

medartis®

PRECISION IN FIXATION

PRODUCT INFORMATION

SpeedTip® CCS
2.2, 3.0

Cannulated Compression Screws

APTUS®

SpeedTip® CCS 2.2, 3.0

Cannulated Compression Screws

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For further information regarding the APTUS product line visit:
www.medartis.com/products

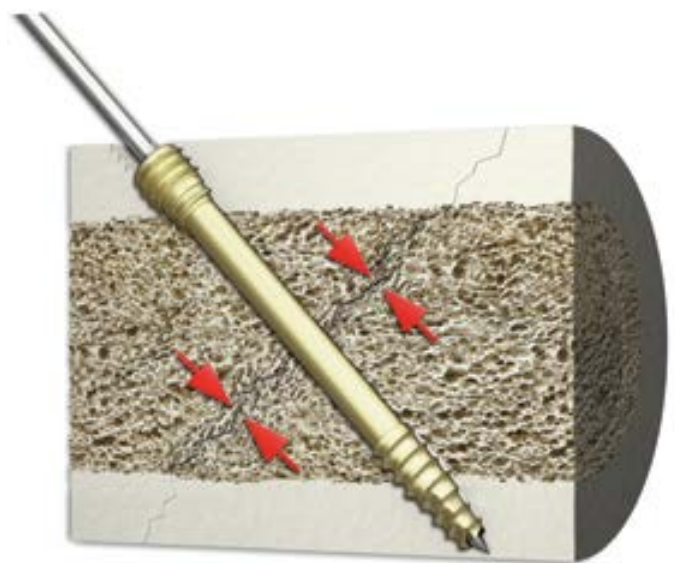
SpeedTip CCS* 2.2, 3.0 Cannulated Compression Screws

A new generation of self-drilling and self-tapping cannulated screws

SpeedTip CCS 2.2, 3.0 cannulated compression screws feature innovative technologies and especially high quality of the screw threads. The patented SpeedTip polygonal geometry in combination with the precision manufacturing of the thread reduce the torque required to insert the screws. This facilitates use for the surgeon and reduces the number of surgical steps. The optimized cutting tip enables the screw to cut and purchase extremely well in the bone, thus reducing the risk of bone fragment displacement.

Indications

Treatment of fractures, osteotomies and arthrodesis of bones e.g. in the hand, wrist, elbow, foot with the appropriate screw size.



- Two screw sizes for treating a wide variety of indications
- Easy to use

Examples of use

Shoulder

Fractures, osseous ligament and tendon avulsions:

- of the proximal humerus
- of the glenohumeral joint

Elbow

Fractures:

- of the distal humerus
- of the proximal ulna
- of the proximal radius

Wrist

Fractures, styloid avulsions and fixation of bone fragments on:

- radius
- ulna

Carpal arthrodesis and fractures

Hand

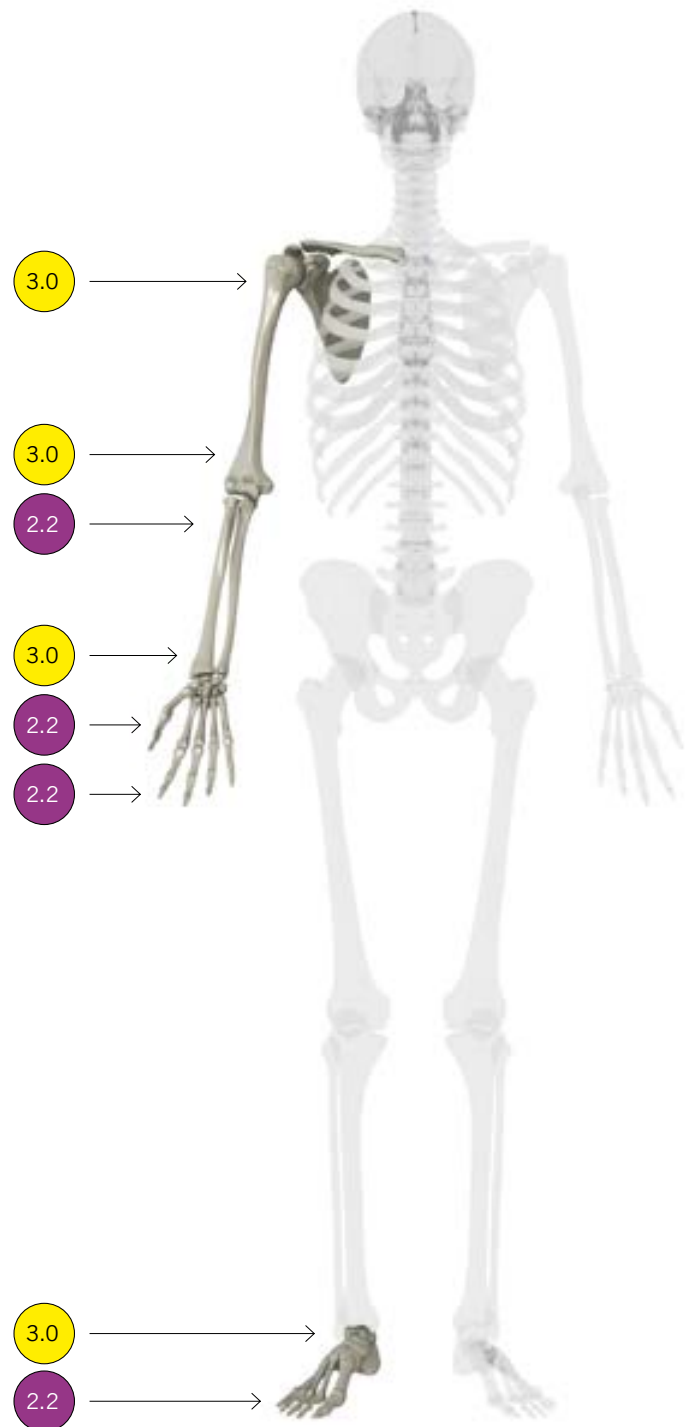
Transverse and spiral fractures, osseous ligament and tendon avulsions as well as arthrodesis and osteotomies:

- of the phalanges
- of the metacarpals
- of the carpals

Foot

Fractures, arthrodesis and correction osteotomies:

- of the phalanges
- of the metatarsals
- of the tarsals



Technology, Screw Features

SpeedTip® polygonal geometry and HexaDrive®

Technology

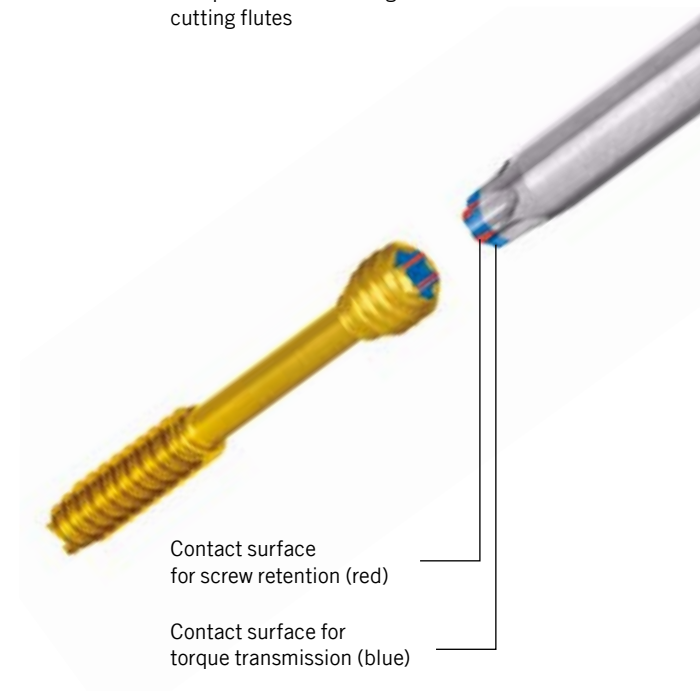
- Patented SpeedTip thread design:
 - Screws can be inserted directly without pre-drilling
 - Reduced risk of bone fragment displacement thanks to excellent cutting behavior
 - Effortless insertion – the polygonal tip pushes bone debris aside
- Self-tapping screws with precise and sharp thread
- Patented HexaDrive screw head design:
 - Secure connection between screw and screwdriver
 - Increased torque transmission
 - Simplified screw pick-up due to patented self-holding technology



