Biologically Oriented Prostheses

BIOPRO

Go-EZ™ Headed + HBS® Headless

Cannulated Compression Screw Systems

Surgical Technique

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Indications & Contraindications

Indications for use:

Go-EZ Headed Screw System
Bone fractures, Osteotomies, Arthrodesis, Osteochondritis, and tendon re-attachment. It is intended for but not limited to hand surgery, plastic surgery, and podiatric surgery, but is not intended for use in the spine.

HBS Headless Screw System
The HBS Mini 2.5mm is indicated for use in the following applications: Scaphoid fractures, Lunate fractures, Capitate fractures, Trapezial fractures, Metacarpal and metatarsal fractures, Phalangeal fractures, Radial head fractures, Ulnar styloid fractures, Osteo-chondral, Small joint fusions. The HBS Standard 3.0mm is indicated for use in the following applications: Scaphoid fractures, Carpal fractures and non-unions, Capitellum fractures, Metacarpal fractures, Phalangeal fractures, Distal radial fractures, Radial head fractures, Ulnar styloid fractures, Small joint fusions, Humeral head fractures, Glenoid fractures, Intercarpal fusions, Interphalangeal fractures, Metatarsal osteotomies, Tarsal fusions, Malleolar fractures, Patellar fractures, Osteo-chondral fractures.

HBS Headless Screw System (Canada)
The HBS Headless Screw System is indicated for use in small bone fractures, joint arthrodesis and osteotomies in the extremities.

Contraindications:

1. A debilitating general health problem that might pose a significant threat to the life of the patient if subjected to a major surgical procedure.
2. Comminuted bone surface that would mitigate against screw placement.
3. Pathologic conditions of bone such as osteopenia which would impair the ability to securely fix the screw.
4. Foreign body sensitivity to metals specifically titanium. Where material sensitivity is suspected, appropriate tests should be made prior to implantation.
5. It is not intended for us in the spine.

Precautions and Handling:
- Inspect the sterile blisters used for the implants prior to use. Sterilization cannot be assured, and screws should not be used if blister or seal is damaged.
- The screws are a single use device
- Do not autoclave screws

Potential Complications and Adverse Effects:
- Allergic reactions to metal
- Delayed or Non-union of bone
- Delayed Healing
- Screws may bend or break
- Screws may extrude or back out of the surgical site

Contact surgeon if a change in performance or pain level is noticed.

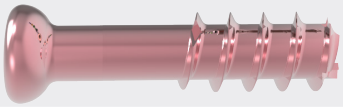
MR Safety Information
The Go-EZ Screw has been evaluated for safety and compatibility in the MR environment and is MR conditional. Contact BioPro for MR parameters.

Implant Specifications

Go-EZ Headed Cannulated Compression Screws and HBS Headless Cannulated Compression Screws are manufactured from implant grade Titanium and are available in multiple diameters and lengths.

The screws are individually sterile packed and housed in a protective blister to protect screw threads. Each screw includes patient labels for implant tracking.

Screw sizes and quantities are customizable to the surgeon's/hospital's needs or preferences.

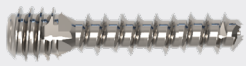
	Go-EZ Headed Compression Screws						
	Ø	Length	Driver (Hex)	Guide Wire	Drill	Color	Tip*
	2.0mm	6-50mm (2 mm increments)	1.5mm	.035" (0.9mm)	1.7mm	Blue	SDST
	2.5mm	6-50mm (2 mm increments)	1.5mm	.035" (0.9mm)	1.7mm	Purple	SDST
	3.0mm	6-40mm (2 mm increments)	2.5mm	.045" (1.1mm)	2.0mm	Gold	SDST
	3.5mm	6-50mm (2 mm increments)	2.5mm	.045" (1.1mm)	2.0mm	Green	SDST
	4.0mm	6-50mm (2 mm increments)	3.0mm	.062" (1.6mm)	2.5mm	Grey	SDST
	4.5mm	6-50mm (2 mm increments)	3.0mm	.062" (1.6mm)	2.5mm	Brown	SDST
	6.5mm	30-40mm (2mm Increments) 45-120mm (5mm Increments)	4.0mm	2mm	4.3mm	Rose Gold	SDST

Caution

The provided guide wires must be used with each system. Failure to use the system's guide wires may result in inaccurate measurements.

