MICRO SCREW
SURGICAL TECHNIQUE

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INDICATIONS FOR USE

The Micro Screw System is intended for fixation of fractures, osteotomies, and arthrodesis of small bones in the foot, hand, and forearm. The Pin and Wire Kit is intended for fixation and stabilization of bone fractures or as guidance at insertion of implants into the skeletal system.

CONTENTS

CLINICAL USES

1.5MM CANNULATED COMPRESSION SCREW
Range: 6mm – 22mm (↑ by 1mm)

2.0MM CANNULATED COMPRESSION SCREW
Range: 6mm – 22mm (↑ by 1mm)

ENGINEERED FOR FIXATION OF FRACTURES, OSTEOTOMIES, AND ARTHRODESIS OF SMALL BONES IN THE HAND AND WRIST INCLUDING:

- Intra-articular fractures
- Extra-articular fractures

FINGER

INTRA-ARTICULAR

- PIPJ Fractures
- DIPJ Fractures
- Mallet Fractures

EXTRA-ARTICULAR

- Tuft Fractures (distal phalanx)
- Middle and Proximal Phalanx Fractures

METACARPAL

INTRA-ARTICULAR

- Metacarpal Head Fractures
- Metacarpal Base Fractures (CMC joint)

EXTRA-ARTICULAR

- Metacarpal Shaft and Neck Fractures

THUMB

INTRA-ARTICULAR

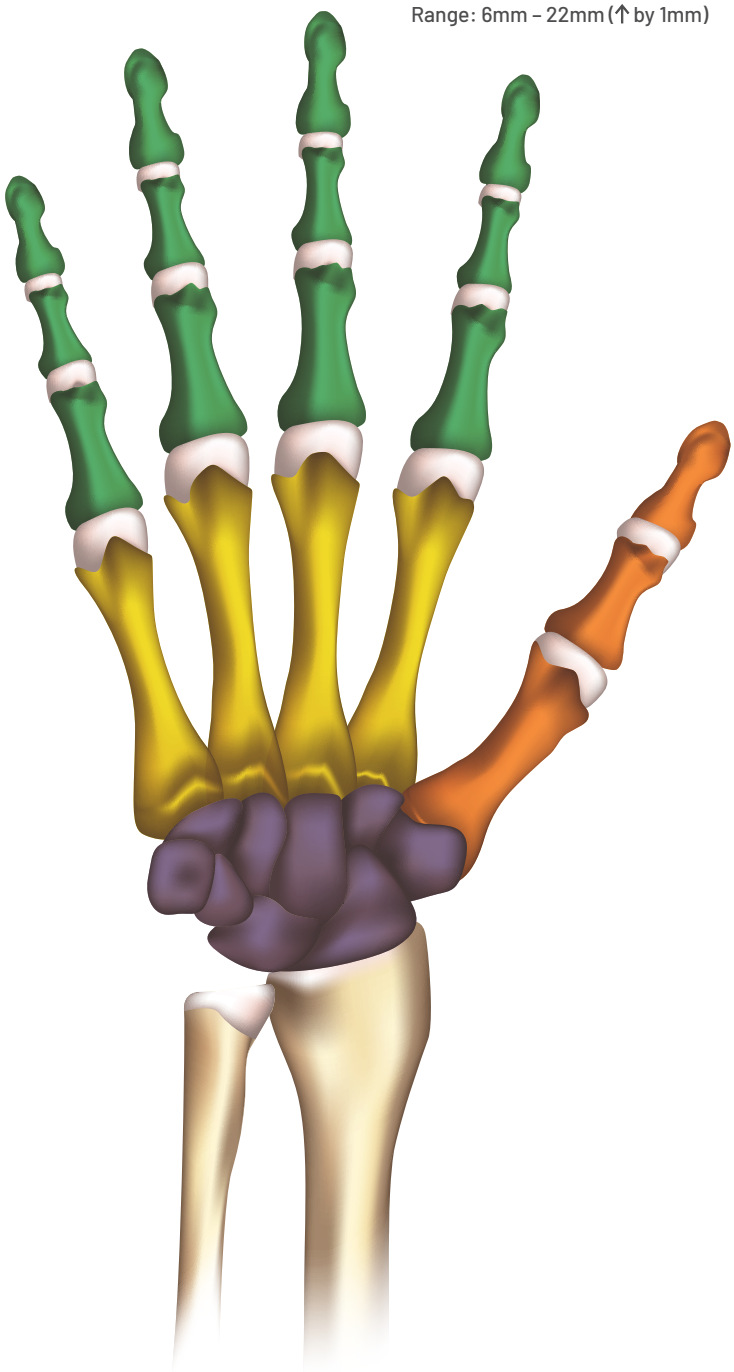
- Bennett's Fractures
- Rolando Fracture
- Skier's / Gameskeeper's Fractures

