MAT
MEDICAL ADVANCED TECHNOLOGY

HAND AND FOOT
SURGERY

SNAP OFF SCREW SYSTEM
Self-drilling and Self-tapping

HBS COMPRESSION SCREW SYSTEM
Double threading for optimal compression Scaphoid Bone Screws TITAN

HBS Osteosynthese · Osteosynthesis · Osteosíntesis
Durchbohrte Schraube mit doppeltem Gewinde · Headless Bone Screw
Tornillo sin cabeza · Vis sans tête · Vite senza testa

Einführung

Für die Fixation intraartikulärer Frakturen bietet das neue HBS-System die Wahl zwischen zwei Schraubentypen mit unterschiedlicher Kompression (Standard/Hohe Kompression).

Aufgrund ihrer Kanülierung können die Schrauben über einen 1 mm starken Führungsdraht eingebracht werden, was die Verwendung eines Zielgeräts überflüssig macht als auch eine perkutane Einbringung ermöglicht. Da beide Gewinde der Schrauben selbstschneidend sind, ist nur ein einziger kanülierter Bohrer erforderlich. Das T-Drive-System wiederum sorgt für sichere und präzise Handhabung.
Da die Schrauben inaktiv und komplett versenkbar sind, stellen sie das ideale Implantat zur intraartikulären oder gelenknahen Verwendung dar.

Indikationen

- Kahnbeinfrakturen
- Karpalfrakturen und Pseudarthrosen
- Mittelhandfrakturen
- Distale Radiusfrakturen (artikuläre Fragmente)
- Griffelfortsatzfrakturen der Ulna
- Proximale Radiuskopffrakturen
- Capitellumfrakture
- Humeruskopffrakturen
- Frakturen der Cavitas glenoidalis
- Interkarpale Fusionen
- Interphalangeale Fusionen
- Mittelfußosteotomien
- Tarsalfusionen
- Knöchelfrakturen
- Patellafrakturen
- Osteochondrale Frakturen
- Densfrakturen
- Unterkieferfrakturen

Vorteile

- Kanülierte Schraube für 1 mm Führungsdraht
- Zwei verschiedene Kompressionsstufen
- Selbsthaltende T-Drive Aufnahme
- Beide Gewinde selbstschneidend
- 1 mm Abstufung der Schrauben

Introduction

For the fixation of intra-articular fractures the new HBS system offers a choice of Standard or High Compression Screws.

Being cannulated, the screws can be inserted over a 1 mm-Guide Wire, thus eliminating the need to use a Jig, and allowing for percutaneous insertion. The self-tapping screw requires only a single cannulated drill, and the T-Drive system ensures complete control.

Since the screws are both inert and non-protrusive, they do not have to be removed, making them the ideal implant for use within or adjacent to a joint.

Indications

- Scaphoid Fractures
- Carpal Fractures and Nonunions
- Metacarpal Fractures
- Distal Radial Fractures (articular fragments)
- Ulnar Styloid Fractures
- Radial Head Fractures
- Capitellum Fractures
- Humeral Head Fractures
- Glenoid Fractures
- Inter-Carpal Fusions
- Inter-Phalangeal Fusions
- Metatarsal Osteotomies
- Tarsal Fusions
- Malleolar Fractures
- Patellar Fractures
- Osteochondral Fractures
- Odontoid Fractures
- Mandibular Fractures

Advantages

- Cannulated Screw for 1 mm Guide Wire
- Two kind of compressions
- Self retaining T-Drive
- Both threads are self-tapping
- Screw length in 1 mm increments

Introducción

Para la fijación de las fracturas intraarticulares el nuevo sistema HBS ofrece la opción de tornillos estándar o de alta compresión.

Ya que vienen canulados, los tornillos pueden ser introducidos sobre un alambre de guía de 1 mm, lo que permite la inserción percutánea, eliminando así la necesidad de usar un aparato de puntería (Jig). Ambas roscas del tornillo son autoroscantes y solamente una broca canulada es necesario. La adaptación „T-Drive“ de la cabeza del tornillo asegura un control y una precisión total. Ya que los tornillos son inertes y no protruyen al ser introducidos, no es necesario quitarlos, convirtiéndolos así en el implante ideal para emplearse adentro o al lado de la articulación.

Indicaciones
- Fracturas escafoideas
- Fracturas carpales y pseudartrosis
- Fracturas metacarpales
- Fracturas radiales distales (fragmentos articulares)
- Fracturas estiloideas del cúbito
- Fracturas de la cabeza radial
- Fracturas del capitellum
- Fracturas de la cabeza del húmero
- Fracturas glenoideas
- Fusiones intercarpales
- Fusiones interfalangeales
- Osteotomías metatarsales
- Fusiones tarsales
- Fracturas maleolares
- Fracturas patelares
- Fracturas osteocondrales
- Fracturas odontoideas
- Fracturas mandibulares

Ventajas
- Tornillo canulado para el alambre guía de 1 mm
- Dos distintos tipos de compresiones
- T-Drive con autoretención
- Ambas roscas son autorroscantes
- La longitud del tornillo viene en incrementos de 1 mm

Introduction
Pour la fixation de fractures intra-articulaires le nouveau-système HBS permet de choisir entre deux types de vis àcompression différentes (à compression standard ainsi qu'à haute compression) selon les besoins.

Ces vis à canule spéciale peuvent être introduites par l'intermédiaire d'une broche de guidage de 1 mm d'épaisseur, ce qui rend l'emploi d'un appareil pilote inutile et qui permet une introduction percutanée. Puisque les deux filetages de la vis sont autotaradants, on n'a besoin que d'un seul foret canulé. Le système de guidage en T assure en outre une manipulation sûre et précise. Puisque ces vis sont inertes et peuvent être entièrement noyées, elles sont des implants tout à fait indiqués pour l emploi intraarticulaire ou à proximité d'articulation.

