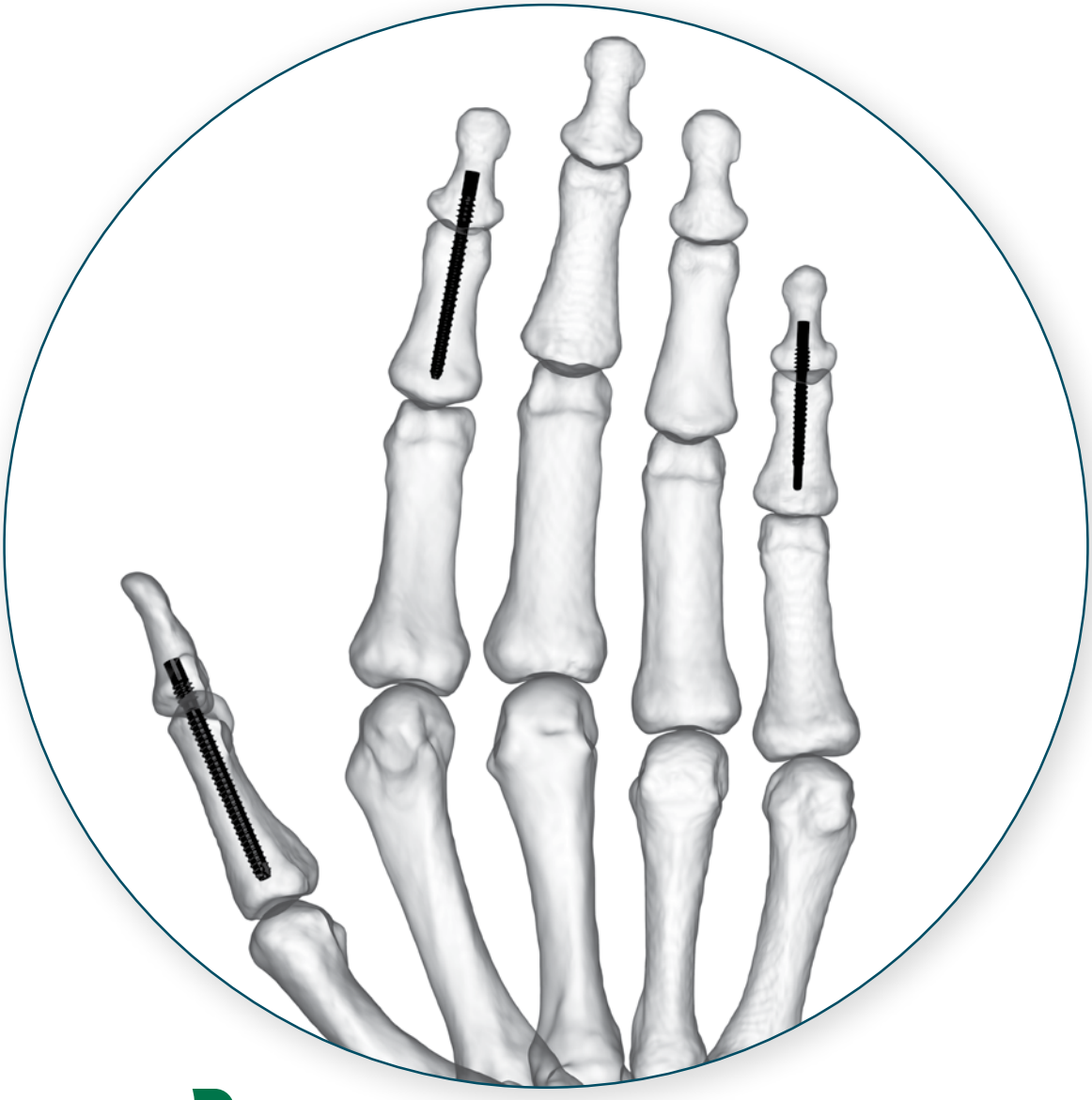
DISTAL INTERPHALANGEAL FUSION

SURGICAL TECHNIQUE GUIDE

REDUCT®

arthrodesis screw system



skeletal dynamics®

UNDERSTANDING THE UPPER EXTREMITY

As described by:
