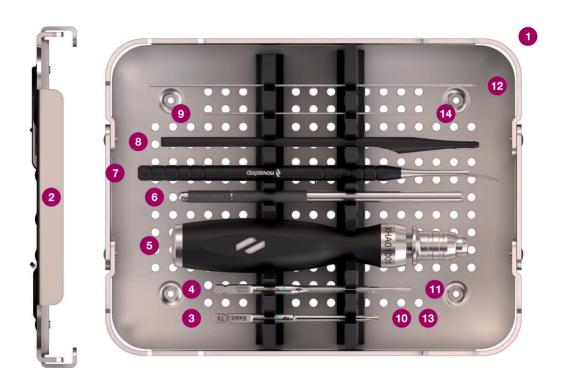
"Medetechnik" K-wire (33-T10-R-09-080) is also available depending on your market "Medetechnik" K-wire (33-T10-R-10-080) is also available depending on your market "Medetechnik" K-wire (33-T10-R-14-100) is also available depending on your market

Compressive cor			
Length (mm)	Ø 2.3 mm	Ø 2.9 mm	Ø 4 mm
10	SC010010	SC020010	-
12	SC010012	SC020012	-
14	SC010014	SC020014	-
16	SC010016	SC020016	-
18	SC010018	SC020018	SC050018
20	SC010020	SC020020	SC050020
22	SC010022	SC020022	SC050022
24	SC010024	SC020024	SC050024
26	SC010026	SC020026	SC050026
28	SC010028	SC020028	SC050028
30	SC010030	SC020030	SC050030
32	-	SC020032	SC050032
34	-	SC020034	SC050034
36	-	-	SC050036
38	-	-	SC050038
40	-	-	SC050040
50	-	-	SC050050
55	-	-	SC050055
60	-	-	SC050060

<sup>\*</sup> Optional in the ForefootCOMPLETE

<sup>\*\*</sup> Optional in the Nexis® MIS Mini tray

# 3 - Nexis® MIS instrumentation



## **Nexis® MIS instrumentation**

Number	Ref	Description	Qty	
1	ACC1018P0001	Tray	1	
2	ACC1018P0002	Lid	1	
3	XSD02006	Exact-2 T8 AO screwdriver tip	2	
4	XRE01024	Countersink Ø 2.8	1	
5	XHA01001	AO handle	1	
6	-	Fine surgical handle <sup>(1)</sup>	1	
7	XMS01011	Periostal elevator single tip	1	§ recents
8	XGA01013	Ruler Lg 100/150	1	168 pm KWire ▶ 応 岩 光 泉 光 茂 次 田 京 湖 岩 河 4 100 mm KWire ◆ mandely
9	-	K-wire Ø 1.2 Lg 100 TR/RD(2)	5	-

# Optional - Nexis® MIS instrumentation

Number	Ref	Description	Qty	
10	XSD02007	Removal Exact-2 T8 AO screwdriver tip	1	x80000001 Exact-2 T8
11	XDB01025	Cannulated drill bit Ø 1.9	1	ADB01025 Stuni
12	-	K-wire Ø 1.2 Lg 150 TR/RD(3)	5	-

<sup>(</sup>SK-wire supplied separately - Medetechnik® K-wire (33-T10-R-12-150) or Novastep® K-wire (CKW01015) are available depending on your market.

## Optional - Nexis® Ø 2.3 instrumentation

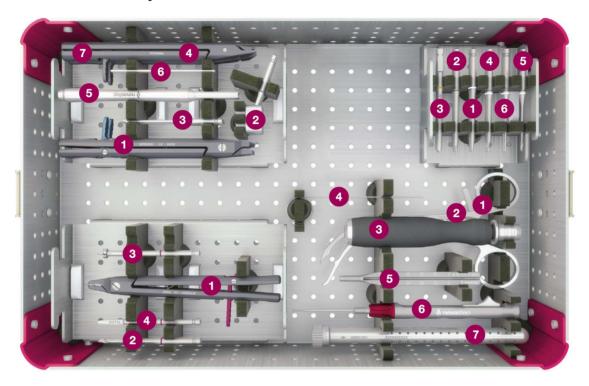
Number	Ref	Description	Qty	
13	XSD01001	T7 AO screwdriver tip	2	1001001X
14	-	K-wire Ø 0.9 Lg 100 TR/RD(4)	5	

<sup>(4)</sup>K-wire supplied separately - Medetechnik® K-wire (33-T10-R-09-100) or Novastep® K-wire (CKW01008) are available depending on your market.

<sup>&</sup>lt;sup>©</sup>Reference SF13 supplied separately - availability depending on your market <sup>©</sup>K-wire supplied separately - Medetechnik® K-wire (33-T10-R-12-100) or Novastep® K-wire (CKW01014) are available depending on your market.