Medartis screw tip with SpeedTip polygonal geometry



Competitor's self-drilling screw with cutting flutes



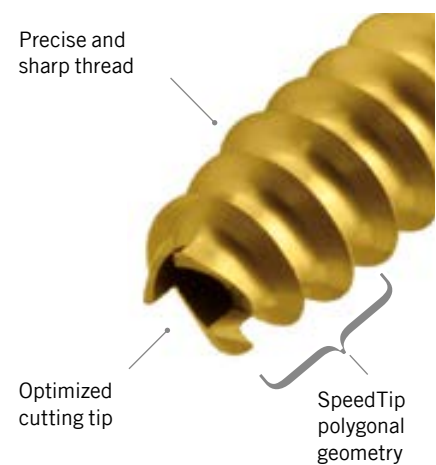
Contact surface for screw retention (red)

Contact surface for torque transmission (blue)

- Innovative technologies and outstanding thread properties
- Cannulated and self-drilling screw design
- Excellent cutting behavior and low insertion torque reduce the risk of bone fragment displacement

Screw features and clinical benefits

- Self-drilling screw design:
 - Fewer surgical steps
 - Easy application
- Substantially less effort required to insert screws due to:
 - SpeedTip polygonal geometry
 - Precise and sharp thread
 - Optimized screw tip
- Large thread surfaces:
 - Compression also in bone with lower bone density
 - Improved purchase in cortical and cancellous bone
- Choice of short and long distal threads for interfragmentary application in a wide variety of indications



Medartis screw tip with SpeedTip polygonal geometry



Standard screw tip with cutting flutes



Medartis thread



Competitor thread



Short thread



Long thread

Clinical Examples

Foot

Case 1 – Axial Fracture of the Navicular Bone



Preoperative X-ray and CT image
 Patient: male, 39 years old
 Axial compression trauma, left foot



Intraoperative X-ray
 Repositioning of the fragment with K-wire and
 insertion of a 3.0 CCS



X-ray and CT image, 6 weeks postoperatively

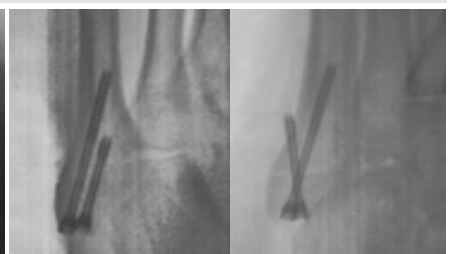
Case 2 – Avulsion Fracture, Metatarsal V



Preoperative X-ray
 Patient: male, 44 years old
 Avulsion fracture, base of metatarsal V, left foot,
 with displacement of 5 mm



Intraoperative X-ray
 Insertion of two 3.0 CCS for a rotation-stable
 fixation

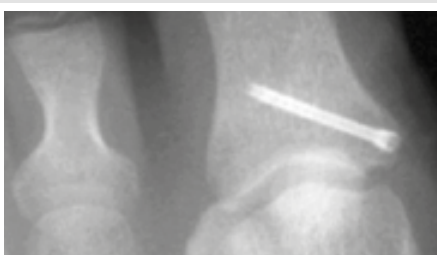


X-rays, 6 weeks postoperatively

Case 3 – Osseous Ligament Avulsion



Preoperative X-ray
 Patient: male, 22 years old
 Osseous ligament avulsion, first proximal
 phalanx



Intraoperative X-ray
 Fixation of the fragment with one 2.2 CCS

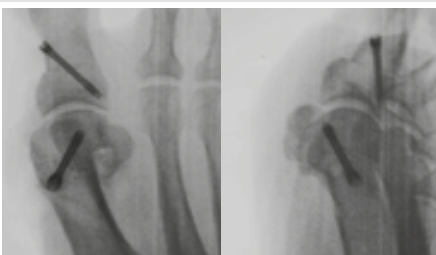


X-ray, 6 weeks postoperatively

Case 4 – Hallux Valgus Correction



Preoperative X-ray
Patient: female, 50 years old



Intraoperative X-rays
Chevron-Akin osteotomy for correction with one 2.2 and one 3.0 CCS