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REDUCT®

arthrodesis screw system

Description

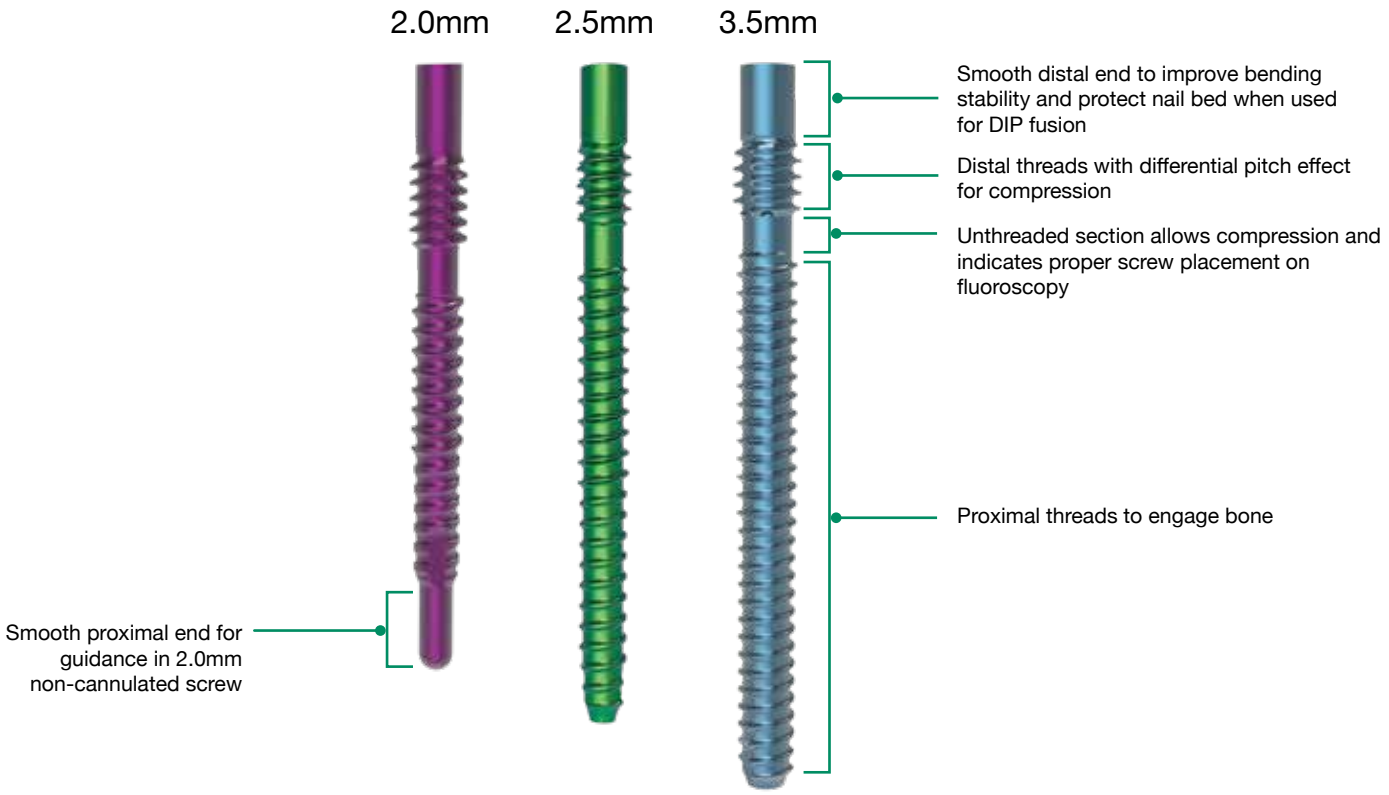
The Skeletal Dynamics REDUCT® Arthrodesis Screw System consists of titanium screws and specialized instrumentation.

