Sport Surgery Range

2022-2023

- Interference Screws
- Bioresorbable Pins
- Fixation Loops
- Resorbable Anchors
- Surgical Threads
- Bone Substitutes
- Instruments

MADE IN FRANCE

Teknimed

Products Overview

Expertise & Quality

Since 1990, Teknimed manufactures innovative high quality biomaterials and medical products to improve the quality of life in Biomaterials products.

Teknimed designs, develops, registers and produces products for orthopaedics, trauma, sports medicine and spine surgeries. Our predominant competencies on orthobiologics products and services enable us to accompany our clients continuously in clinical surgeries.

Our Research and Development Department and their transversal skills enable us to have a holistic overview to project management.

We are best known for conceiving and manufacturing implants and their ancillary systems.

Each product is synthesized and manufactured internally by our chemists all the way through to worldwide regulatory validation, each and every step is rigorously thorough and qualified.

Teknimed puts quality at the heart of the company's values to ensure its products performance and safety.

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Our quality system has been certified since 1996; it is based on a strategy of continuous improvement and meets national and international requirements, particularly such as: Benchmark standards ISO 13485 and CFR 21 part 820, compliance with current regulations (particularly FDA and European Directive 93/42/EEC), audits by our notified body and by our customers, ANSM, ANVISA, KFDA, FDA – 21 CFR Part 820 inspections.

You can have all your products under your brand name!

PRIVATE LABEL

LOCALISATION

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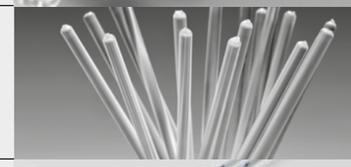
Bioresorbable PIN	7	
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Biomaterials

Polyal®

A novel bio-composite

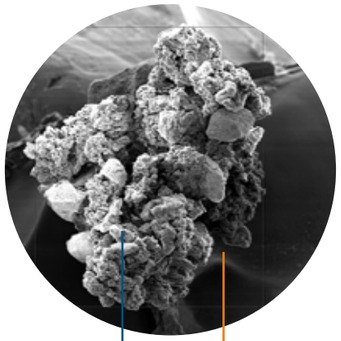
Controlled implant resorption, bone regeneration and patient well-being are at the heart of this composition.

Polyal® is a 100% synthetic, bio-composite composed of polylactic acid (PLA) and tricalcium phosphate (TCP). PLA is the leading polymer of choice in medical devices today.[1,2]

PLA and specifically amorphous co-polymer of PLA has the key criteria of maintaining the implant's **mechanical resistance** (L-Lactide) in the first 6 months and then starting the degradation process through hydrolysis with limited inflammation (DL-Lactide)[3]. The ratio of the two forms of lactide was selected to obtain strength and adapted degradation characteristics of the resulting material.The body subsequently starts the natural bone remodeling process.

As there is not enough mineral at the implant site Polyal's mineral content releases ionic exchange: **TCP dissolution and bony crystal precipitation facilitating osteoblastic bone formation** to develop fully architectural natural bone.

It is known that certain polymer only solutions, such as PLGA can lead to acidic shock and absorbs too quickly. Polyal's mineral structure degrades breaking into phosphate and calcium ions which **maintain the pH in the surrounding implant, significantly limiting inflammation.**



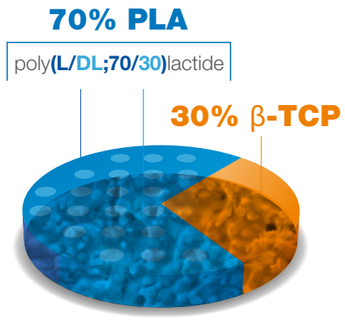
SEM image of Polyal® microstructure. Scale x5000.

A singular manufacturing process

Polyal® has unique characteristics thanks to a non-destructive manufacturing process.[4]

This crucially means all Polyal® products retain their original physical-chemical properties such as molecular weight and complete homogeneity of polymer and TCP throughout the materials. Manufacturing bioabsorbable implants from **Polyal®** gives final products with higher properties compared to other biocomposites.