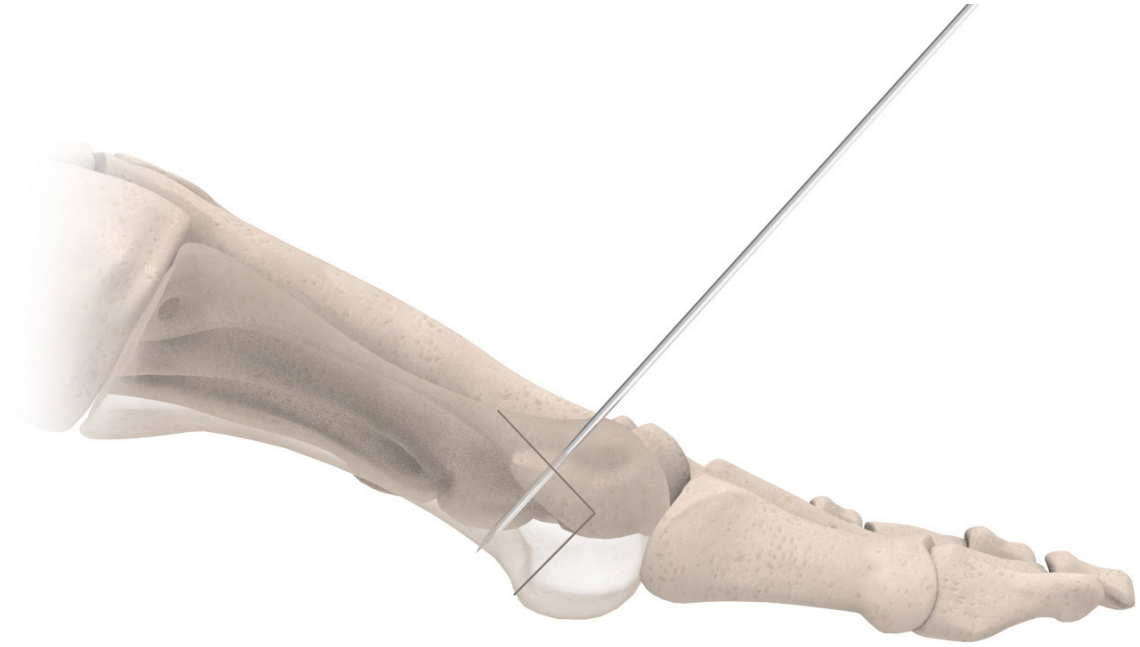
NOTE: Standard surgery kits DO NOT contain all available screw sizes. Full size range is available on special request.
*** SDST = Self-drilling + Self-tapping, ST = Self-tapping**

Implant Specifications

	HBS Headless Compression Screws							
	Ø (Distal)	Ø (Proximal)	Length	Driver (Torx)	Guide Wire	Drill	Color	Tip*
	2.5mm	3.5mm	10-40mm (2mm increments)	T-8	.035" (0.9mm)	1.7mm	Rose Gold	SDST
	3.0mm	3.5mm	10-40mm (2mm increments)	T-8	.035" (0.9mm)	1.7mm	Blue	SDST
	2.5mm	3.5mm	10-30mm (1mm increments)	T-8	.035" (0.9mm)	1.7mm	Purple	ST
	3.0mm	3.9mm	10-30mm (1mm increments)	T-8	.035" (0.9mm)	2.0mm	Grey	ST
	3.0mm	3.9mm	10-30mm (2mm increments)	T-8	.035" (0.9mm)	1.7mm	Silver	SDST