- 2.0mm non-cannulated screws: 20mm - 44mm in 2mm increments.
- 2.5mm cannulated screws: 26mm - 40mm in 2mm increments.
- 3.5mm cannulated screws: 32mm - 46mm in 2mm increments.

The system is provided non-sterile and is sterilized in the user facility.

Indications for Use

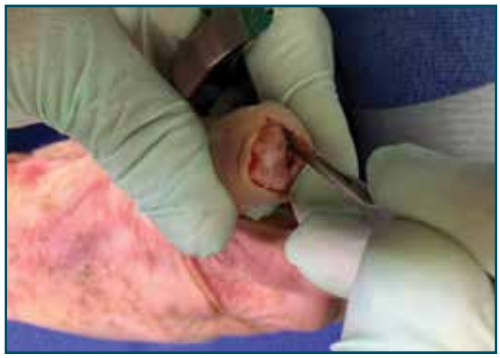
The REDUCT® Arthrodesis Screw System is intended for fixation of osseous fragments or fractures, arthrodesis of small joints, and osteotomies, with the appropriately sized screw.



Concave reamer for shaping proximal bone

Convex reamers for shaping distal bone

1 SUPERFICIAL AND DEEP EXPOSURE



Using any preferred approach, expose the joint.

Manage extensor mechanism.

Release collateral ligaments.

2 SCREW SIZE SELECTION

Screw Options	Guide Wire	Drill	Driver
2.0mm	0.9mm	1.8mm	1.1mm hex
2.5mm	0.9mm	2.1mm	1.5mm hex
3.5mm	1.1mm	2.9mm	2.0mm hex

The system includes three screw diameters: 2.0mm (magenta), 2.5mm (green), and 3.5mm (blue). Each width screw has a corresponding size k-wire, drill bit, and driver, as noted in the table above. Select the appropriate width screw and note the corresponding instrumentation.

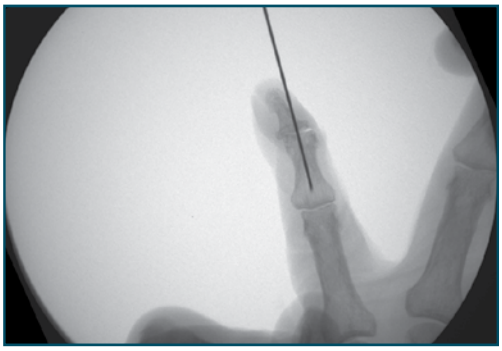
Note:
Choose the screw option based on the narrowest point of the canal.

PROXIMAL BONE INITIAL PREPARATION 3

Use a rongeur to remove any osteophytes and hard sclerotic bone to facilitate the use of the sequential reamers.

Insert the appropriate size k-wire retrograde into the proximal bone until it reaches the proximal cortex.

Use fluoroscopy to confirm k-wire placement.



PROXIMAL BONE DECORTICATION 4

The system includes five sequential concave hand reamers.

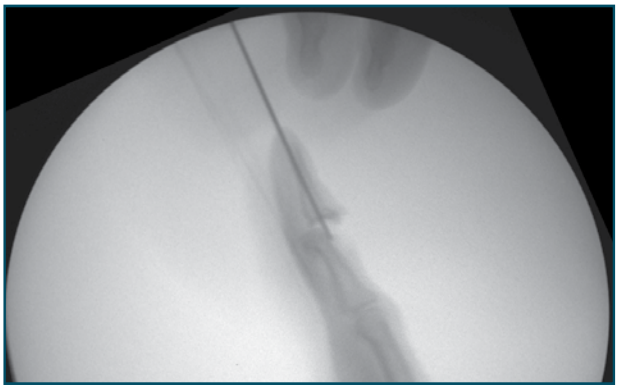
Starting with the size #1 concave reamer, slide the concave reamer over the distal end of the k-wire and ensure the reamer ring extends beyond the bone edges circumferentially.