Indications
- Fractures naviculaires
- Fractures carpiennes et pseudarthroses
- Fractures métacarpiennes
- Fractures distales radiales (fragments articulaires)
- Fractures styloïdes ulnaires
- Fractures proximales de la tête du radius
- Fractures du capitellum
- Fractures de la tête de l'humérus
- Fractures de la cavité glénoïde
- Fusions inter-carpiennes
- Fusions inter-phalangiennes
- Ostéotomies métatarsiennes
- Fusions tarsiennes
- Fractures malléolaires
- Fractures patellaires
- Fractures ostéochondrales
- Fractures dentaires
- Fractures mandibulaires

Avantages
- Vis canulée pour une broche de guidage de 1 mm
- Deux forces différentes de compression
- Guidage en T autostatique (embout de Torx)
- Deux filetages auto taraudeurs
- Longueurs de vis en gradations de 1 mm

Introduzione
Per il fissaggio di fratture intraarticolari il nuovo sistema HBS offre una risposta a queste problematiche e permette al chirurgo la scelta, a seconda delle esigenze, fra due tipi di viti con compressione differenziata (compressione standard e alta compressione).

Grazie alla cannulazione le viti possono essere inserite su un filo guida di spessore 1 mm, rendendo in tal modo superfluo l'impiego del puntatore e permettendo al contempo l'inserzione percutanea. Poiché la vite è completamente autofilettante, è necessaria soltanto un'unica punta cannulata. Il sistema T-Drive provvede inoltre alla sicurezza e alla precisione delle operazioni.

Poiché le viti sono inerte e a scomparsa completa, esse rapprsentano l'impianto ideale per impiego intraarticolare o in prossmità di articolazioni.

Indicazioni
- Fratture dello scafoide
- Fratture carpali e pseudoartrosi
- Fratture metacarpali
- Fratture distali del radio (frammenti articolari)
- Fratture dell'ulna stiloide
- Fratture prossimali della testa radiale
- Fratture del capitello dell'omero
- Fratture della testa dell'omero
- Fratture della fossa glenoide
- Fusioni intercarpali
- Fusioni interfalangee
- Osteotomie del metatarso
- Fusioni tarsali
- Fratture della caviglia
- Fratture della rotula
- Fratture osteocondriche
- Fratture dentali
- Fratture mandibolari

Vantaggi
- Vite cannulata per filo guida da 1 mm
- Due differenti forze di compressione
- T-Drive autoreggente (attacco Torx)
- Completamente autofilettante
- Lunghezza vite in passi di 1 mm

INTRODUCING OURSELVE

Manufacturer of surgical implants and medical devices. Solutions for patient orthopaedic and osteosyntheses fracture treatments, osteosyntheses customized orthopaedic innovations and solutions.

CORPORATE COMPANY PHILOSOPHY, SOLUTION WITHOUT COMPROMISE

MAT GmbH & Co. KG. design, develop and manufacture implants and instruments for use in specific treatments of trauma orthopedic systems, fracture reconstruction treatment systems.

- **Plate- and screw systems (mini, small- and large fragment systems)**
- **Locking plate- and screw systems (small- and large fragment systems)**
- **Interlocking nailing systems**
- **Cranio maxillo facial plate- and screw systems**
- **Cannulated screw system**
- **Flexible reamer systems**
- **Hand and Foot implants (screws- and staple systems)**
- **External fixator systems**
- **Oscillating saw blades**
- **Power tool systems, battery- and air drive systems**
- **General surgical instruments**
- **Hemi arthroplasty instruments for hip surgeries and cement extraction**

MAT GmbH & Co. KG. innovative and exiting product portfolio is updated and expanded in line with technological advances to satisfy the current and future needs of both, patients and healthcare professionals.
MAT GmbH & Co. KG. is committed to playing our part in achieving improved healthcare outcomes worldwide.

HBS / SNAP OFF SYSTEM

SET CAT. NO. SET-1001-HBS

Cat. No. TRAY-1000-HBS
Plastic Soft Case with Semi Transparent Plastic Lid

Recommended sterilization container for SET-1001-HBS STERILIZATION CONTAINER	
C-1000-00	Container lid / bottom perforated 310 x 190 x 65 mm

SET CAT. NO. SET-1001-HBS

Implants

For Cat. No. see page 11 !
Scaphoid bone screws in Titanium DIN ISO 5832-3
HBS bone screw system

Dia. 4.0 mm

Dia. 3.0 mm

For Cat. No. see page 16 !
Self-drilling and tapping Snap off Screw Dia. 2.0 mm in Titanium DIN ISO 5832-3 (weil osteotomy)

Dia. 2.0 mm

Listing for Set Cat. No. SET-1001-HBS

Index: Instruments	Pcs.:	Cat. No
Plastic soft case with semi transparent plastic lid	-1-	TRAY-1000-HBS
HBS - Guide Wire Ø 1.0 mm x Length 80 mm	-4-	KW-1000-080
HBS - Cannulated Drill Bit Ø 2.1 mm / Ø 3.3 mm	-1-	INS-8200-00
HBS - Cannulated Drill Bit Ø 2.1 mm / Ø 3.3 mm, long	-1-	INS-8200-01
HBS - Cannulated Drill Bit Ø 2.1 mm	-1-	INS-8201-00
HBS - Screw Length Gauge	-1-	INS-8202-00
HBS - Measuring Sleeve for Guide Wire	-1-	INS-8203-00
HBS - Cannulated Screw Driver, Hexagonal 2.0 mm	-1-	INS-8204-00
HBS - Screw Driver for Snap off Screws	-1-	INS-8205-00
Screw Forceps	-1-	INS-8079-00
Titanium HBS - Screws cannulated Ø 4.0 mm / Ø 3.0 mm	**Pcs.:**	**Cat. No**
Length 12 mm, Titanium	-4-	HBS-1000-12
Length 14 mm, Titanium	-4-	HBS-1000-14
Length 16 mm, Titanium	-4-	HBS-1000-16
Length 18 mm, Titanium	-4-	HBS-1000-18
Length 20 mm, Titanium	-4-	HBS-1000-20
Length 22 mm, Titanium	-4-	HBS-1000-22
Length 24 mm, Titanium	-4-	HBS-1000-24
Length 26 mm, Titanium	-4-	HBS-1000-26
Length 28 mm, Titanium	-4-	HBS-1000-28
Length 30 mm, Titanium	-4-	HBS-1000-30