EXTRA-ARTICULAR

- Pseudo-Bennett Fractures (transverse or oblique)

WRIST

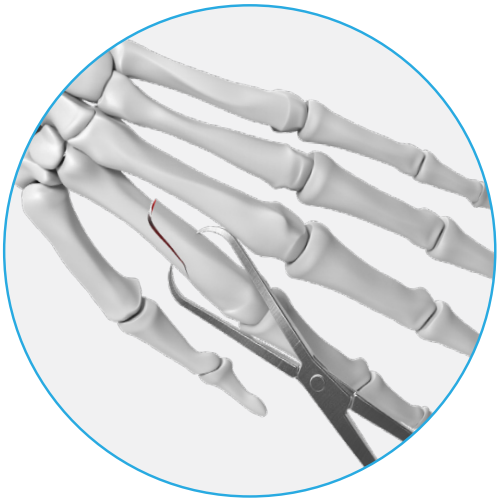
- Scaphoid Fractures
- Lunate Fractures
- Hamate Fractures

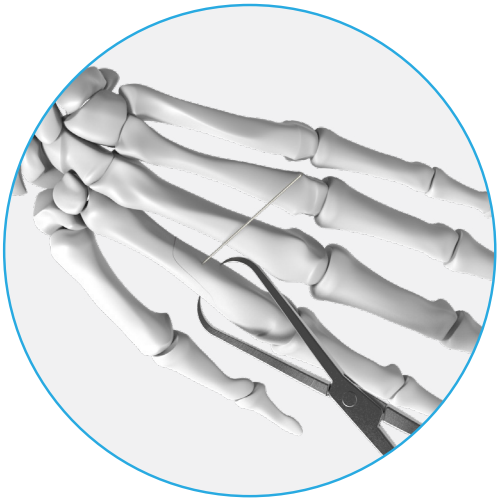


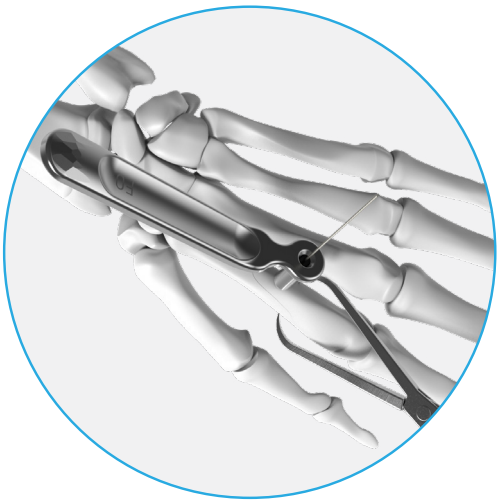
SURGICAL TECHNIQUE

1. FRACTURE REDUCTION AND PREPARATION

- Following the preoperative plan, complete a minimally invasive surgical approach to minimise soft tissue stripping.
- Reduce fracture fragments with preferred technique.
- Suitably sized pins and K-wires may be used at the surgeon's discretion in keeping with standard practices. Pins and K-wires may be left in for definitive fixation or a cannulated screw used over the wire.
- Prepare for screw insertion by passing the **0.6 mm K-wire** (KWST-0706) through both fragments until it pierces the far cortex. If required, the **soft tissue protector** (MSSTP) and/or **guide sleeve** (MSGS-06) can be used to guide the K-wire during insertion.
- Confirm positioning under fluoroscopy.







SURGICAL TECHNIQUE

2. MEASUREMENT

- To measure length and diameter, slide the **cannulated depth gauge** (MSDG(c)-100) over the K-wire until the tip is in contact the proximal bone surface.
- Select appropriate diameter based on fragment size, position, and planned fixation construct.
- Measure insertion length from "0" marking on the depth gauge to the rounded end of the K-wire.