Polyal® Composition

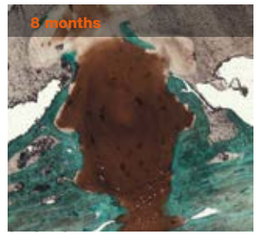


1. MiddletonJ. C., et al.; Biomaterials 21 (23), «Synthetic biodegradable polymers as Orthopaedic devices», 2000 2335-2346.
2. Dorozhkin SV, Calcium Orthophosphate-Containing Biocomposites and Hybrid Biomaterials for Biomedical Applications, J. Funct. Biomater, 2015, 6, 708-832.
3. Auras R, Lim LT, Selke SEM, Tsuji H, Poly(lactic acid): Synthesis, Structures, Properties, Processing, and Applications, 2010, Wiley series on polymer engineering and tech.
4. Data on file at Teknimed.

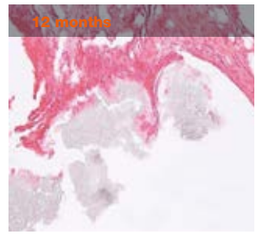
Polyal® has demonstrated long-term compatibility

In vivo implantation, EURO**SCREW**® TCP[1]

Cohesion of new bone ingrowth all around the screw



Screw distorsion during process of resorption



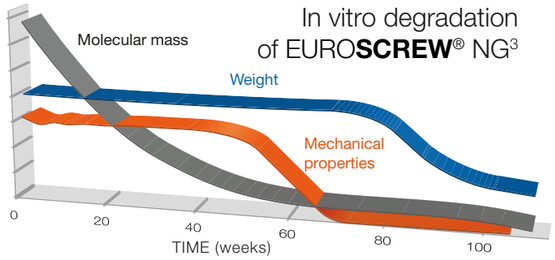
Interdigitation of new bone into screw's fragments

Implants made of Polyal® show new bone formation beginning at 3 months (New bone surrounded the screw with varying thickness). At 6 months this new bone starts to be well calcified bone. Consequently, we could conclude that the present biodegradable β-TCP/PLA implants have a good biocompatibility in vivo.

Resorption

Polyal® is mechanically stable for 8-10 months. Bioabsorption kinetic is tailored to start at the end of natural bone healing. Complete absorption of the material is observed within a maximum of 4 years.[2]

In vitro degradation of EURO**SCREW**® NG[3]



1. Internal report "Étude n°07-04", 2008
2. Internal report "SO161019", 2019

EUROSCREW® NG

Bioabsorbable cannulated screw specially designed for ligamentoplasty surgical procedures (Class III)

EUROSCREW® NG & TCP NG offer a complete range of screws and tools to ensure a secure fixation of the transplants. The screws are suitable for current ligamentoplasty techniques.

MECHANICAL ADVANTAGES:

- **HIGH TORQUE RESISTANCE[1]**
- **SPECIAL INTERNAL CONFIGURATION**
- **OSTEOCONDUCTIVE (Polyal®)**

HANDLING ADVANTAGES:

- **SELF-TAPPING, NO TAP NEEDED[2]**
- **DOUBLE THREADED FOR FAST SCREWING**

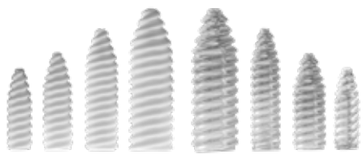
A detail design

The screws have a triangular inner cone which ensures perfect contact between the screwdriver and the screw. This contact allows transmission of torque in a compressive rather than shearing mode. This increases the resistance of EUROSCREW® NG to torque failure. (fig.1).

A conical tip and specific threads avoid the need to tap even for TCP version.

Special internal configuration: Internal design of the tip avoids any contact between the screwdriver and soft tissues.