Manually ream until all articular cartilage is removed. Remove the k-wire.

Note:
Do not ream under power.

RMR-CV-XX: Concave Reamer, Size XX

5 DISTAL BONE INITIAL PREPARATION



Use a rongeur to remove any osteophytes and hard sclerotic bone to facilitate the use of the sequential reamers. Insert the appropriate size k-wire anterograde into the medullary canal of the distal bone until it exits through the skin.

Use fluoroscopy to confirm k-wire placement. Leave enough of the k-wire near the proximal surface of the distal bone to use as a guide for the reamer.

6 DISTAL BONE DECORTICATION

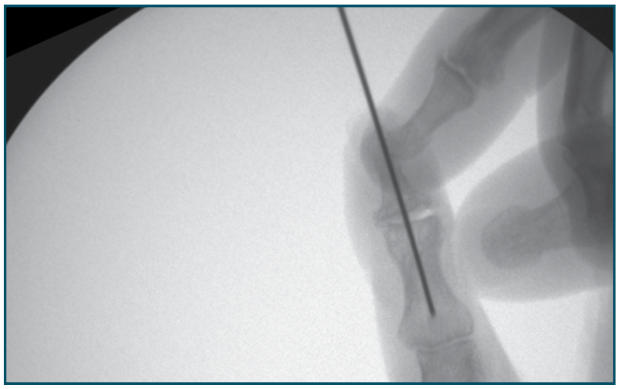
The system includes five sequential convex hand reamers.

Starting with the size #1 convex reamer, slide the convex reamer over the proximal end of the k-wire and manually ream. Continue sequential manual reaming until all articular cartilage is removed.

Note:
Do not ream under power.

RMR-CX-XX: Convex Reamer, Size XX

PROVISIONAL JOINT REDUCTION 7



Re-position the k-wire from the distal bone so the proximal end of the k-wire is positioned at the proximal tip of the distal bone.

Using fluoroscopic guidance, advance the k-wire retrograde into the proximal bone until it reaches the proximal cortex of the proximal bone.

SCREW PREPARATION 8

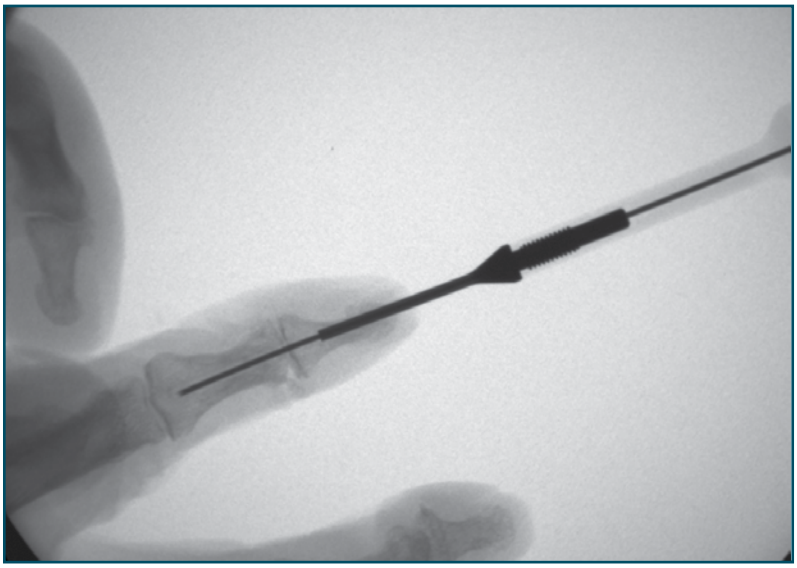
Make a transverse incision where the k-wire exits the skin at the distal bone. Insert the correct size cannulated drill bit over the distal end of the k-wire and drill through the distal bone into the proximal bone until reaching the proximal cortex. Remove the drill bit and leave the k-wire in place.