Titanium Snap off Screws ø 2.0 mm	Pcs.:	Cat. No
Length 10 mm, Titanium	-4-	So-1000-10
Length 11 mm, Titanium	-4-	So-1000-11
Length 12 mm, Titanium	-4-	So-1000-12
Length 13 mm, Titanium	-4-	S0-1000-13
Length 14 mm, Titanium	-4-	S0-1000-14
Length 15 mm, Titanium	-4-	S0-1000-15
Length 16 mm, Titanium	-4-	S0-1000-16
Length 17 mm, Titanium	-4-	S0-1000-17
Length 18 mm, Titanium	-4-	S0-1000-18

SET CAT. NO. SET-1002-HBS

Cat. No. TRAY-1000-HBS
Plastic Soft Case with Semi Transparent Plastic Lid

Instrument / Implant Set within high compression HBS cannulated screws and conical snap off screws

Implants

For Cat. No. see page 13 !

Dia. 4.0 mm  **Dia. 3.0 mm**

For Cat. No. see page 17 !

 **Dia. 2.0 mm**

Recommended sterilization container for SET-1002-HBS (are not included in the set)	
C-1000-00	Container lid / bottom perforated 310 x 190 x 65 mm

Listing for Set Cat. No. SET-1002-HBS

INDEX: Instruments	Pcs.:	Cat. No
Plastic soft case with semi transparent plastic lid	-1-	TRAY-1000-HBS
HBS - guide wire Ø 1.0 mm x L. 80 mm	-4-	KW-1000-080
HBS - cannulated drill bit Ø 2.1 mm / Ø 3.3 mm	-1-	INS-8200-00
HBS - cannulated drill bit Ø 2.1 mm / Ø 3.3 mm, long	-1-	INS-8200-01
HBS - cannulated drill bit Ø 2.1 mm	-1-	INS-8201-00
HBS - screw length	-1-	INS-8202-00
HBS - measuring sleeve for guide wire	-1-	INS-8203-00
HBS - cannulated screw driver, hexagonal 2.0 mm	-1-	INS-8204-00
HBS - screw driver for snapp of screws	-1-	INS-8205-00
Screw forceps	-1-	INS-8079-00
TI - HBS Self-drilling high compression screws cannulated Ø 4.0 mm / Ø 3.0 mm	Pcs.:	Cat. No
Length 12 mm, Titanium	-4-	HBS-1002-12S
Length 14 mm, Titanium	-4-	HBS-1002-14S
Length 16 mm, Titanium	-4-	HBS-1002-16S
Length 18 mm, Titanium	-4-	HBS-1002-18S
Length 20 mm, Titanium	-4-	HBS-1002-20S
Length 22 mm, Titanium	-4-	HBS-1002-22S
Length 24 mm, Titanium	-4-	HBS-1002-24S
Length 26 mm, Titanium	-4-	HBS-1002-26S
Length 28 mm, Titanium	-4-	HBS-1002-28S
Length 30 mm, Titanium	-4-	HBS-1002-30S
TI - Snap off Type II - Screws Ø 2.0 mm	Pcs.:	Cat. No
New generation snap off screws with conical thread self-drilling		
Length 10 mm, Titanium	-4-	So-1002-10
Length 11 mm, Titanium	-4-	So-1002-11
Length 12 mm, Titanium	-4-	So-1002-12
Length 13 mm, Titanium	-4-	So-1002-13
Length 14 mm, Titanium	-4-	So-1002-14
Length 15 mm, Titanium	-4-	So-1002-15
Length 16 mm, Titanium	-4-	So-1002-16
Length 17 mm, Titanium	-4-	So-1002-17

SET CAT. NO. SET-1000-HBS

Implants

For Cat. No. see page 11 !
Scaphoid bone screws in Titanium DIN ISO 5832-3
HBS bone screw system

Dia. 4.0 mm  **Dia. 3.0 mm**

For Cat. No. see page 16 !
Self- drilling and tapping Snap off Screw Dia. 2.0 mm in Titanium DIN ISO 5832-3 (weil osteotomy)

 **Dia. 2.0 mm**

Cat. No. TRAY-1000-HBS
Plastic Soft Case with Semi Transparent Plastic Lid

Instrument / Implant Set

Cat. No. SET-1000-HBS and Snap off Screw Implant and Instrument Set

Recommended sterilization container for SET-1000-HBS (are not included in the set)	
C-1000-00	Container lid / bottom perforated 310 x 190 x 65 mm