EUROSCREW® NG haves a double thread which reduces the number of turns needed to introduce the screw into the pre-drilled tunnel.



AVAILABLE SIZES	
Ø 6 mm L 20 mm	Ø 8 mm L 30 mm
Ø 7 mm L 24 mm	Ø 9 mm L 30 mm
Ø 8 mm L 24 mm	Ø 10 mm L 30 mm
Ø 9 mm L 24 mm	Ø 11 mm L 35 mm
Ø 7 mm L 30 mm	

Indications

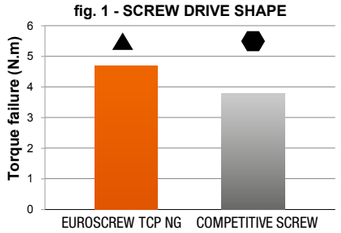
EUROSCREW® NG are recommended for ligament attachment in knee anterior cruciate ligament or ankle lateral ligament reconstructions.

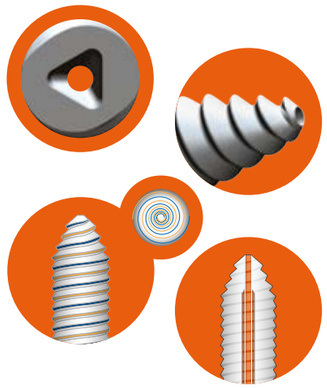
EUROSCREW® TCP NG are recommended for ligament attachment in knee anterior cruciate ligament reconstructions.

Composition

Polyal® or 100% PLA

fig. 1 - SCREW DRIVE SHAPE





1. Internal report “132-3-PE”, 2013
2. Internal report “JI19022015”, 2015

Bioresorbable PINS

Bioresorbable pin (Class III)

Bioresorbable PINS allow alignment and fixation of small bones during fusion

ADVANTAGES:

- **CONTROLLED DEGRADATION**
- **BIOCOMPATIBLE**
- **READY TO USE**
- **MECHANICAL STRENGTH**
- **DIVISIBLE WITH CLEAN CUT**
- **RADIOTRANSPARENT**

Pins are stable during 8-10 months after implantation allowing bone stabilization during healing. Then pins are hydrolyzed in situ and totally replaced by bone within a maximum of 4 years[1].

Dimensions:

- **Made of 100% poly(70/30;L/DL)lactide.**
- **Available in 2 diameters.**
- **Available as a kit with disposable stainless steel pins drilling instrumentation.**

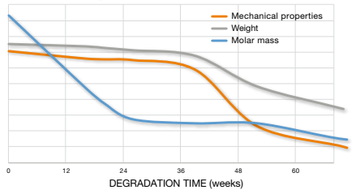
Indications

Bioresorbable pins are indicated for the stabilization of metatarsal & phalangeal osteotomies during treatment of hallux valgus.

Composition

100% poly(70/30;L/DL)lactide.

In vitro degradation of Bioresorbable Pins[2]



Sharp stainless steel pin for bone drilling

Pin-Pusher

1. Internal report SO161019, 2017
2. Internal report “in vitro degradation DM PLA/PLA-TCP”, 2019

COLINK® Standard

Fixation button with loop (Class IIb)

COLINK® Standard fixation device offers one of the strongest soft tissue femoral fixation currently available.

MECHANICAL ADVANTAGES:

- **HIGH TENSILE STRENGTH (1500N)[1]**
- **CONTINUOUS BRAIDED LOOP**

HANDLING ADVANTAGES:

- **ALLOWS TRULY ENDOSCOPIC PROCEDURE**
- **ACCOMODATES VARIOUS GRAFT LENGTHS**
- **ELIMINATES THE NEED FOR KNOT TYING**
- **ENSURES CORRECT SEATING OF DEVICE**

Ideal for primary or auxilliary fixation during ACL or PCL reconstruction techniques. Preloaded with UHMWPE suture (white) and flipping suture (striped) for added procedure efficiency.