X-ray, 6 weeks postoperatively

Case 5 – DIP Arthrodesis, Foot



Preoperative X-rays
Patient: male, 69 years old
Circular saw injury, distal phalanges I and II



Intraoperative X-ray
Fusion of the IP I with two 3.0 CCS and fusion of the DIP II with one 2.2 CCS



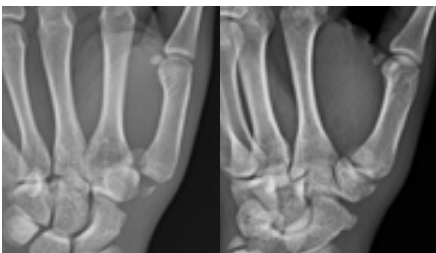
X-ray, 6 weeks postoperatively

Clinical cases on pages 8–12 published with the kind permission of:
M. Bachmann, Switzerland (2) | R. Blazek, Switzerland (5) | T. Gunzenhauser, Switzerland (1) | U. Hefti, Switzerland (4, 12)
C. Ranft, Germany (9) | W. Geissler, USA (6–8, 10, 11, 13)

Clinical Examples

Hand & Wrist

Case 6 – Metacarpal Fracture



Preoperative X-rays
Patient: 17 years old
Base fracture of the metacarpal I



Intraoperative X-rays

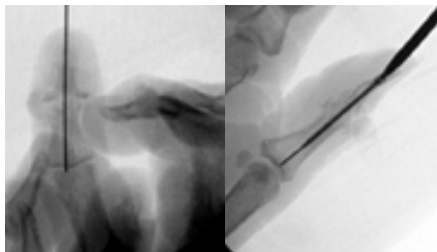


Postoperative X-rays
Left: AP view
Right: Lateral view

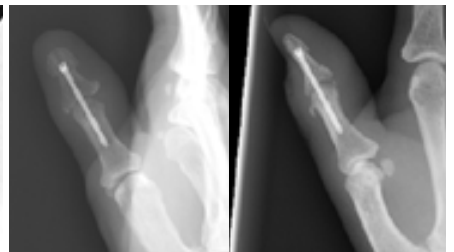
Case 7 – DIP Arthrodesis, Thumb



Preoperative X-ray
Patient: male, 68 years old
Several year history of IP joint thumb pain.
Unresponsive to NSAIDs and splinting



Intraoperative X-rays
Left: Insertion of the K-wire
Right: Placement of a 2.2 CCS

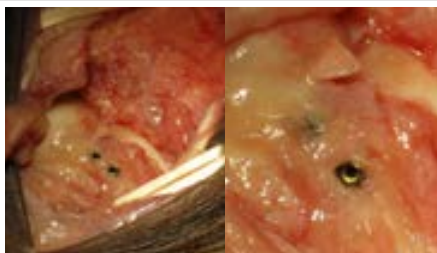


Postoperative X-rays

Case 8 – Wrist Fracture Dislocation



Preoperative X-rays
Patient: 28 years old
Fracture dislocation of the wrist



Intraoperative images from dorsal

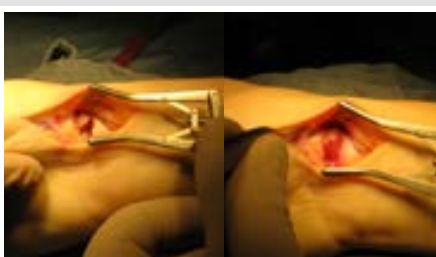


Postoperative X-rays
Left: AP view
Right: Lateral view

Case 9 – Scaphoid Nonunion



Preoperative X-ray and CT of the right hand
 Patient: male, 16 years old
 Nonunion of a scaphoid fracture, approximately 1 year old



Intraoperative images, volar
 Left: resection of the pseudarthrosis tissue
 Right: reconstruction of the scaphoid with cancellous bone chips from the iliac crest

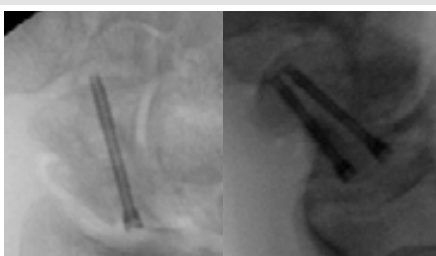


Postoperative X-rays
 Internal interfragmentary fixation with a 2.2 CCS

Case 10 – Scaphoid Nonunion (2 Screws)