Listing for Set Cat. No. SET-1000-HBS

Cat. No.: Graphic Case for HBS -Snap off Screw System	Pcs.:	Cat. No
Plastic soft case with semi transparent plastic lid	-1-	TRAY-1000-HBS
Cat. No.: Instruments for HBS - Snap off Screw System	**Pcs.:**	**Cat. No**
HBS - Guide Wire Dia. 1.0 mm x Length 80 mm	-4-	KW-1000-080
HBS - Cannulated Drill Bit Dia. 2.1 mm / 3.3 mm	-1-	INS-8200-00
HBS - Cannulated Drill Bit Dia. 2.1 mm	-1-	INS-8201-00
HBS - Screw Length Gauge	-1-	INS-8202-00
HBS - Measuring Sleeve for Guide Wire	-1-	INS-8203-00
HBS - Cannulated Screw Driver, Hexagonal 2.0 mm	-1-	INS-8204-00
HBS - Screw Driver for Snap off Screws	-1-	INS-8205-00
Screw Forceps	-1-	INS-8079-00
Cat. No.: Dia. 3.0 mm Ti. HBS Screws, Cannulated	**Pcs.:**	**Cat. No**
Length 12 mm, Titanium	-4-	HBS-1000-12
Length 14 mm, Titanium	-4-	HBS-1000-14
Length 16 mm, Titanium	-4-	HBS-1000-16
Length 18 mm, Titanium	-4-	HBS-1000-18
Length 20 mm, Titanium	-4-	HBS-1000-20
Length 22 mm, Titanium	-4-	HBS-1000-22
Length 24 mm, Titanium	-4-	HBS-1000-24
Length 26 mm, Titanium	-4-	HBS-1000-26
Length 28 mm, Titanium	-4-	HBS-1000-28
Length 30 mm, Titanium	-4-	HBS-1000-30
Cat. No.: Dia. 2.0 mm Ti. Snap off Screws	**Pcs.:**	**Cat. No**
Length 11 mm, Titanium	-4-	So-1000-11
Length 12 mm, Titanium	-4-	So-1000-12
Length 13 mm, Titanium	-4-	So-1000-13
Length 14 mm, Titanium	-4-	S0-1000-14

SET CAT. NO. SET-1005-HBS

Instrument / Implant Set with high compression HBS micro cannulated screws and conical snap off screws

Implants

For Cat. No. see page 13 !

Dia. 3.2 mm

Dia. 2.5 mm

For Cat. No. see page 17 !

Dia. 2.0 mm

Cat. No. TRAY-1005-HBS
Plastic Soft Case with Semi Transparent Plastic Lid

Recommended sterilization container for SET-1005-HBS (are not included in the set)	
C-1000-00	Container lid / bottom perforated 310 x 190 x 65 mm

Listing for Set Cat. No. SET-1005-HBS

INDEX: Instruments	Pcs.:	Cat. No
Plastic soft case with semi transparent plastic lid	-1-	TRAY-1005-HBS
HBS - guide wire Ø 0.8 mm x L. 80 mm	-4-	KW-1003-080
HBS - Cannulated Drill Bit Ø 1.9 mm / Ø 2.5 mm, micro extra short	-1-	INS-8302-02
HBS - Cannulated Drill Bit Ø 1.9 mm, micro	-1-	INS-8301-00
HBS - Screw Length Gauge	-1-	INS-8202-00
HBS - Measuring Sleeve for Guide Wire	-1-	INS-8203-00
HBS - Cannulated Screw Driver, Hexagonal 1.5 mm	-1-	INS-8304-00
HBS - Screw Driver for Snap of Screws	-1-	INS-8205-00
Screw Forceps	-1-	INS-8079-00
MICRO TI - HBS Self-drilling high compression screws cannulated Ø 3.2 mm / Ø 2.5 mm	**Pcs.:**	**Cat. No**
Length 10 mm, Titanium	-4-	HBS-1003-10S
Length 12 mm, Titanium	-4-	HBS-1003-12S
Length 14 mm, Titanium	-4-	HBS-1003-14S
Length 16 mm, Titanium	-4-	HBS-1003-16S
Length 18 mm, Titanium	-4-	HBS-1003-18S
Length 20 mm, Titanium	-4-	HBS-1003-20S
Length 22 mm, Titanium	-4-	HBS-1003-22S
Length 24 mm, Titanium	-4-	HBS-1003-24S
Length 26 mm, Titanium	-4-	HBS-1003-26S
Length 28 mm, Titanium	-4-	HBS-1003-28S
Length 30 mm, Titanium	-4-	HBS-1003-30S
TI - Snap off Type II - Screws Ø 2.0 mm New generation snap off screws with conial thread self-drilling	**Pcs.:**	**Cat. No**
Length 11 mm, Titanium	-4-	SO-1002-11
Length 12 mm, Titanium	-4-	SO-1002-12
Length 13 mm, Titanium	-4-	SO-1002-13
Length 14 mm, Titanium	-4-	SO-1002-14



Cat. No. KW-1000-080 HBS - Guide Wire - Dia. 1.0 mm x Length 80 mm
Cat. No. KW-1003-080 HBS - Guide Wire (MICRO)
Dia. 0.8 mm x Length 80 mm

Cat. No. INS-8203-00 HBS - Measuring Sleeve for Guide Wire KW-1000-080

Cat. No. INS-8200-00 HBS - Cannulated Drill Bit Dia. 2.1 mm / 3.3 mm
Cat. No. INS-8200-01 HBS - Cannulated Drill Bit Dia. 2.1 mm / 3.3 mm, Long
Cat. No. INS-8200-02 HBS - Cannulated Drill Bit Dia. 2.1 mm / 3.3 mm, Extra Short

Cat. No. INS-8205-00 HBS - Screw Driver for Snap off Screws

Cat. No. INS-8201-00 HBS - Cannulated Drill Bit Dia. 2.1 mm
Cat. No. INS-8301-00 HBS - Cannulated Drill Bit Dia. 1.9 mm
(USED FOR HBS MICRO SYSTEM)

Cat. No. INS-8204-00 HBS - Cannulated Screw Driver, Hex. 2.0 mm
Cat. No. INS-8304-00 HBS - Cannulated Screw Driver, Hex. 1.5 mm
(USED FOR HBS MICRO SYSTEM)