COLINK® Standard can be used in:

- Single-Bundle soft tissue fixation
- Double-Bundle soft tissue fixation
- Bone-Tendon-Bone fixation

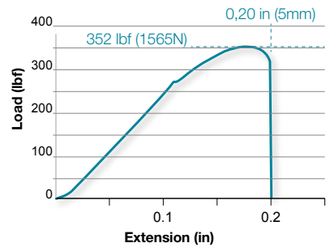
Indications

Fixation of bone and soft tissue in Orthopaedic procedures requiring ligament or tendon reconstruction.

Composition

Loop: UHMWPE
Sutures: HS Fiber®
Plate: Titanium (Ti-6Al-4V)

fig.1 - Ultimate Load Failure Test (Mean)



AVAILABLE SIZES	
Standard 12 mm	Standard 40 mm
Standard 15 mm	Standard 45 mm
Standard 20 mm	Standard 50 mm
Standard 25 mm	Standard 55 mm
Standard 30 mm	Standard 60 mm
Standard 35 mm	

Endoscopic Reamer Ø 4.7

1. Data on file at Teknimed.

COLINK® Adjustable

Fixation button with loop (Class IIb)

COLINK® Adjustable fixation device incorporates a unique cradle design to help protect the graft during loop reduction.

MECHANICAL ADVANTAGES:

- **HIGH TENSILE STRENGTH (900N)[1]**
- **UNIQUE 3-POINT LOCKING DESIGN & BRAID FOR EASY PLACEMENT AND TO REDUCE SUTURE CREEP**
- **GRAFT SUPPORT FRAME WITH LARGE CONTACT AREA**
- **PROPER REDUCTION & COUNTER TENSIONING**

HANDLING ADVANTAGES:

- **ADJUSTABLE LOOP - ONE SIZE FITS ALL (15 to 60mm)**
- **TWO-HANDED ADJUSTMENT**
- **CROSSOVER PATTERN TO INCREASE VISIBILITY**

Indications

Fixation of bone and soft tissue in Orthopaedic procedures requiring ligament or tendon reconstruction.

Composition

Loop: UHMWPE
Sutures: HS Fiber®
Plate: Titanium (Ti-6Al-4V)

Graft Prep Station

A'**LINK'S**®

Bioabsorbable suture anchor

(Class III)

A'**LINK'S**® is a bioresorbable suture anchor mounted on a single-use inserter with two sutures of UHMWPE (USP2).

SUTURE ADVANTAGES:

- **HIGH TENSILE STRENGTH**
- **NO TANGLES**
- **RESISTANT KNOTS**
- **SOLID AND SECURE SUTURES**

ANCHOR ADVANTAGES:

- **DOUBLE THREAD**
- **HIGH MECHANICAL PROPERTIES**
- **BIOCOMPATIBLE MATERIAL**
- **BIOABSORPTION**

Suture

1) High tensile strength, USP2 sutures made of Ultra High Molecular Weight Polyethylene (UHMWPE).

2) No tangles, sutures of different colour individually stored in the handle of the inserter.

3) Free sliding of the sutures due to their composition.Resistant knots once tied[1,2]

4) Tighter loop security during the tying process and superior knot break strength.

Anchor

1) Higher pull-out strength thanks to the double thread design[3]

2) High mechanical properties, due to homogeneous distribution of TCP particles within the PLA Matrix.