*** SDST = Self-drilling + Self-tapping, ST = Self-tapping**

Go-EZ Surgical Technique

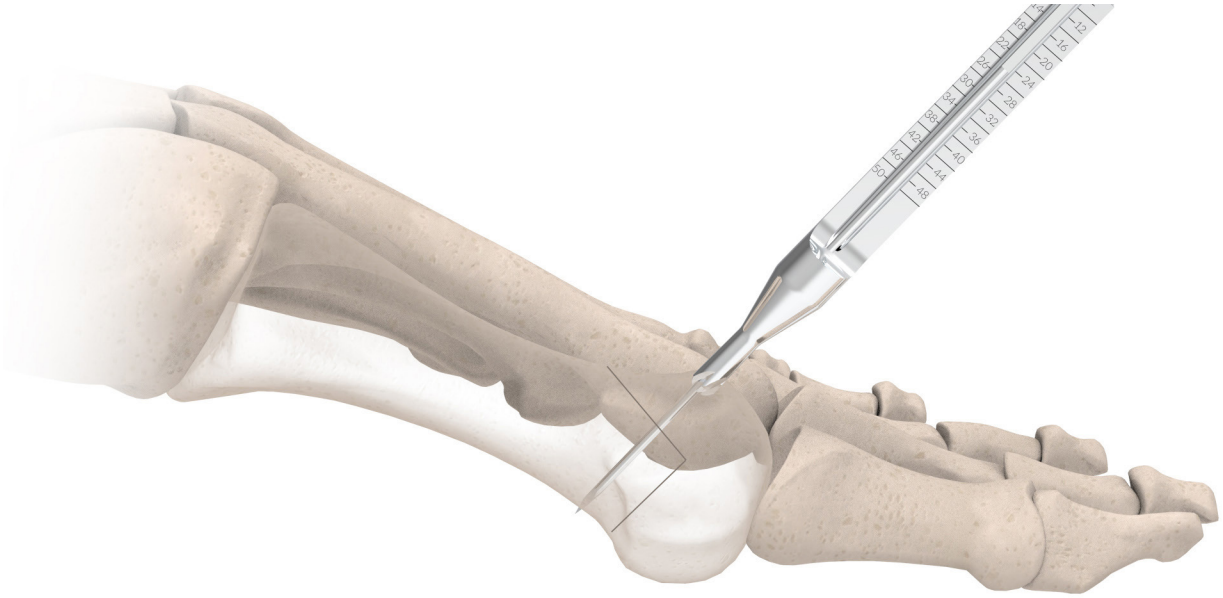


Step One:
Tightly oppose bone segments and drive the appropriate size guide wire [match with implant specification table] to the far cortex.

Caution
Exceeding the opposite cortex by over 1mm could result in using screws that are too long, compromising thread purchase.

Note:
Be sure to use the included wires as these are a custom length to correspond with the depth gauge.

Note:
Always ensure the wire enters the bone straight. A bent wire can result in a stripped screw head or broken screw. To help ensure the wire maintains a straight path, never expose more than 20mm of the wire while driving.

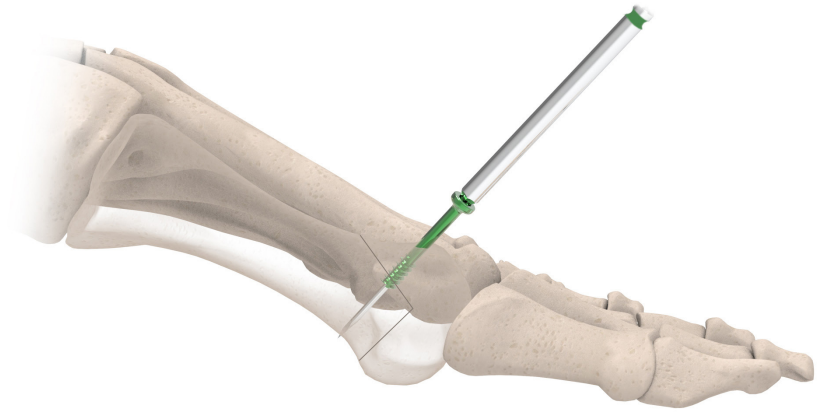


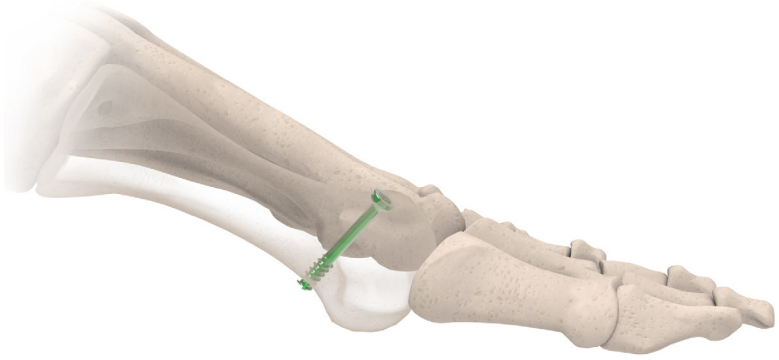
Step Two:
Countersink and measure in one step with the included appropriately sized depth gauge.