Cat. No. INS-8302-02 HBS - Cannulated Drill Bit Dia. 1.9 mm / Dia. 2.5 mm, extra short (USED FOR HBS MICRO SYSTEM)

Cat. No. INS-8202-00 HBS - Screw Length Gauge

Cat. No. INS-8079-00 Screw Forceps

Cat. No. INS-8205-10
Scarf Bone Holding Forceps

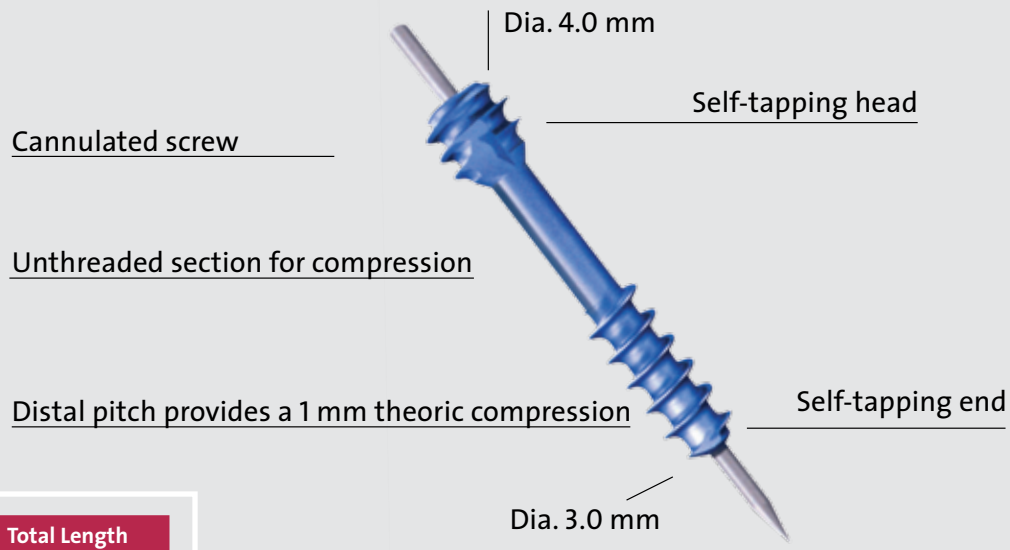
Cat. No. INS-8206-00
Verbrügge Bone Holding Forceps 175 mm

Cat. No. INS-8207-00 Inge 16.0 cm

DOUBLE THREADING FOR OPTIMAL COMPRESSION

Design rationale and Main features

The Compression Screw is easy to insert (over a guide wire) and provides efficient compression (through two separate threadings with different pitches, and an intermediate unthreaded section), thus ensuring quick, dependable internal fixation.



Cat. No.:	Total Length Cannulated
HBS-1000-12	12 mm, titanium
HBS-1000-14	14 mm, titanium
HBS-1000-16	16 mm, titanium
HBS-1000-18	18 mm, titanium
HBS-1000-20	20 mm, titanium
HBS-1000-22	22 mm, titanium
HBS-1000-24	24 mm, titanium
HBS-1000-26	26 mm, titanium
HBS-1000-28	28 mm, titanium
HBS-1000-30	30 mm, titanium
HBS-1000-32	32 mm, titanium
HBS-1000-34	34 mm, titanium
HBS-1000-36	36 mm, titanium
HBS-1000-38	38 mm, titanium
HBS-1000-40	40 mm, titanium

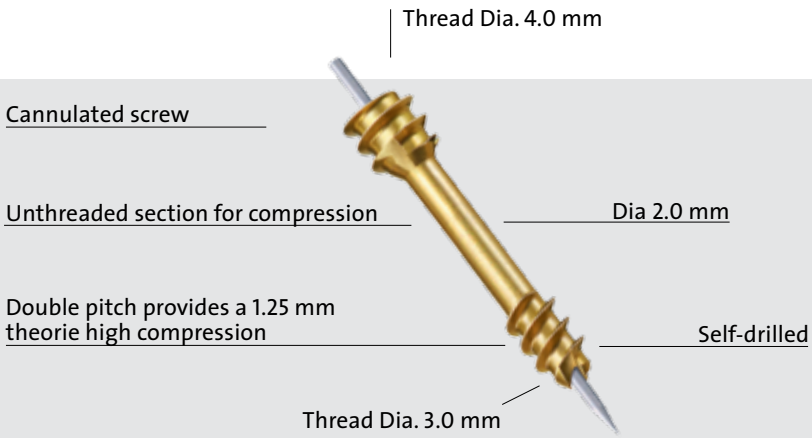
INDICATIONS

- Distal and proximal metatarsal osteotomies
- SCARF osteotomy
- Uni and biocortical internal fixation (ex.: scaphoid)
- Small bone fusion