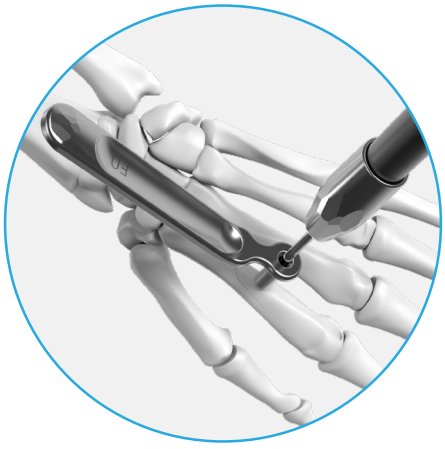
SURGICAL TECHNIQUE

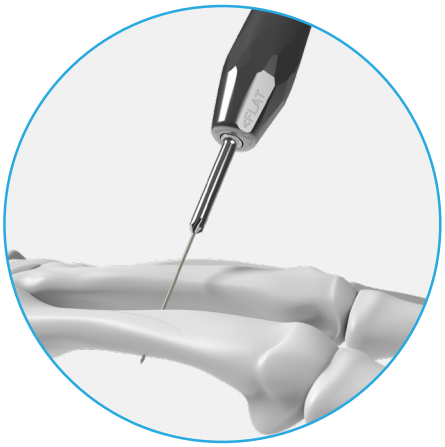
QUICK COUPLING INSTRUMENTS

- The surgical handle (MSHD) is compatible with the cannulated 1.1mm and 1.4mm drill bits (MSDL(c)-110 and MSDL(c)-140), hex driver (MSHX(c)-15) and countersink (MSCN(c)-1225) via a quick-coupling attachment.
- To connect, insert the proximal end of the drill bit, hex driver or countersink into the handle whilst pulling back on the black, centre portion in the direction marked "RELEASE". The flat portion of the instrument must align with the "FLAT" label on the handle. The bit will lock once fully seated and the centre portion of the handle is released.
- To disconnect, pull back the centre portion of the handle before pull the instrument out.

3. DRILLING

- Using the correct size cannulated drill bit, drill a pilot hole over the K-wire.
  - For 1.5mm Micro Screws, use the **1.1mm Cannulated Drill Bit** (MSDL(c)-110).
  - For 2.0mm Micro Screws, use the **1.4 mm Cannulated Drill Bit** (MSDL(c)-140).
- Once again, the **soft tissue protector** (MSSTP) can be used for accuracy and protection of surrounding tissue.





4. COUNTERSINKING – OPTIONAL

- Pass the **cannulated countersink** (MSCN(c)-1225) over the K-wire and drive into the proximal bone surface to the appropriate screw head size laser mark.

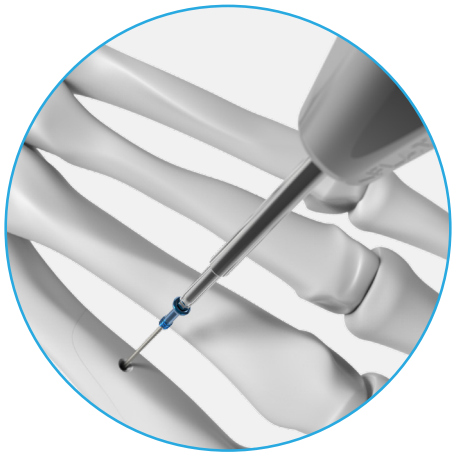
SURGICAL TECHNIQUE

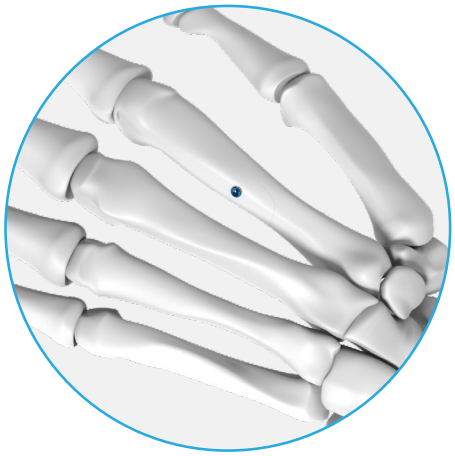
5. SCREW INSERTION

- With the **1.5 cannulated hex driver** (MSHX(c)-15) attached to the **surgical handle** (MSHD), firmly connect the screw head to the driver using normal axial force
- Carefully remove the screw from the tray, maintaining a vertical alignment. The screw should be held securely

TIP

If there is no self-retention between the driver and screw head, it is possible the screw has been picked up before and is deformed. In this case, it may be necessary to use a new screw.