Note:
If necessary, use the k-wire pusher to keep the k-wire in place while removing the drill bit.

HCS-WP: HCS Wire Pusher

DRLL-DIP-XX : Drill, Cannulated

9 MEASURE SCREW LENGTH



Using fluoroscopic imaging, pass the depth gauge over the k-wire to the intended final position of the proximal end of the screw. Note the screw length.

Note:
The tip of the k-wire within the depth gauge indicates the screw length.

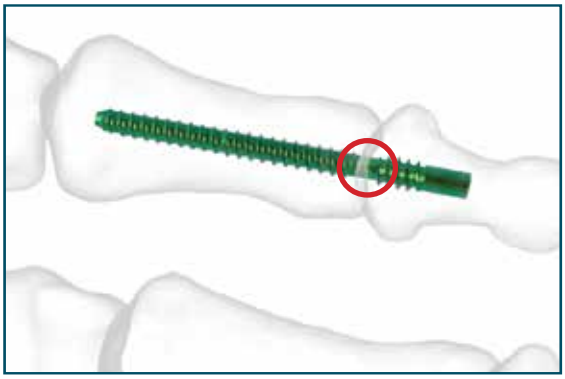
For 2.5mm or 3.5mm screws, remove the depth gauge, leaving the k-wire in place.

If using a 2.0mm screw, remove the k-wire prior to screw insertion, as the screw is not cannulated.

DGA-DIP: REDUCT Depth Gauge

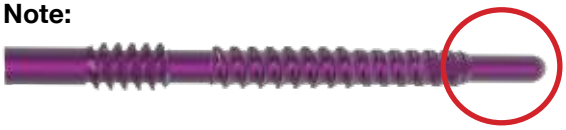
10 SCREW INSERTION

Use the corresponding sized cannulated driver with the selected screw. While maintaining desired joint rotation and compression, insert the 2.5mm or 3.5mm screw over the k-wire, threading it into the bone. Manually compressing the bones together before advancing the screw will help to prevent distraction of the joint.



Advance the screw until the smooth portion of the screw is in the joint space. Do not allow the distal threads to enter the joint space; doing so may result in a loss of compression.

Note:



The 2.0mm, non-cannulated screw has a non-threaded distal end to aid in insertion.