# 4 - Nexis® instrumentation

# 1 - ForefootCOMPLETE Tray



## **Universal instruments**

Number	Ref	Description	Qty	
	ACC1001P0001	Forefoot complete tray	1	
	ACC1001P0002	Forefoot complete Lid	1	
1	XFP01001	Scarf Forceps **	1	78
2	XFP01004	Chevron Forceps **	1	-8
3	XHA01001	AO Handle	1	
4	XKW01001	Cleaning pin Ø 0.9	1	
5	XGA01001	Ruler Lg 80	1	50 40 30 20 10 0 <b>€</b> 80 mm K.Wive
6	XGA01002	Depth gauge	1	
7	XMS01001	K-wire tube	1	
-	-	K-wire Ø0.9 lg 80 TR/RD(1)	1	
-	-	K-wire Ø1.0 lg 80 TR/RD(2)	1	-
-	-	K-wire Ø1.4 lg 100 TR/RD(3)	1	

<sup>&</sup>quot;K-wire supplied separately - Medetechnik® K-wire (33-T10-R-09-080) or Novastep® K-wire (CKW01009) are available depending on your market. 
"K-wire supplied separately - Medetechnik® K-wire (33-T10-R-10-080) or Novastep® K-wire (CKW01006) are available depending on your market. 
"K-wire supplied separately - Medetechnik® K-wire (33-T10-R-14-100) or Novastep® K-wire (CKW01002) are available depending on your market. 
\*\*Optional

# Nexis® module Ø 2, 2.3 & 2.9

Number	Ref	Description	Qty	
	ACC1001P0006	Module	1	
1	XSD01001	T7 AO screwdriver tip	1	XSD01001
2	XSD02001	T8 AO screwdriver tip	1	×5D02001 ◆ (B)
3	XSD03001	Snap-off AO screwdriver tip	1	XSD03001 🛷
4	XRE01001	Countersink Ø 2.75	1	XRE01001 🛷
5	XDB02001	Solid drill bit Ø 1.75	1	(corns)
6	XDB01001	Cannulated drill bit Ø 1.75	1	(4700 0000

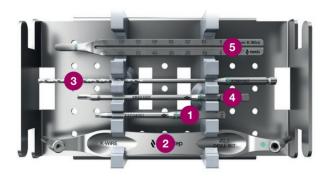
# Arcad® forefoot module

Number	Ref	Description	Qty	
	ACC1001P0003	Module	1	
1	XFP03001	Arcad® 10 - Forceps	1	
2	XDG01001	Arcad® 10 - Drill-guide	1	H
3	XDB01008	Drill bit Ø 2	1	X0201008
4	XFP02001	Angled staples Forceps	1	
5	XMS01002	Impactor	1	≬ novactop
6	XPP01001	Positioning pin Ø 2	2	★ XHM1001 R2 (€ XXXX )
7	XFP05001	Straight staples Forceps	1	

# Lync® module

Number	Ref	Description	Qty	
	ACC1001P0004	Module	1	
1	XFP04001	Forceps	1	
2	XDB01003	Drill bit Ø 2.3	1	(6870)
3	XRE01002	Surfacing reamer	1	XRE01002
4	XRA01002	Rasp	1	DISTAL

# 2 - Optional - Nexis® Ø 4 module



# Nexis® Ø 4 module

Number	Ref	Description	Qty	
	ACC1002P0004	Module	1	
1	XSD04001	T10 AO screwdriver tip	1	XSD04001 🛷
2	XDG01009	Double drill guide for screw Ø 4.0	1	Formation (1)
3	XDB01007	Cannulated drill bit Ø 2.7	1	WARRIER WARRIE
4	XRE01007	Nexis® / PECA®-C - Countersink Ø 3.7	1	X55(0100)
5	XGA01004	Ruler Lg 100	1	02 09 05 07 05 05 0 0 4 100 mm K-Mires

## 3 - ForefootEXACT Tray



## **Universal instruments**

Number	Ref	Description	Qty	
	ACC1001P0008	Forefoot exact tray	1	
	ACC1001P0007	Forefoot exact Lid	1	
1	XFP01001	Scarf Forceps **	1	78
2	XFP01004	Chevron Forceps **	1	\$
3	XHA01001	AO handle	1	
4	XKW01001	Cleaning pin Ø 0.9	1	
5	XGA01001	Ruler Lg 80	1	65
6	XGA01002	Depth gauge	1	
7	XMS01001	K-wire tube	1	
-	-	K-wire Ø0.9 lg 80 TR/RD(1)	1	
-	-	K-wire Ø1.0 lg 80 TR/RD(2)	1	
-	-	K-wire Ø1.4 lg 100 TR/RD(3)	1	

# Nexis® module Ø 2, 2.3 & 2.9

Number	Ref	Description	Qty	
	ACC1001P0006	Module	1	
1	XSD01001	T7 AO screwdriver tip	1	XSD01001
2	XSD02001	T8 AO screwdriver tip	1	XSD02001 👟
3	XSD03001	Snap-off AO screwdriver tip	1	XSD03001 🛷
4	XRE01001	Countersink Ø 2.75	1	XRE01001
5	XDB02001	Solid drill bit Ø 1.75	1	(G16) 0000
6	XDB01001	Cannulated drill bit Ø 1.75	1	SECTION

<sup>&</sup>quot;K-wire supplied separately - Medetechnik" K-wire (33-T10-R-09-080) or Novastep" K-wire (CKW01009) are available depending on your market.

"K-wire supplied separately - Medetechnik" K-wire (33-T10-R-10-080) or Novastep" K-wire (CKW01006) are available depending on your market.

"K-wire supplied separately - Medetechnik" K-wire (33-T10-R-14-100) or Novastep" K-wire (CKW01002) are available depending on your market.

"Optional"



#### Please note:

Carefully read the enclosed Instructions For Use (IFU) and all packaging label information. Devices: Implants: Class IIb-CE1639 / Instruments: Class I / Class Ir-CE1639 / Class IIa-CE1639.

#### ■ Novastep:

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Reference: Nex-FORE-ST-Ed2-07-24-EN