Note:
For Go-EZ Headed Screws be sure to countersink prior to recording the depth.

Caution
The depth gauge features an aggressive countersink. In smaller sized screws it may not be necessary to countersink much due to the low profile design of the screw head.

Note:
The measurement at the end of the wire indicates the screw length needed. Due to the high compression of the screw it is recommended to choose the shorter screw size (i.e. measure 25mm, implant 24mm).





Go-EZ Screws feature a hexalobe drive.

Optional Step:
If necessary, overdrill the proximal aspect of the surgical site with included, appropriately sized, drill bit.

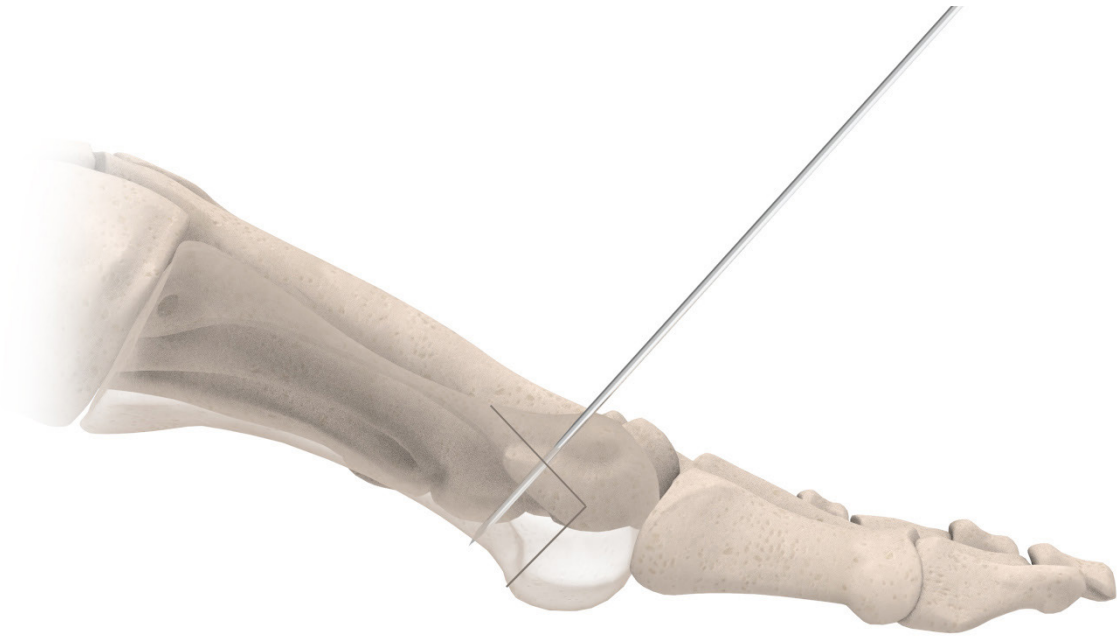
Step Three:
Assemble the appropriate hex driver into the ratchet handle. Slide the screw over the wire and drive to depth.

Note:
Ensure that the screw head seats flush into the countersunk hole created in step two, using care to not overtighten and strip the screw.

Note:
The system is designed to be self-drilling/self-tapping, however in cases of overly hard bone, drilling the proximal aspect makes screw installation much easier. Due to the size and length, it is always recommend to overdrill when using the 6.5mm screws.

Note:
If overdrilling or threading the screw into the bone seems difficult, the wire may be bent within the bone. Do not try to force the screw over a bent wire as this may result in a stripped screw head or broken screw. Instead, remove the wire and re-insert a new wire, ensuring it is straight.