Preoperative X-ray
 Patient: 18 years old
 Nonunion of a scaphoid fracture



Intraoperative X-rays
 Insertion of two 2.2 CCS for rotational stability

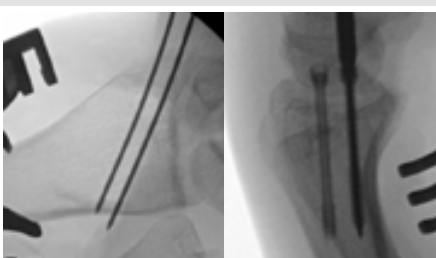


Postoperative X-ray

Case 11 – Radial Styloid Fracture



Preoperative X-ray
 Patient: 33 years old
 Fracture of the radial styloid after fall



Intraoperative X-rays
 Left: Insertion of two K-wires for rotational stability
 Right: Placement of two 3.0 CCS



Postoperative X-rays
 Left: AP view
 Right: Lateral view

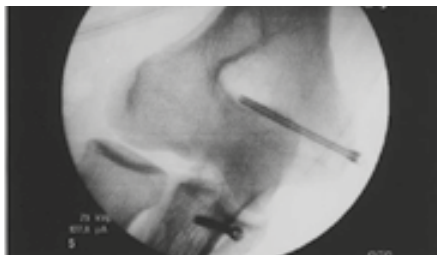
Clinical Examples

Elbow & Shoulder

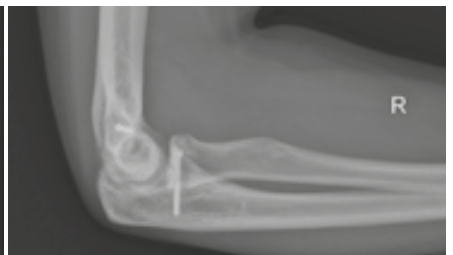
Case 12 – Dislocated Elbow



Preoperative X-ray
 Patient: male, 32 years old
 Dislocated elbow with fracture of the coronoid and medial epicondyle osteotomy



Intraoperative X-ray
 Repositioning of the fracture and insertion of two 3.0 CCS



X-ray, 6 weeks postoperatively

Case 13 – Radial Head Fracture



Preoperative X-ray
 Patient: male, 33 years old
 Trauma after fall

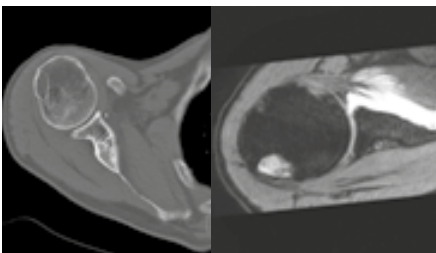


Intraoperative pictures
 Left: Fixation of the fragments with a 2.2 CCS on the back table
 Right: Refixation of the radial head with a radial head rim plate

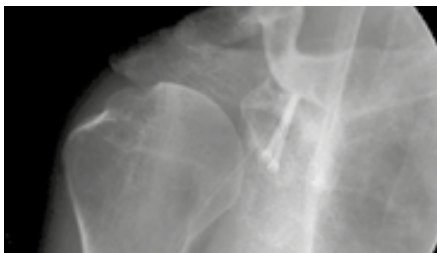


Postoperative X-rays

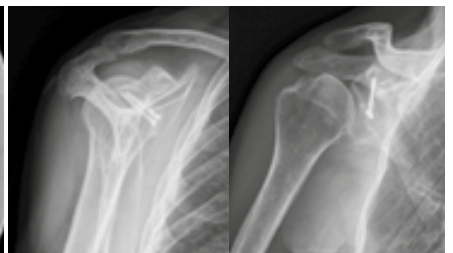
Case 14 – Dislocated Shoulder – Latarjet Procedure



Preoperative CT and MRI images
 Patient: male, 59 years old
 Unstable shoulder after shoulder dislocation with substantial bone defect



Intraoperative X-ray
 Fixation of the coracoid with attached tendon in the defect area with two 3.0 CCS