TI - HBS SELF-DRILLED HIGH COMPRESSION SCREWS

Cannulated ø 4.0 / ø 3.0 mm

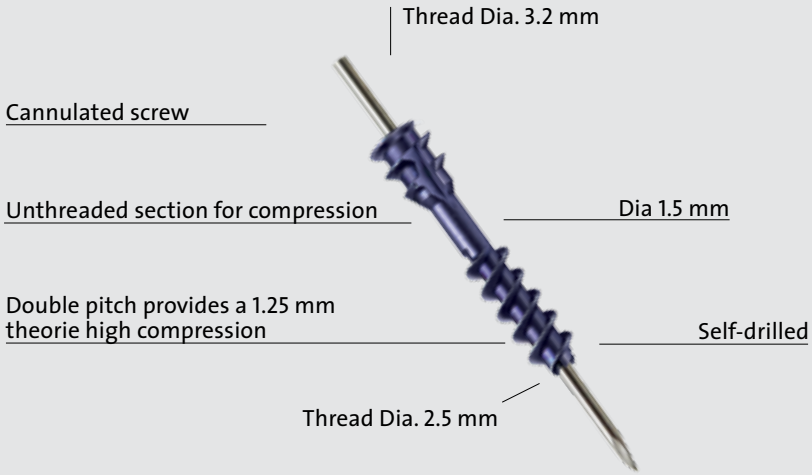
TI-HBS Self-drilling high compression screws	
Cat. No.:	Cannulated ø 4.0/3.0mm
HBS-1002-12S	Lenght 12 mm, titanium
HBS-1002-14S	Lenght 14 mm, titanium
HBS-1002-16S	Lenght 16 mm, titanium
HBS-1002-18S	Lenght 18 mm, titanium
HBS-1002-20S	Lenght 20 mm, titanium
HBS-1002-22S	Lenght 22 mm, titanium
HBS-1002-24S	Lenght 24 mm, titanium
HBS-1002-26S	Lenght 26 mm, titanium
HBS-1002-28S	Lenght 28 mm, titanium
HBS-1002-30S	Lenght 30 mm, titanium
HBS-1002-32S	Lenght 32 mm, titanium
HBS-1002-34S	Lenght 34 mm, titanium
HBS-1002-36S	Lenght 36 mm, titanium
HBS-1002-38S	Lenght 38 mm, titanium
HBS-1002-40S	Lenght 40 mm, titanium



MICRO TI - HBS SELF-DRILLED HIGH COMPRESSION SCREWS

Cannulated ø 3.2 / ø 2.5 mm

MICRO TI - HBS Self-drilling high compression screws cannulated ø 3.2 mm / ø 2.5 mm	
HBS-1003-10S	Lenght 10 mm, titanium
HBS-1003-12S	Lenght 12 mm, titanium
HBS-1003-14S	Lenght 14 mm, titanium
HBS-1003-16S	Lenght 16 mm, titanium
HBS-1003-18S	Lenght 18 mm, titanium
HBS-1003-20S	Lenght 20 mm, titanium
HBS-1003-22S	Lenght 22 mm, titanium
HBS-1003-24S	Lenght 24 mm, titanium
HBS-1003-26S	Lenght 26 mm, titanium
HBS-1003-28S	Lenght 28 mm, titanium
HBS-1003-30S	Lenght 30 mm, titanium



SURGICAL TECHNIQUE (SCARF OSTEOTOMY)

1

EXPOSURE AND EXOSTOSECTOMY

- After lateral freeing of the base of the phalanx, a medial skin incision is made over the first metatarsal.
- Exostosectomy is performed using an oscillating saw, taking care to preserve cartilage integrity.
- Edges of the cut are smoothed off using a reamer or a small rasp.

2

OSTEOTOMY

- The longitudinal cut is performed on the medial aspect of the metatarsal shaft, parallel to the plantar surface.
- Transverse bone cuts should be parallel to each other, and between 45° and 60° (depending on the technique used) to the longitudinal bone cut.

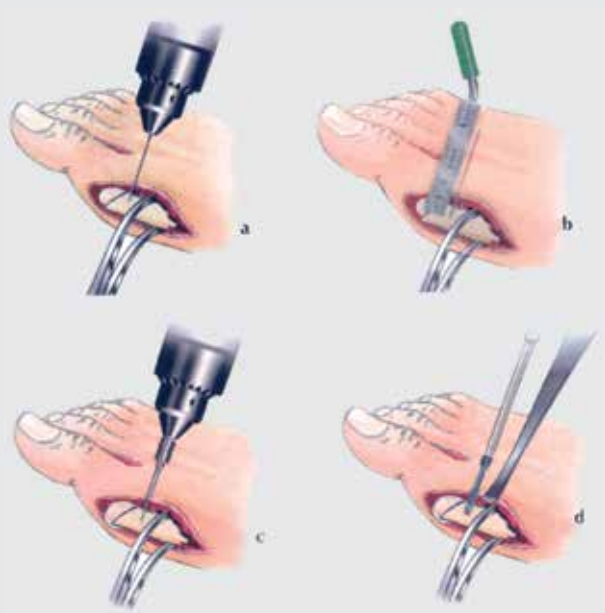
3

TRANSLATION

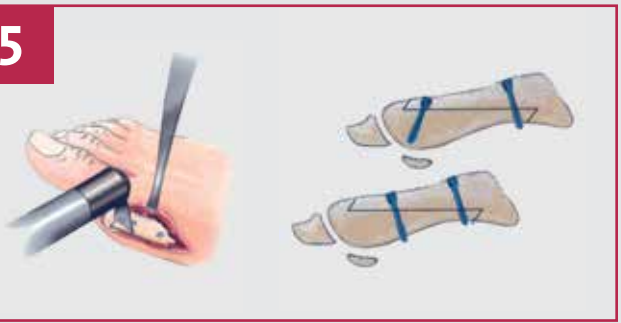
After translation has been performed, it is maintained with the special bone clamp.

- Lateral translation is normally used. However, certain corrections may require translation in the frontal or sagittal plane (for lowering or shortening).

4



5



FIXATION

a. A 10/10 Kirschner wire is inserted at the proper entry point and with the proper angulation (for head or shaft fixation), to serve as a guide for later drilling and screw insertion.

b. Use the screw length gauge (using the substraction principle) to determine the appropriate length of the screw.
The lag screw should be at least 4 mm shorter than the measured length to avoid cartilage penetration.

c. The cannulated drill is inserted over the guide wire and fully advanced to create the countersink for the screw head.

d. The selected screw is inserted and its head is carefully countersunk to ensure optimal compression and avoid later impingement.Make sure that the diaphyseal screw is firmly anchored in both cortices.