HBS Surgical Technique

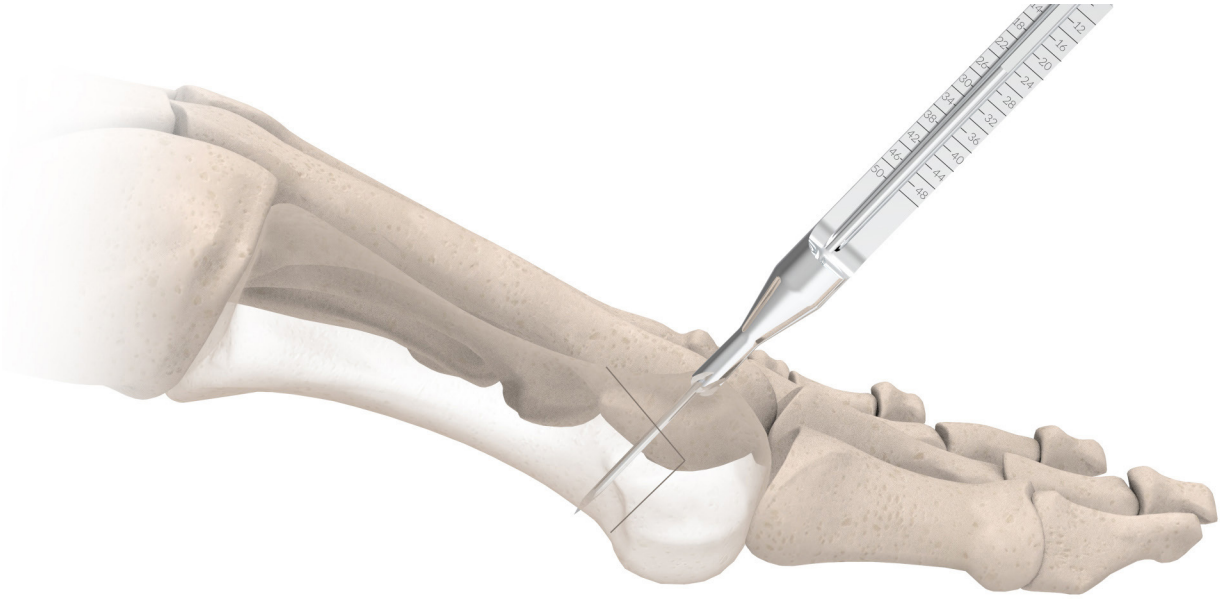


Step One:
Tightly oppose bone segments and drive the HBS .035"/.9mm guide wire to the far cortex.

Caution
Exceeding the opposite cortex by over 1mm could result in using screws that are too long, compromising thread purchase.

Note:
Be sure to use the included wires as these are a custom length to correspond with the depth gauge.

Note:
Always ensure the wire enters the bone straight. A bent wire can result in a stripped screw head or broken screw. To help ensure the wire maintains a straight path, never expose more than 20mm of the wire while driving.



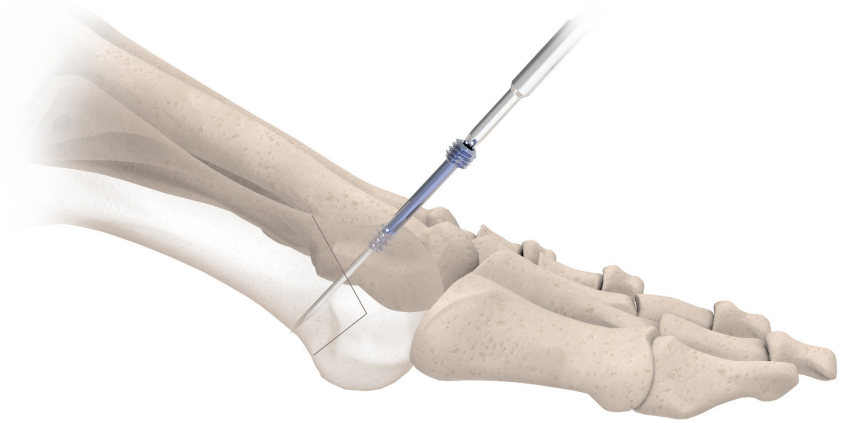
Step Two:
Measure and countersink in one step with the included appropriately sized depth gauge.