- After driving the screw over the K-wire, tighten to desired compression using the thumb and index finger, taking care not to strip the thread.
- Confirm position under fluoroscopy.
- Remove K-wire and close with preferred method.

TIP

Where removal is required, please use general surgical instruments.

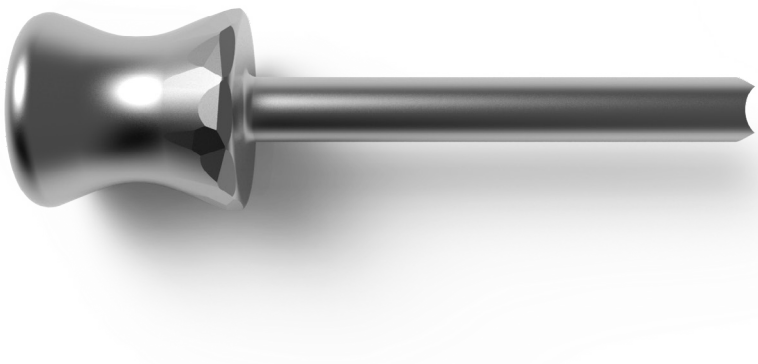
INSTRUMENT CATALOGUE

INSTRUMENT CATALOGUE

K-WIRES

CAT NO.	LEGACY CAT NO.	DESCRIPTION	DIAMETER	LENGTH	MATERIAL	QUANTITY
KWST-0706/5	BTSC00023	0.6 Single-ended Trocar K-wire 70 mm	0.6mm	70mm	Stainless Steel	5

GUIDE SLEEVE



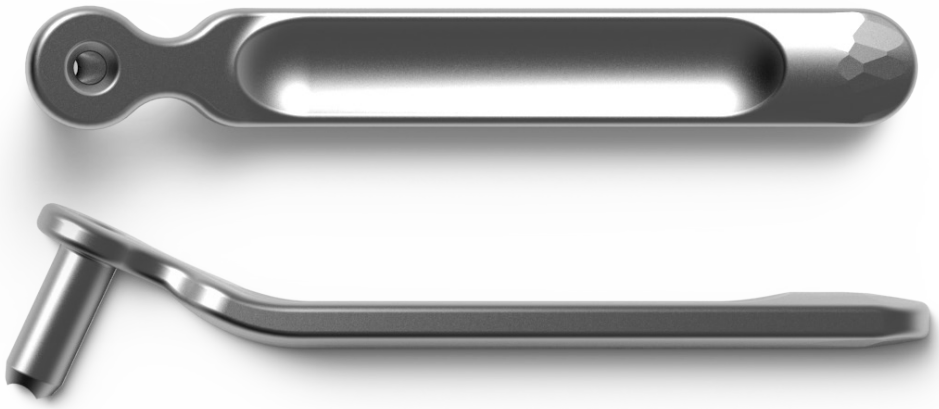
CAT NO.	LEGACY CAT NO.	DESCRIPTION	MATERIAL	QUANTITY
MSGS-06	BTSC00038	0.6 FO Guide Sleeve	Stainless Steel	1

INSTRUMENT CATALOGUE

CANNULATED DEPTH GAUGE

CAT NO.	LEGACY CAT NO.	DESCRIPTION	MATERIAL	QUANTITY
MSDG(c)-100	BTSC00024	FO Micro Depth Gauge (Cannulated)	Aluminum Alloy	1

SOFT TISSUE PROTECTOR



CAT NO.	LEGACY CAT NO.	DESCRIPTION	MATERIAL	QUANTITY
MSSTP	BTSC00031	FO Soft Tissue Protector	Stainless Steel	1

INSTRUMENT CATALOGUE

CLEANING STYLET

CAT NO.	LEGACY CAT NO.	DESCRIPTION	MATERIAL	QUANTITY
MSSTY	BTSC00028	FO Micro Cleaning Stylet	Stainless Steel	1

0.6MM K-WIRE POWERTOOL ADAPTER - PIN COLLET

The Micro Screw instrument kit includes a 0.6mm K-wire which is smaller than the industry standard and requires this special adapter to interface with most power tool hand pieces.