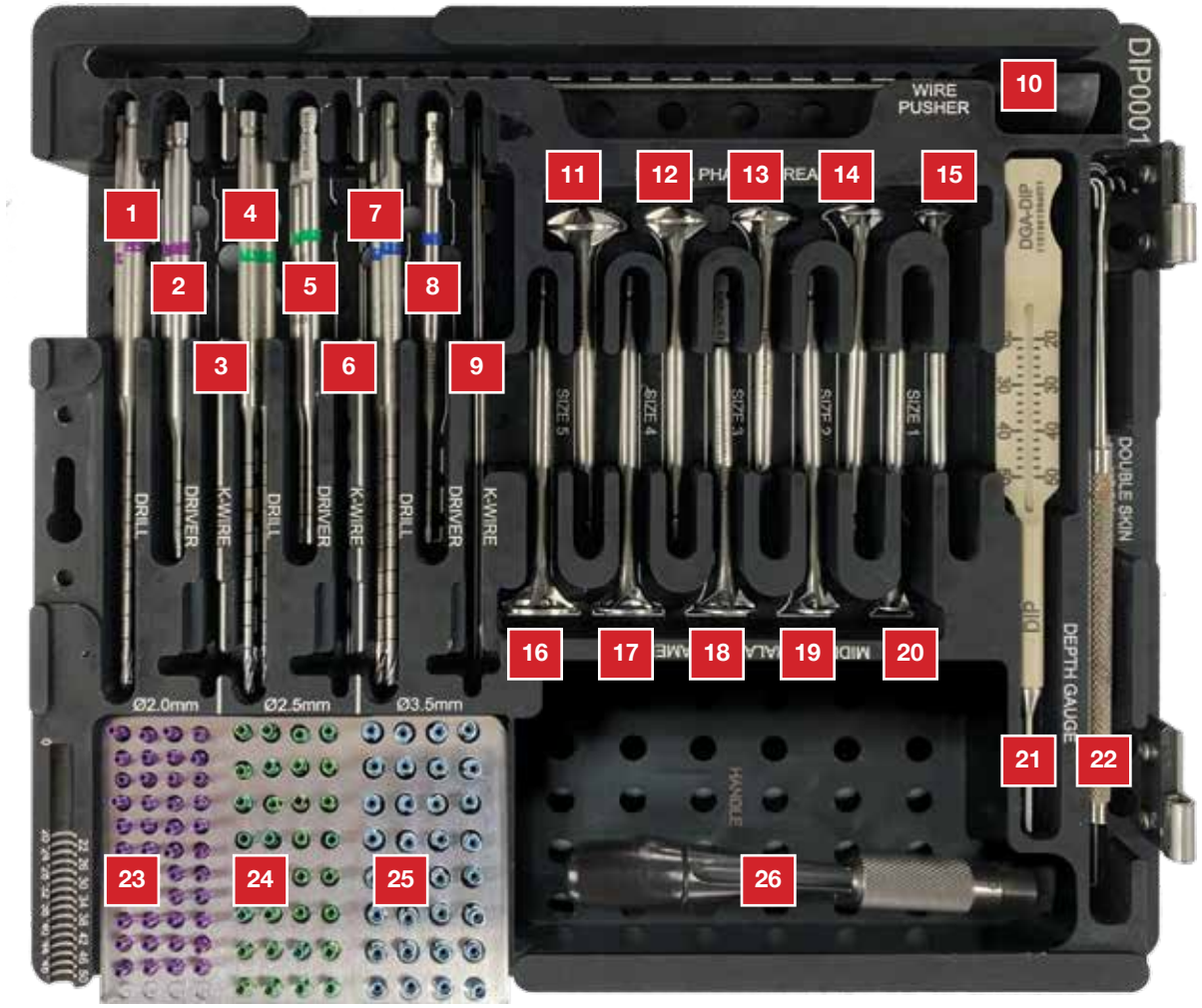
FLUOROSCOPIC CONFIRMATION 11

Use fluoroscopy to confirm proper reduction and verify final screw placement.

Remove the k-wire.

Close the wound in the usual fashion.

INSTRUMENT TRAY (Standard Configuration)