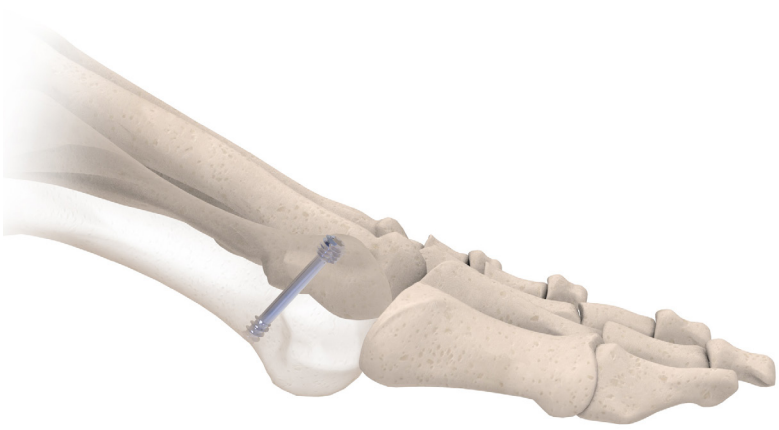
Note:
For HBS Headless Screws record depth first before breaking the cortex with the countersink.

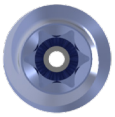
Caution
The depth gauge features an aggressive countersink. Only countersink to break the cortex.

Note:
If using self-tapping screws (HBS ST), overdrill the entire length of the screw path with the appropriately sized drill bit. If using the self-drilling / self-tapping (HBS SDST) screws, drilling the proximal portion may allow for easier insertion.

Note:
The measurement at the end of the wire indicates the screw length needed. Due to the high compression of the screw it is recommended to choose the shorter screw size (i.e. measure 25mm implant 24mm).







HBS Screws feature a star drive.

Step Three:
Assemble the star driver into the ratchet handle. Slide the screw over the wire and drive to depth.

Note:
The screw head should sit at or below the surface.

Note:
If overdrilling or threading the screw into the bone seems difficult, the wire may be bent within the bone. Do not try to force the screw over a bent wire as this may result in a stripped screw head or broken screw. Instead, remove the wire and re-insert a new wire, ensuring it is straight.

Ordering Implants

Go-EZ Cannulated Screws								
Length (mm)	**Ø2.0 (Blue)**	**Ø2.5 (Purple)**	**Ø3.0 (Gold)**	**Ø3.5 (Green)**	**Ø4.0 (Grey)**	**Ø4.5 (Brown)**	**Length (mm)**	**Ø6.5 (Rose)**
6	18162	18172	18185	18203	18226	18239	**30**	19651
8	18163	18173	18186	18204	18227	18240	**32**	19652
10	18164	18174	18187	18205	18228	18241	**34**	19653
12	18165	18175	18188	18206	18229	18242	**36**	19654
14	18166	18176	18189	18207	18230	18243	**38**	19655
16	18167	18177	18190	18208	18231	18244	**40**	19656
18	18168	18178	18191	18209	18232	18245	**45**	19657
20	18169	18179	18192	18210	18233	18246	**50**	19658
22	18170	18180	18193	18211	18234	18247	**55**	19659
24	18171	18181	18194	18212	18235	18248	**60**	19660
26	19265	18182	18195	18213	18236	18249	**65**	19661
28	19266	18183	18196	18214	18237	18250	**70**	19662
30	19267	18184	18197	18215	18238	18251	**75**	19663
32	19268	19250	18198	18216	19041	19031	**80**	19664
34	19269	19251	18199	18217	19042	19032	**85**	19665
36	19270	19252	18200	18218	19043	19033	**90**	19666
38	19271	19253	18201	18219	19044	19034	**95**	19667
40	19272	19254	18202	18220	19045	19035	**100**	19668
42	19273	19255		18221	19046	19036	**105**	19669
44	19274	19256		18222	19047	19037	**110**	19670
46	19275	19257		18223	19048	19038	**115**	19671
48	19276	19258		18224	19049	19039	**120**	19672
50	19277	19259		18225	19050	19040		

Highlighted parts are only available upon special request.