3) Biocompatible composite material made of 70% PLA & 30% ß-TCP

4) Bioabsorption kinetic tailored to start at the end of the natural bone healing. PLA is biodegraded by the human body through hydrolytic degradation. TCP helps to maintain the surrounding tissues at a neutral pH by buffer effect which reduces the risk of inflammation.[4]

The anchor is completely absorbed within a maximum of 4 years.[5]

Indications

The A'LINK'S Anchor is intended for Rotator Cuff Repair & Biceps tenodesis

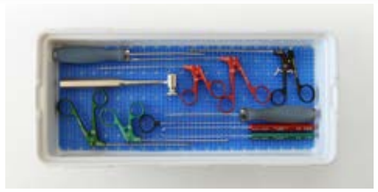
Composition

Polyal® + UHMWPE
Handle: polypropylene
Stem: stainless steel

1. I. Lo et al. «Arthroscopy», Vol. 26, No. 9, pp. 120-126, 2010
2. Brochure « TELEFLEX Force Fiber Suture » 2015
3. FA. Barber et al. «Arthroscopy», Vol. 24, No. 8, pp. 859-867, 2008
4. M. Dziadek et al. «Materials Science and Engineering: C», Vol. 71, pp. 1175-1191, 2017
5. Internal report "SO161019"

Shoulder **instrumentation**

A'LINK'S® Set & parts



Complete A'LINK'S® set

Trim cord suturwire cutter

Combo Grasper

Clever hook left

Suture manipulator grasper

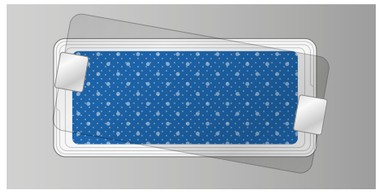
Clever hook right

Hammer

Suture leader 70° right

Suture leader 70° left

Knot manipulator full loop



Container

Shoulder **Ancillary -** A'LINK'S® Awl & Tapper

Ø 5.5mm Short Tap

Ø 6.5mm Short Tap

SUTUR'**LINK**®

Suture

(Class IIb)

SUTUR'**LINK**® is a UHMWPE thread giving superior tensile & knot strength which translate into clinical and patient benefits.

HANDLING ADVANTAGES:

- **HIGH TENSILE & KNOT STRENGTH**[1]
- **THE RIGHT BALANCE BETWEEN KNOT SAFETY AND SLIDING ABILITY**
- **PROVEN LESS BACTERIAL ADHERENCE**[2]
- **ERGONOMIC NEEDLES**

Indications

SUTUR' LINK® are indicated for repairing or reinforcing ligaments, closure and/or ligation of soft tissues, and tuberosity reinsertions.

Composition

87,5 % UHMWPE/12,5 % PP
+ Stainless Steel Needles

Rounded needle intended for suturing tendons and ligaments.
Triangular needle intended for trans bone reinsertions & tuberosity fixation.

Dimensions:

- **Thread: USP ¾, L = 900 mm**
- **Round needle: ⅜ length 25 mm**
- **Triangular needle: ½ length 40 mm**

1. Data on file at Teknimed.
2. Masini B, Stinner D, Waterman S, et al. Bacterial adherence to high-tensile strength sutures. Arthroscopy. 2011;27(6):834-838.

CERAFORM®

Synthetic Bone Substitute

(Class III)

CERAFORM® is a synthetic biphasic ceramic made of hydroxyapatite (HA) and beta tricalcium phosphate (β-TCP), biocompatible and safe.

Hydroxyapatite $Ca_{10}(PO_4)_6(OH)_2$ is a calcium phosphate similar to the mineral phase of bone tissue. Tricalcium phosphate $Ca_3(PO_4)_2$, more soluble than HA, improves the resorption kinetics of **CERA**FORM®.

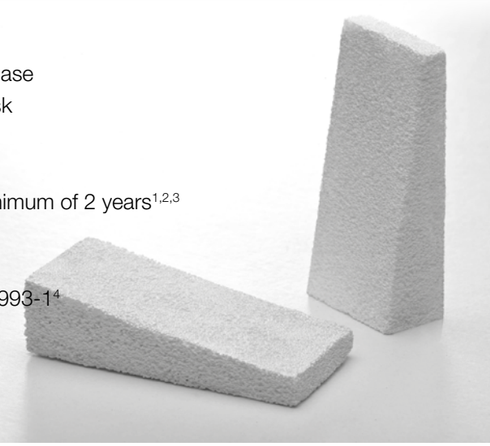
ADVANTAGES:

- **ELIMINATES INFECTION & IMMUNOLOGICAL RISKS (SYNTHETIC)**
- **NO ADVERSE BIOLOGICAL REACTION (BIOCOMPATIBLE)**
- **PERFECTLY INTEGRATED INTO THE BONE TISSUE.**

SYNTHETIC
- Free from organic phase
- No immunological risk

ABSORBABLE
- Absorbed after a minimum of 2 years[1,2,3]

BIOCOMPATIBLE
- Compliant to ISO 10993-1[4]



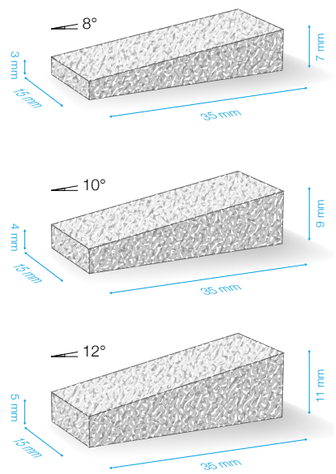
Indications

CERAFORM® is indicated for the filling of bone defects due to bone injury (such as tumour, trauma, disease) , or surgical procedure (such as arthrodesis, osteotomy).

Composition

65% HA / 35% β-TCP

3 SIZES :



1. El-Adl G, Ali AM. Does bone marrow affect the radiological outcome when added to biphasic ceramic graft in treatment of benign bone lesions? Eur J Orthop Surg Traumatol. 2013 Jan;23(1):13-20. doi: 10.1007/s00590-012-0943-x. Epub 2012 Jan 22.
2. P. Botez, P. Sirbu, L. Simion, Fl. Munteanu, I. Antoniac. Application of a biphasic macroporous synthetic bone substitutes CERAFORM®: clinical and histological results. Eur J Orthop Surg Traumatol (2009) 19:387–395.
3. El-Adl G, Mostafa MF, Enan A, Ashraf M. Biphasic ceramic bone substitute mixed with autogenous bone marrow in the treatment of cavitary benign bone lesions. Acta Orthop Belg. 2009 Feb;75(1):110-8.
4. Biological Risk Assessment Report CERAFORM® 095/3/PERB

Teknimed

References

KNEE

EUROSCREW® NG PLA

Ø 6 x L 20mm	T720620NG
Ø 7 x L 24mm	T720724NG
Ø 8 x L 24mm	T720824NG
Ø 9 x L 24mm	T720924NG
Ø 7 x L 30mm	T720730NG
Ø 8 x L 30mm	T720830NG
Ø 9 x L 30mm	T720930NG
Ø 10 x L 30mm	T721030NG
Ø 11 x L 35mm	T721135NG

EUROSCREW® NG PLA/TCP

Ø 6 x L 20mm	T730620NG
Ø 7 x L 24mm	T730724NG
Ø 8 x L 24mm	T730824NG
Ø 9 x L 24mm	T730924NG
Ø 7 x L 30mm	T730730NG
Ø 8 x L 30mm	T730830NG
Ø 9 x L 30mm	T730930NG
Ø 10 x L 30mm	T731030NG
Ø 11 x L 35mm	T731135NG

CERAFORM®

Wedge 8°	T803008
Wedge 10°	T803010
Wedge 12°	T803012

KNEE & SHOULDER

COLINK® Standard

12mm	TEK-OBCL-12
15mm	TEK-OBCL-15
20mm	TEK-OBCL-20
25mm	TEK-OBCL-25
30mm	TEK-OBCL-30
35mm	TEK-OBCL-35
40mm	TEK-OBCL-40
45mm	TEK-OBCL-45
50mm	TEK-OBCL-50
55mm	TEK-OBCL-55
60mm	TEK-OBCL-60