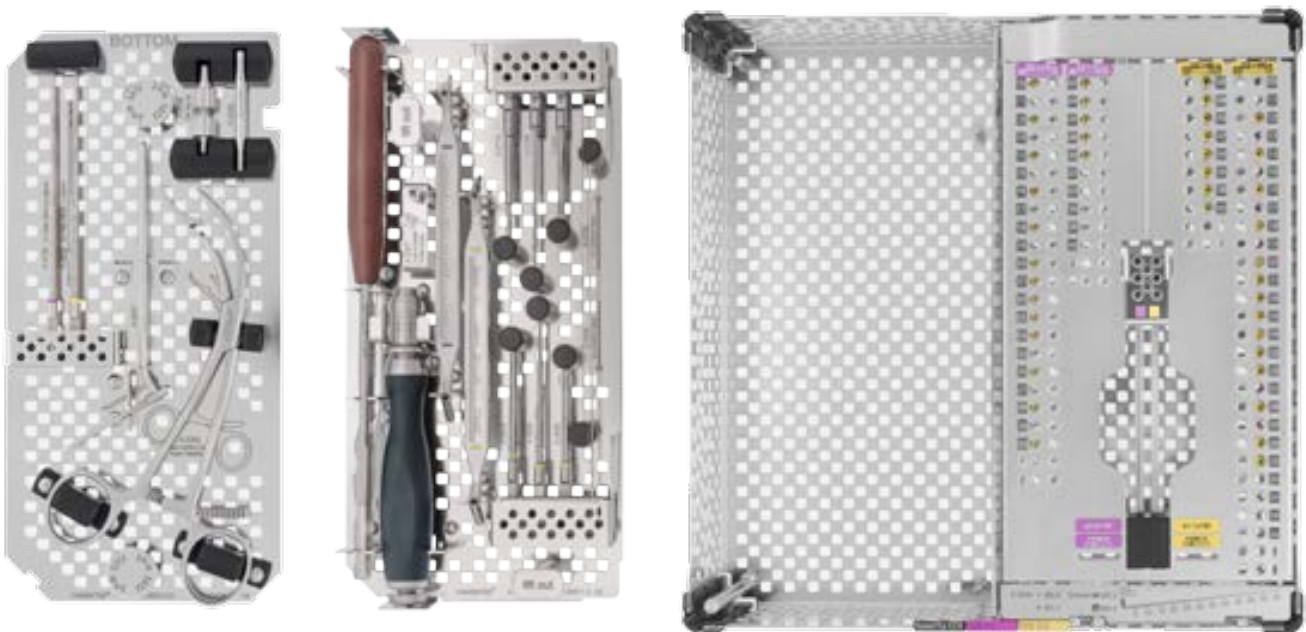
X-ray, 6 weeks postoperatively
 Fracture has healed in unchanged position

Storage

- Economic and compact system
- Customized kit arrangement
- Streamlined organization of implants and instruments
- Easy to handle



Example of an equipped CCS 2.2, 3.0 mini container with an implant case and two instrument trays



Example of an equipped CCS 2.2, 3.0 standard container with an implant case and two instrument trays

Ordering Information

2.2 Cannulated Compression Screws, Self-Drilling, HexaDrive 7

Material: Titanium (ASTM F136)

Short Thread



Length	Distal Thread Length	Art. No.	Pieces/Pkg
10 mm	4 mm	A-5780.10/1	1
11 mm	5 mm	A-5780.11/1	1
12 mm	5 mm	A-5780.12/1	1
13 mm	5 mm	A-5780.13/1	1
14 mm	5 mm	A-5780.14/1	1
15 mm	5 mm	A-5780.15/1	1
16 mm	5 mm	A-5780.16/1	1
17 mm	5 mm	A-5780.17/1	1
18 mm	5 mm	A-5780.18/1	1
19 mm	5 mm	A-5780.19/1	1
20 mm	5 mm	A-5780.20/1	1
21 mm	5 mm	A-5780.21/1	1
22 mm	5 mm	A-5780.22/1	1
23 mm	5 mm	A-5780.23/1	1
24 mm	6 mm	A-5780.24/1	1
25 mm	6 mm	A-5780.25/1	1
26 mm	6 mm	A-5780.26/1	1
27 mm	6 mm	A-5780.27/1	1
28 mm	6 mm	A-5780.28/1	1
29 mm	6 mm	A-5780.29/1	1
30 mm	6 mm	A-5780.30/1	1