Ordering Implants

HBS ST SCREWS		
Length (mm)	**Ø2.5 (Purple)**	**Ø3.0 (Grey)**
10	19545	19566
11	19546	19567
12	19547	19568
13	19548	19569
14	19549	19570
15	19550	19571
16	19551	19572
17	19552	19573
18	19553	19574
19	19554	19575
20	19555	19576
21	19556	19577
22	19557	19578
23	19558	19579
24	19559	19580
25	19560	19581
26	19561	19582
27	19562	19583
28	19563	19584
29	19564	19585
30	19565	19586

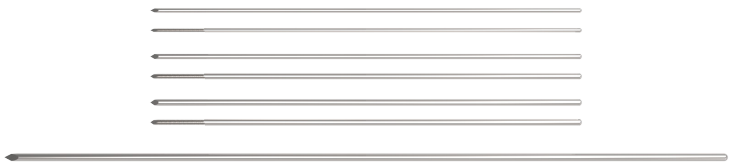
HBS SDST SCREWS		
Length (mm)	**Ø2.5 (Rose)**	**Ø3.0 (Blue)**
10	20500	20516
12	20501	20517
14	20502	20518
16	20503	20519
18	20504	20520
20	20505	20521
22	20506	20522
24	20507	20523
26	20508	20524
28	20509	20525
30	20510	20526
32	20511	20527
34	20512	20528
36	20513	20529
38	20514	20530
40	20515	20531

HBS Fully Threaded	
Length (mm)	**Ø3.0 (Silver)**
10	22540
12	22541
14	22542
16	22543
18	22544
20	22545
22	22546
24	22547
26	22548
28	22549
30	22550
32	22551
34	22552
36	22553
38	22554
40	22555

Highlighted parts are only available upon special request.

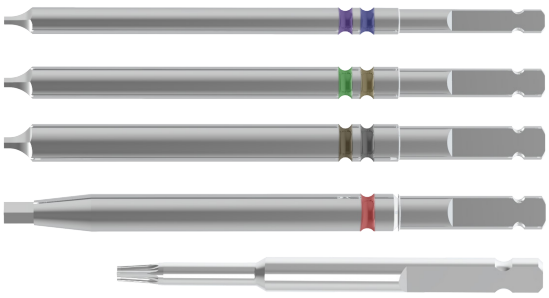
Ordering Instruments

(Size specific)



ITEM #	DESCRIPTION
19106	K-WIRE STERILE SINGLE TROCHAR .035 (0.9mm)
19107	K-WIRE THREADED STERILE SINGLE TROCHAR .035 (0.9mm)
19108	K-WIRE STERILE SINGLE TROCHAR .045 (1.1mm)
19109	K-WIRE THREADED STERILE SINGLE TROCHAR .045 (1.1mm)
19110	K-WIRE STERILE SINGLE TROCHAR .062 (1.6mm)
19111	K-WIRE THREADED STERILE SINGLE TROCHAR .062 (1.6mm)
19871	K-WIRE STERILE SINGLE TROCHAR 2MM X 170MM

ITEM #	DESCRIPTION
19234	CANNULATED DRILL STERILE 1.7MM
19235	CANNULATED DRILL STERILE 2.0MM
19236	CANNULATED DRILL STERILE 2.5MM
19875	CANNULATED DRILL STERILE 4.3MM
19092	CANNULATED DRILL 1.7MM
18333	CANNULATED DRILL 2.0MM
19142	CANNULATED DRILL 2.5MM
22277	CANNULATED DRILL 4.3MM



ITEM #	DESCRIPTION
18323	HEX DRIVER 2.0-2.5MM
18324	HEX DRIVER 3.0-3.5MM
18325	HEX DRIVER 4.0-4.5MM
19751	HEX DRIVER 6.5MM
22299	T-8 STAR DRIVER

ITEM #	DESCRIPTION
18321	DEPTH GAUGE W/COUNTERSINK 2.0-3.5
18322	DEPTH GAUGE W/COUNTERSINK 3.5-4.5
19730	DEPTH GAUGE W/COUNTERSINK 6.5

Ordering Instruments

(General instruments)

ITEM #	DESCRIPTION
22293	CANNULATED RATCHET HANDLE
18334	SCREW PICK UP SM
18335	SCREW PICK UP LG
18338	POINTED BONE CLAMP 5"
18337	POINTED BONE CLAMP 6"

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