COLINK® Adjustable

	TEK-OBAL-80

SUTUR'LINK®

	T362034

FOOT

BIORESORBABLE PINS®

Ø 2.0 x L 60mm	T7100220
Ø 2.4 x L 60mm	T7100224

KIT BIORESORBABLE PINS®

Stainless Steel Pin + Pin Ø 2.0	T7110220
Stainless Steel Pin + Pin Ø 2.4	T7110224

PIN PUSHER

Ø 2.1	251183
Ø 2.5	251184

SHOULDER

A'LINK'S®

Ø 5.5 x L 20mm	T753155
Ø 6.5 x L 20mm	T753165

A'LINK'S® Instrumentation

Ø 5.5mm Short Tap	T067503
Ø 6.5mm Short Tap	T067504
Combo Grasper	TAG-622200
Trim cord suturwire cutter	TAG-231200
Suture manipulator grasper	TAG-601200
Knot manipulator full loop	TAG-301200
Suture leader 70° right	TAG-232012
Suture leader 70° left	TAG-232022
Clever hook right	TAG-328332
Clever hook left	TAG-328342
Hammer	820010.25
A'LINK'S® Instrumentation Case	T067294

ACL

ACL IMPLANT INSTRUMENTATION

Screwdriver EUROSCREW	T067230
Ratchet Handle	T067228
Screwdriver Shaft EUROSCREW	T067233
Starter Tap Shaft Ø7mm	T067201
Starter Tap Shaft Ø8mm	T067202
Starter Tap Shaft Ø9mm	T067203
Starter Tap Shaft Ø10mm	T067204
Starter Tap Shaft Ø11mm	T067205
Screwdriver EUROSCREW NG	T067231
Screwdriver EUROSCREW NG XL (optional)	T067232
Ratchet Handle	T067228
Screwdriver Shaft EUROSCREW NG	T067234
Pin Ø 1.2 Length 350 mm x2	T067254
ACL Cover Case	T067293
ACL Implant Instrumentation Case	T067291

ACL SURGERY INSTRUMENTATION

Preparation of the knee	
Notchplasty Curette	225-000-507
Graft removal and preparation	
Stripper	T067255
Graft prep Station	225-000-700
Sizing Plate	T067250
Realization of tunnels	
Femoral Aimer 5mm	T067212
Femoral Aimer 6mm	T067213
Femoral Aimer 7mm	T067214
Drill Guide System - ACL Tip Aimer - Angled Bullet - Drill Guide	 225-001-105 225-001-102 225-001-101
Eyeloop Pin Ø2.4mm L355 T x2	T067256
Eyeloop Pin Ø2.4mm L355 D x2	T067257
Tibial Guide Pin Ø2,4mm L250 D x3	T067258
Drill Ø6mm	T067236
Drill Ø6.5mm	T0672365
Drill Ø7mm	T067237
Drill Ø7.5mm	T0672375
Drill Ø8mm	T067238
Drill Ø8.5mm	T0672385
Drill Ø9mm	T067239
Drill Ø9.5mm	T0672395
Drill Ø10mm	T067240
Drill Ø10.5mm	T0672405
Drill Ø11mm	T067241
Drill Ø11.5mm	T0672415
Drill Ø12mm	T067242
Reamer Ø6mm	T067276
Reamer Ø6.5mm	T0672765
Reamer Ø7mm	T067277
Reamer Ø7.5mm	T0672775
Reamer Ø8mm	T067278
Reamer Ø8.5mm	T0672785
Reamer Ø9mm	T067279
Reamer Ø9.5mm	T0672795
Reamer Ø10mm	T067280
Reamer Ø10.5mm	T0672805
Reamer Ø11mm	T067281
Reamer Ø11.5mm	T0672815
Reamer Ø12mm	T067282
ACL Surgery Instru. Case	T067292
COLINK® Endoscopic Reamer Ø 4.7mm	BAK-7118

ISO 13485 Medical Devices Quality Management

CE 2797
Except for Class I products & Colink CE 0459

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Teknimed