2.2 Cannulated Compression Screws, Self-Drilling, HexaDrive 7

Material: Titanium (ASTM F136)

Long Thread



Length	Distal Thread Length	Art. No.	Pieces/Pkg
22 mm	8 mm	A-5781.22/1	1
24 mm	8 mm	A-5781.24/1	1
26 mm	8 mm	A-5781.26/1	1
28 mm	9 mm	A-5781.28/1	1
30 mm	10 mm	A-5781.30/1	1
32 mm	11 mm	A-5781.32/1	1
34 mm	12 mm	A-5781.34/1	1
36 mm	13 mm	A-5781.36/1	1
38 mm	14 mm	A-5781.38/1	1
40 mm	15 mm	A-5781.40/1	1

3.0 Cannulated Compression Screws, Self-Drilling, HexaDrive 10

Material: Titanium (ASTM F136)

Short Thread



Length	Distal Thread Length	Art. No.	Pieces/Pkg
10 mm	3.5 mm	A-5880.10/1	1
11 mm	4.5 mm	A-5880.11/1	1
12 mm	5 mm	A-5880.12/1	1
13 mm	5 mm	A-5880.13/1	1
14 mm	5 mm	A-5880.14/1	1
15 mm	5 mm	A-5880.15/1	1
16 mm	5 mm	A-5880.16/1	1
17 mm	5 mm	A-5880.17/1	1
18 mm	5 mm	A-5880.18/1	1
19 mm	5 mm	A-5880.19/1	1
20 mm	5 mm	A-5880.20/1	1
21 mm	5 mm	A-5880.21/1	1
22 mm	5 mm	A-5880.22/1	1
23 mm	5 mm	A-5880.23/1	1
24 mm	6 mm	A-5880.24/1	1
25 mm	6 mm	A-5880.25/1	1
26 mm	6 mm	A-5880.26/1	1
27 mm	6 mm	A-5880.27/1	1
28 mm	6 mm	A-5880.28/1	1
29 mm	6 mm	A-5880.29/1	1
30 mm	6 mm	A-5880.30/1	1
32 mm	6 mm	A-5880.32/1	1
34 mm	7 mm	A-5880.34/1	1
36 mm	7 mm	A-5880.36/1	1
38 mm	8 mm	A-5880.38/1	1
40 mm	8 mm	A-5880.40/1	1

3.0 Cannulated Compression Screws, Self-Drilling, HexaDrive 10

Material: Titanium (ASTM F136)

Long Thread



Length	Distal Thread Length	Art. No.	Pieces/Pkg
26 mm	8 mm	A-5881.26/1	1
28 mm	9 mm	A-5881.28/1	1
30 mm	10 mm	A-5881.30/1	1
32 mm	11 mm	A-5881.32/1	1
34 mm	12 mm	A-5881.34/1	1
36 mm	13 mm	A-5881.36/1	1
38 mm	14 mm	A-5881.38/1	1
40 mm	15 mm	A-5881.40/1	1

16 | SpeedTip CCS 2.2, 3.0 – Cannulated Compression Screws

Cannulated Twist Drills



Art. No.	Ø	System Size	Description	Length	Drill Shaft End	Pieces/Pkg
A-3736	1.8 mm	2.2	for K-wire Ø 0.8 mm	87 mm	AO Quick Coupling	1
A-3738*	1.8 mm	2.2	for K-wire Ø 0.8 mm, for drill stop	122 mm	AO Quick Coupling	1
A-3836	2.1 mm	3.0	for K-wire Ø 1.1 mm	87 mm	AO Quick Coupling	1
A-3838*	2.1 mm	3.0	for K-wire Ø 1.1 mm, for drill stop	122 mm	AO Quick Coupling	1