The proximal screw is inserted using the same technique.

ANTEROMEDIAL RESECTION

- Once the screws are positioned, the anteromedial angle is cut in line with the exostosectomy, using an oscillating saw. Edges of the cut are smoothed off.
- The capsule is closed in a routine fashion.

SELF - DRILLING AND SELF - TAPPING

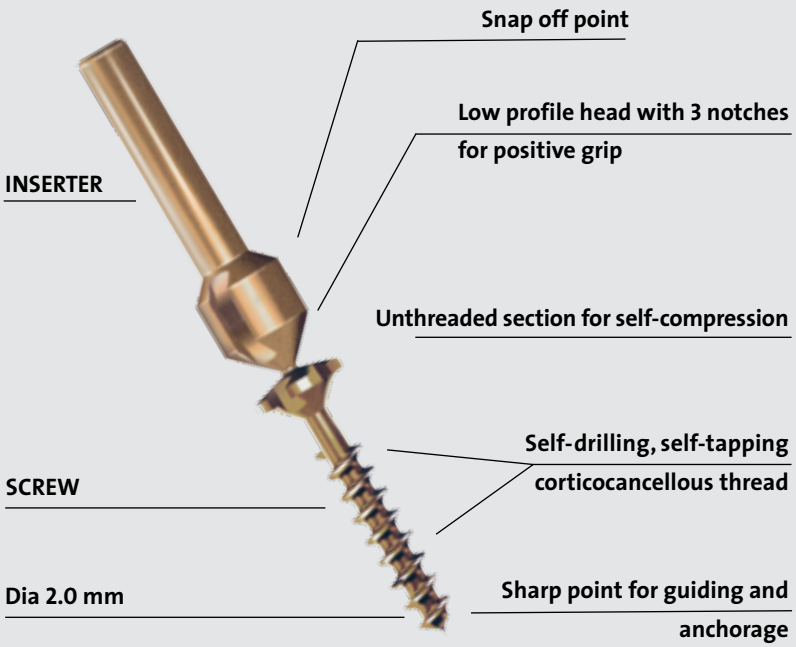
Design rationale and Main features

The Snap off Screw provides superior fixation: it saves time (no need for a pilot drill hole), and it is easy to use, safe (clean break), accurate (guide point), and efficient (self-compression).

The Snap off Screw consists of two parts: implantable screw which provides firm anchorage inserter which allows powered insertion.

INDICATIONS

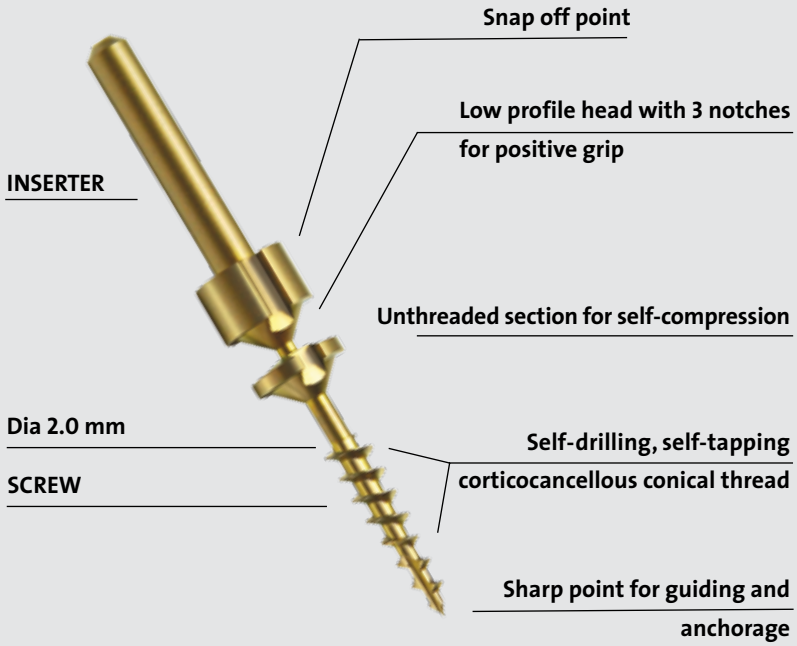
- Weil osteotomy
- Unicortical internal fixation



Cat.No.:	Total Length in mm (without Snap off Shaft)
SO-1000-10	10 mm, titanium
SO-1000-11	11 mm, titanium
SO-1000-12	12 mm, titanium
SO-1000-13	13 mm, titanium
SO-1000-14	14 mm, titanium
SO-1000-15	15 mm, titanium
SO-1000-16	16 mm, titanium
SO-1000-17	17 mm, titanium
SO-1000-18	18 mm, titanium
SO-1000-19	19 mm, titanium
SO-1000-20	20 mm, titanium
SO-1000-21	21 mm, titanium
SO-1000-22	22 mm, titanium
SO-1000-23	23 mm, titanium
SO-1000-24	24 mm, titanium
SO-1000-25	25 mm, titanium
SO-1000-26	26 mm, titanium
SO-1000-27	27 mm, titanium
SO-1000-28	28 mm, titanium
SO-1000-29	29 mm, titanium
SO-1000-30	30 mm, titanium

TI - SNAP OFF TYPE II - SCREWS ø 2.0mm

New Generation snap off screws with conical thread self-drilling



Cat.No.:	TI - Snap off type II screws ø 2.0 mm New Genertion Snap off Screws with conical thread self-drilling
SO-1002-10	Length 10 mm, titanium
SO-1002-11	Length 11 mm, titanium
SO-1002-12	Length 12 mm, titanium
SO-1002-13	Length 13 mm, titanium
SO-1002-14	Length 14 mm, titanium
SO-1002-15	Length 15 mm, titanium
SO-1002-16	Length 16 mm, titanium
SO-1002-17	Length 17 mm, titanium
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SURGICAL TECHNIQUE (WEIL OSTEOTOMY)

1

EXPOSURE

The procedure is performed using a dorsal intermetatarsal and/or transverse approach. After the two extensor muscles have been separated:.