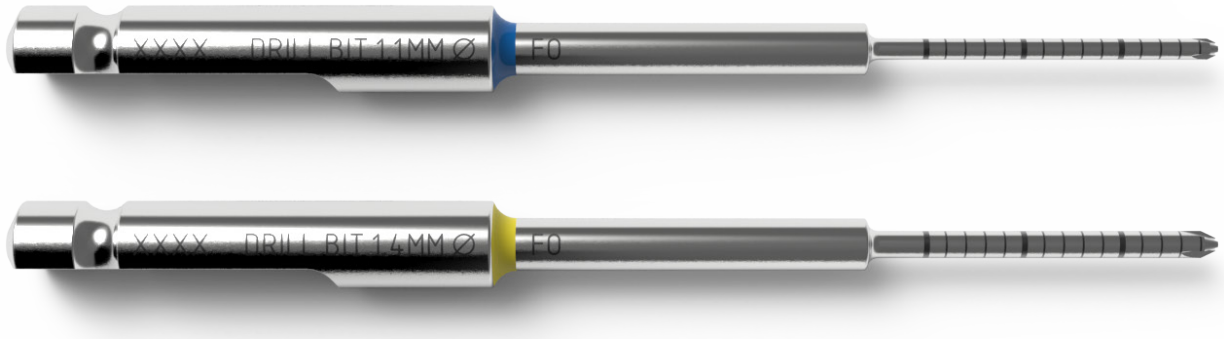
CAT NO.	LEGACY CAT NO.	DESCRIPTION	MATERIAL	QUANTITY
MSCT-06/1	BTSC00075	0.6 Pin Collet Insert	Stainless Steel	1

INSTRUMENT CATALOGUE

SURGICAL HANDLE

CAT NO.	LEGACY CAT NO.	DESCRIPTION	MATERIAL	QUANTITY
MSHD	BTSC00030	FO Surgical Handle, Quick Coupling	Stainless Steel & Aluminum Alloy	1

CANNULATED DRILL BITS



CAT NO.	LEGACY CAT NO.	DESCRIPTION	DIAMETER	MATERIAL	QUANTITY
MSDL(c)-110	BTSC00025	1.1 FO Micro Drill (Cannulated)	1.1mm	Stainless Steel	1
MSDL(c)-140	BTSC00026	1.4 FO Micro Drill (Cannulated)	1.4mm	Stainless Steel	1

INSTRUMENT CATALOGUE

CANNULATED HEX DRIVER

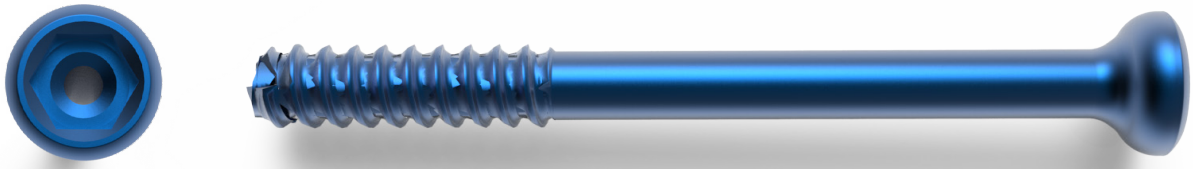
CAT NO.	LEGACY CAT NO.	DESCRIPTION	MATERIAL	QUANTITY
MSHX(c)-15	BTSC00029	FO Micro Hex Driver (Cannulated)	Stainless Steel	1

CANNULATED COUNTERSINK

CAT NO.	LEGACY CAT NO.	DESCRIPTION	MATERIAL	QUANTITY
MSCN(c)-1225	BTSC00027	FO Countersink (Cannulated)	Stainless Steel	1