Drill Stop



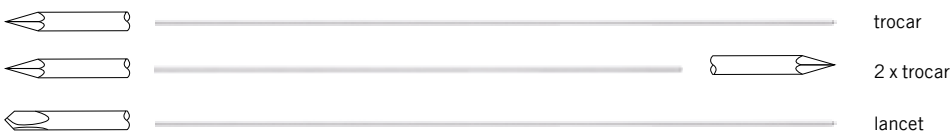
Art. No.	System Size	Description	Length	Pieces/Pkg
A-2038*	2.2/3.0	for cannulated twist drills A-3738 and A-3838	35 mm	1

Countersinks for Cannulated Compression Screws



Art. No.	Ø	System Size	Length	Shaft End	Pieces/Pkg
A-3937*	2.4 mm	2.2 mm	68 mm	AO Quick Coupling	1
A-3938*	3.2 mm	3.0 mm	68 mm	AO Quick Coupling	1

K-Wires, Stainless Steel



Art. No.	Ø	Description	Length	Pieces/Pkg
A-5040.00	0.8 mm	trocar tip	100 mm	10
A-5040.10	1.1 mm	trocar tip	100 mm	10
A-5043.00	0.8 mm	2 x trocar tip	100 mm	10
A-5043.10	1.1 mm	2 x trocar tip	100 mm	10
A-5042.00	0.8 mm	lancet tip	100 mm	10
A-5042.10	1.1 mm	lancet tip	100 mm	10

Click-On Parallel K-Wire Guide



Art. No.	System Size	Description	Length	Pieces/Pkg
A-2027*	2.2/3.0	for drill guides A-2725 and A-2825	20 mm	1

Drill Guides/K-wire Guides



1:2

Art. No.	System Size	Description	Length	Pieces/Pkg
A-2007*	2.2/3.0	percutaneous, for K-wires Ø 0.8 mm/1.1 mm	123 mm	1
A-2725	2.2	for twist drill Ø 1.8 mm and K-wire Ø 0.8 mm	138 mm	1
A-2825	3.0	for twist drill Ø 2.1 mm and K-wire Ø 1.1 mm	138 mm	1

Depth Gauge



1:2

Art. No.	System Size	Description	Length	Pieces/Pkg
A-2835	2.2, 3.0	for CCS 2.2, 3.0	110 mm	1

Cannulated Screwdriver Blades, Self-Holding



Art. No.	System Size	Description	Length	Shaft End	Pieces/Pkg
A-2716	2.2	HD7, for K-wire Ø 0.8 mm	75 mm	AO Quick Coupling	1
A-2816	3.0	HD10, for K-wire Ø 1.1 mm	75 mm	AO Quick Coupling	1

Handle with Quick Connector



1:2



Protection Sleeve

Art. No.	Description	Length	for Shaft End	Pieces/Pkg
A-2073	cannulated	124 mm	AO Quick Coupling	1

Art. No.	System Size	Length	Pieces/Pkg
A-2039*	2.2/3.0	47 mm	1

Cleaning Stylus



Art. No.	System Size	Description	Length	Pieces/Pkg
A-2706	2.2	0.8 mm	147 mm	1
A-2806	3.0	1.1 mm	147 mm	1

Bone Holding Clamp for Scarf Osteotomies



Art. No.	Length	Pieces/Pkg
A-2065	147 mm	1

Periosteal Elevator



Art. No.	Width	Length	Pieces/Pkg
A-7011	3 mm	185 mm	1

Publications

1. Mehling IM, Sauerbier M.
Scaphoid fractures and pseudarthrosis of the scaphoid [in German]
Z Orthop Unfall. 2013 Dec;151(6):639-60.
2. Arsalan-Werner A, Sauerbier M, Mehling IM.
Current concept for the treatment of acute scaphoid fractures
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3. Greenberg A, Shreve M, Bazylewicz D, Goldstein R, Sapienza A.
Early motion following 4-corner arthrodesis using cannulated compression screws: a biomechanical study
J Hand Surg Am. 2013 Nov;38(11):2180-7.
4. Hoffmann R.
Checkliste Handchirurgie
Thieme Verlag, pp 291-295, 3. Auflage 2009
5. Spiegel, A., Pochlatko, N., Zeuner, H., Lang, A.
Biomechanical Tests of Different Cannulated Compression Screws
White Paper, Medartis AG, Switzerland, 2012

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