- Hohmann retractors are placed on both metatarsal sides.
- The metatarsophalangeal joint is dislocated between the extensor digitorum longus and the extensor digito rum brevis.
- A Hinge spreader is inserted to protect the extensor muscles and afford good exposure for the osteotomy

2

OSTEOTOMY

Osteotomy is performed using an oscillating saw:

- Make a 3 cm (approximately) horizontal cut parallel tothe sole, to increase the interfragmental contact area and thus enhance healing.
- Osteotomy results in spontaneous recession of the metatarsal head, which relieves tension on soft tissue.

3

TRANSLATION

- Grasp the metatarsal head with Kocher forceps
- Use the „Index Plus Minus“ formula and the Lelièvre Curve to determine the amount of recession of the metatarsal head.
- The metatarsal head must be held in the correct position for subsequent screw fixation.

4

INSERTION OF THE SNAP OFF SCREW

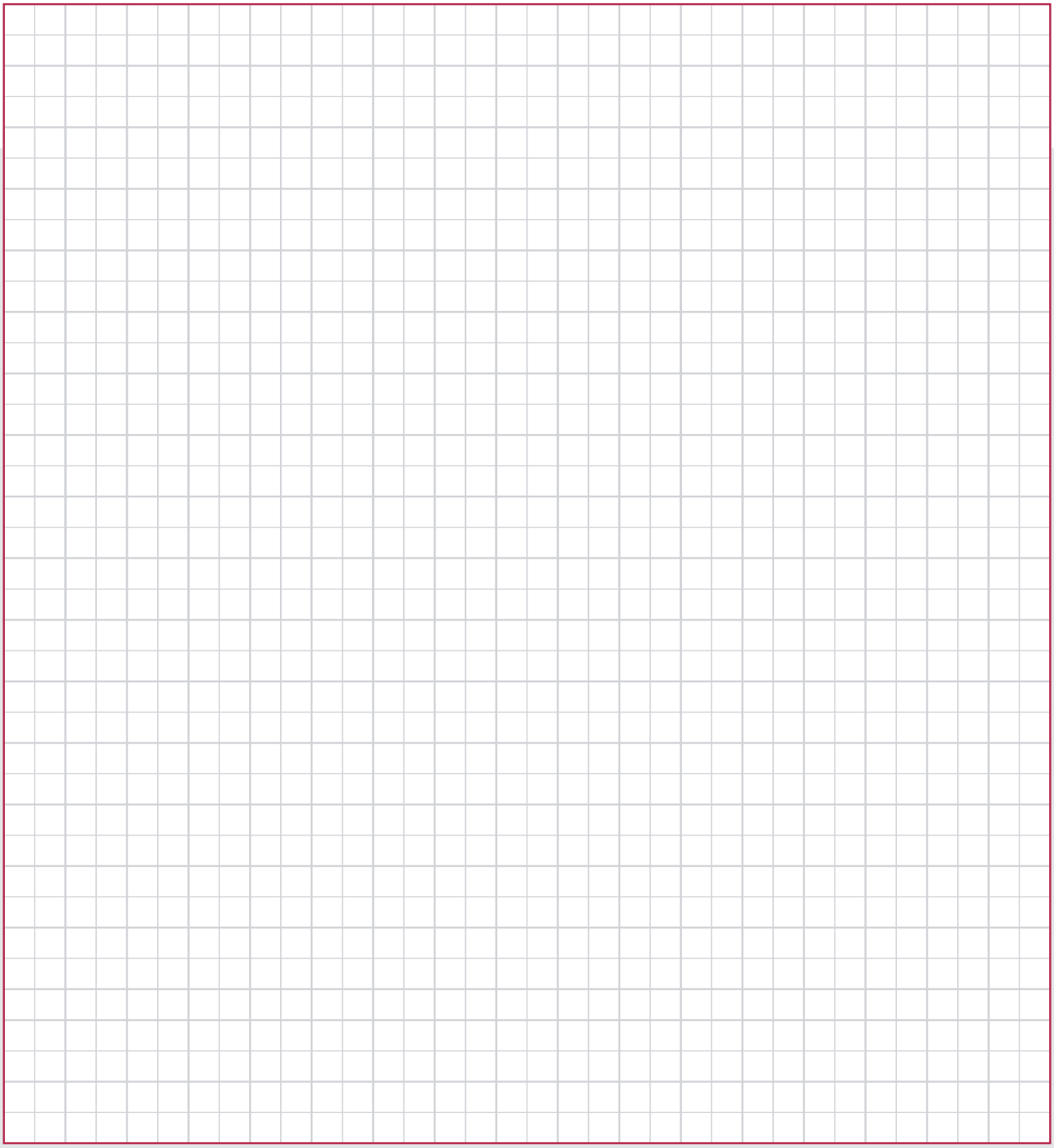
- Connect the screw inserter to the power drill, and drive the screw into the metatarsal.
- The inserter snaps off as soon as the screw head makes contact with the dorsal cortex.
- If necessary, insertion of the screw can be completed with the special screwdriver (with 3 notches).

5

RESECTION OF THE BONE PEAK

- Bone peak is resected using Liston pliers. This allows deep flexion of the metatarsophalangeal joint.
- It may be necessary to perform a Z-shaped release (Green technique) of the extensor muscles.

NOTICE



MEDICAL ADVANCED TECHNOLOGY

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