IMPLANT CATALOGUE

1.5MM CANNULATED PARTIALLY THREADED COMPRESSION SCREW RANGE



CATALOGUE NUMBER	LEGACY CAT NO.	DESCRIPTION	SCREW LENGTH (MM)	DISTAL THREAD LENGTH (MM)
MSCC-1506	BTSC00001	1.5 FO Micro Screw 6 mm (Cannulated)	6	2
MSCC-1507	BTSC00002	1.5 FO Micro Screw 7 mm (Cannulated)	7	2
MSCC-1508	BTSC00003	1.5 FO Micro Screw 8 mm (Cannulated)	8	3
MSCC-1509	BTSC00004	1.5 FO Micro Screw 9 mm (Cannulated)	9	3
MSCC-1510	BTSC00005	1.5 FO Micro Screw 10 mm (Cannulated)	10	3
MSCC-1511	BTSC00006	1.5 FO Micro Screw 11 mm (Cannulated)	11	4
MSCC-1512	BTSC00007	1.5 FO Micro Screw 12 mm (Cannulated)	12	4
MSCC-1513	BTSC00008	1.5 FO Micro Screw 13 mm (Cannulated)	13	4
MSCC-1514	BTSC00009	1.5 FO Micro Screw 14 mm (Cannulated)	14	5
MSCC-1515	BTSC00010	1.5 FO Micro Screw 15 mm (Cannulated)	15	5
MSCC-1516	BTSC00011	1.5 FO Micro Screw 16 mm (Cannulated)	16	5
MSCC-1517	BTSC00077	1.5 FO Micro Screw 17 mm (Cannulated)	17	5
MSCC-1518	BTSC00078	1.5 FO Micro Screw 18 mm (Cannulated)	18	6
MSCC-1519	BTSC00079	1.5 FO Micro Screw 19 mm (Cannulated)	19	6
MSCC-1520	BTSC00080	1.5 FO Micro Screw 20 mm (Cannulated)	20	6
MSCC-1521	BTSC00081	1.5 FO Micro Screw 21 mm (Cannulated)	21	7
MSCC-1522	BTSC00082	1.5 FO Micro Screw 22 mm (Cannulated)	22	7

Material: Manufactured from Titanium alloy (Ti-6Al-4V ELI)

IMPLANT CATALOGUE

2.0MM CANNULATED PARTIALLY THREADED COMPRESSION SCREW RANGE

CATALOGUE NUMBER	LEGACY CAT NO.	DESCRIPTION	SCREW LENGTH (MM)	DISTAL THREAD LENGTH (MM)
MSCC-2006	BTSC00012	2.0 FO Micro Screw 6 mm (Cannulated)	6	2
MSCC-2007	BTSC00013	2.0 FO Micro Screw 7 mm (Cannulated)	7	2
MSCC-2008	BTSC00014	2.0 FO Micro Screw 8 mm (Cannulated)	8	3
MSCC-2009	BTSC00015	2.0 FO Micro Screw 9 mm (Cannulated)	9	3
MSCC-2010	BTSC00016	2.0 FO Micro Screw 10 mm (Cannulated)	10	3
MSCC-2011	BTSC00017	2.0 FO Micro Screw 11 mm (Cannulated)	11	4
MSCC-2012	BTSC00018	2.0 FO Micro Screw 12 mm (Cannulated)	12	4
MSCC-2013	BTSC00019	2.0 FO Micro Screw 13 mm (Cannulated)	13	4
MSCC-2014	BTSC00020	2.0 FO Micro Screw 14 mm (Cannulated)	14	5
MSCC-2015	BTSC00021	2.0 FO Micro Screw 15 mm (Cannulated)	15	5
MSCC-2016	BTSC00022	2.0 FO Micro Screw 16 mm (Cannulated)	16	5
MSCC-2017	BTSC00083	2.0 FO Micro Screw 17 mm (Cannulated)	17	5
MSCC-2018	BTSC00084	2.0 FO Micro Screw 18 mm (Cannulated)	18	6
MSCC-2019	BTSC00085	2.0 FO Micro Screw 19 mm (Cannulated)	19	6
MSCC-2020	BTSC00086	2.0 FO Micro Screw 20 mm (Cannulated)	20	6
MSCC-2021	BTSC00087	2.0 FO Micro Screw 21 mm (Cannulated)	21	7
MSCC-2022	BTSC00088	2.0 FO Micro Screw 22 mm (Cannulated)	22	7

Material: Manufactured from Titanium alloy (Ti-6Al-4V ELI)

FIELD ORTHOPAEDICS

Get in touch with your local sales representative today to discuss how Micro Screw System can meet your hand trauma needs.

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US Federal Law restricts this device to sale and use by, or on the order of, a physician.