Loc #	Catalog #	Description
1	DRLL-DIP-18	Drill, 1.8mm Cannulated
2	DRVR-HCS-0110	REDUCT Driver, 2.0
3	KWIR-DT-09127	K-Wire, 0.9mm x 127mm, Double Trocar
4	DRLL-DIP-21	Drill, 2.1mm Cannulated
5	DRVR-HCS-1015	REDUCT Driver, 2.5
6	KWIR-DT-09127	K-Wire, 0.9mm x 127mm, Double Trocar
7	DRLL-DIP-29	Drill, 2.9mm Cannulated
8	DRVR-HCS-1520	REDUCT Driver, 3.5
9	KWIR-DT-11127	K-Wire, HCS, 1.1mm x 127mm, Double Trocar
10	HCS-WP	HCS Wire Pusher
11	RMR-CX-05	Convex Reamer, Size 5
12	RMR-CX-04	Convex Reamer, Size 4
13	RMR-CX-03	Convex Reamer, Size 3
14	RMR-CX-02	Convex Reamer, Size 2
15	RMR-CX-01	Convex Reamer, Size 1
16	RMR-CV-05	Concave Reamer, Size 5
17	RMR-CV-04	Concave Reamer, Size 4
18	RMR-CV-03	Concave Reamer, Size 3
19	RMR-CV-02	Concave Reamer, Size 2
20	RMR-CV-01	Concave Reamer, Size 1
21	DGA-DIP	REDUCT Depth Gauge
22	SH2-020	Skin Hook, 2 Prong, 2mm
23	HCSD-20020	Screw, Arthrodesis, 2.0 x 20mm, Ti
	HCSD-20022	Screw, Arthrodesis, 2.0 x 22mm, Ti
	HCSD-20024	Screw, Arthrodesis, 2.0 x 24mm, Ti
	HCSD-20026	Screw, Arthrodesis, 2.0 x 26mm, Ti
	HCSD-20028	Screw, Arthrodesis, 2.0 x 28mm, Ti
	HCSD-20030	Screw, Arthrodesis, 2.0 x 30mm, Ti
	HCSD-20032	Screw, Arthrodesis, 2.0 x 32mm, Ti
	HCSD-20034	Screw, Arthrodesis, 2.0 x 34mm, Ti
	HCSD-20036	Screw, Arthrodesis, 2.0 x 36mm, Ti
	HCSD-20040	Screw, Arthrodesis, 2.0 x 40mm, Ti
	HCSD-20044	Screw, Arthrodesis, 2.0 x 44mm, Ti
24	HCSD-25026	Screw, Arthrodesis, 2.5 x 26mm, Ti
	HCSD-25028	Screw, Arthrodesis, 2.5 x 28mm, Ti
	HCSD-25030	Screw, Arthrodesis, 2.5 x 30mm, Ti
	HCSD-25032	Screw, Arthrodesis, 2.5 x 32mm, Ti
	HCSD-25034	Screw, Arthrodesis, 2.5 x 34mm, Ti
	HCSD-25036	Screw, Arthrodesis, 2.5 x 36mm, Ti
	HCSD-25038	Screw, Arthrodesis, 2.5 x 38mm, Ti
	HCSD-25040	Screw, Arthrodesis, 2.5 x 40mm, Ti
25	HCSD-35032	Screw, Arthrodesis, 3.5 x 32mm, Ti
	HCSD-35034	Screw, Arthrodesis, 3.5 x 34mm, Ti
	HCSD-35036	Screw, Arthrodesis, 3.5 x 36mm, Ti
	HCSD-35038	Screw, Arthrodesis, 3.5 x 38mm, Ti
	HCSD-35040	Screw, Arthrodesis, 3.5 x 40mm, Ti
	HCSD-35042	Screw, Arthrodesis, 3.5 x 42mm, Ti
	HCSD-35044	Screw, Arthrodesis, 3.5 x 44mm, Ti
	HCSD-35046	Screw, Arthrodesis, 3.5 x 46mm, Ti
26	HNDL-AQC-FXD	Handle, AO QC, Fixed

REDUCT® 2.0mm ARTHRODESIS SCREW

K-Wire, 0.9mm x 127mm, Double Trocar

Drill, 1.8mm Cannulated

REDUCT Driver, 2.0

REDUCT® 2.5mm ARTHRODESIS SCREW

K-Wire, 0.9mm x 127mm, Double Trocar

Drill, 2.1mm Cannulated

REDUCT Driver, 2.5

REDUCT® 3.5mm ARTHRODESIS SCREW

K-Wire, HCS, 1.1mm x 127mm, Double Trocar

Drill, 2.9mm Cannulated

REDUCT Driver, 3.5

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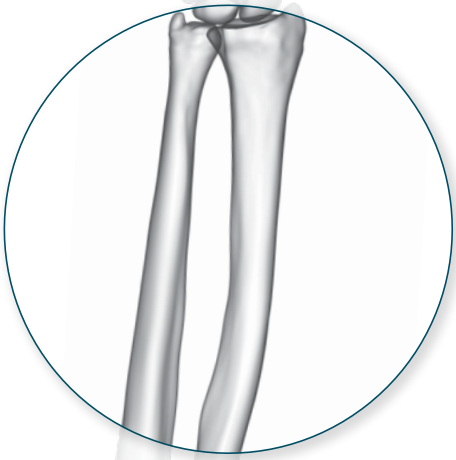

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