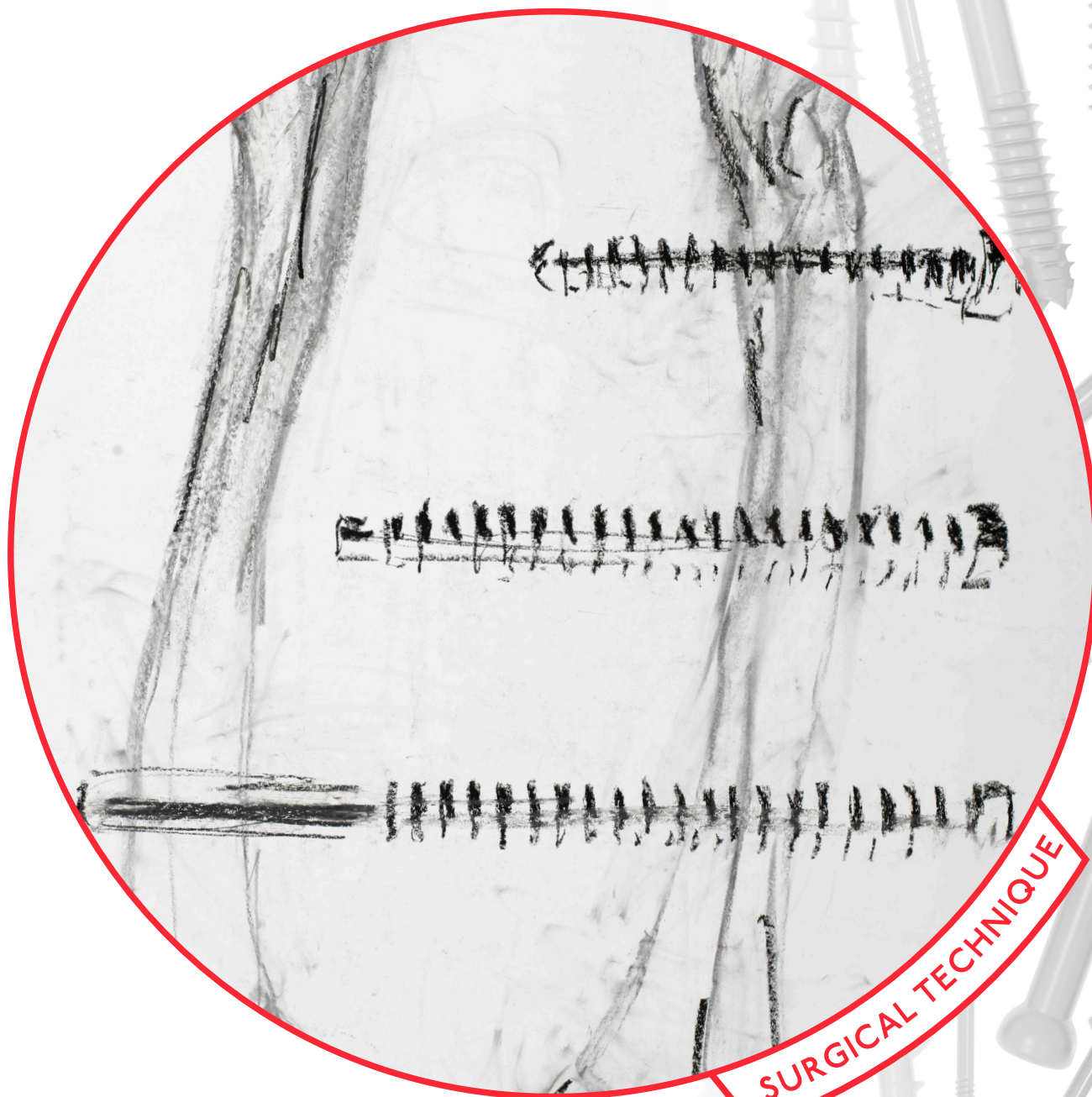


ITS.

Implants for Trauma Surgery



SURGICAL TECHNIQUE

CAnnulated Screws

THE ART of TRAUMA SURGERY

The Art of Trauma Surgery is a collaborative project between ITS. and Austrian artist Oskar Stocker that celebrates the skill, perseverance, and artistry of engineers and surgeons who work tirelessly to improve outcomes for trauma patients.

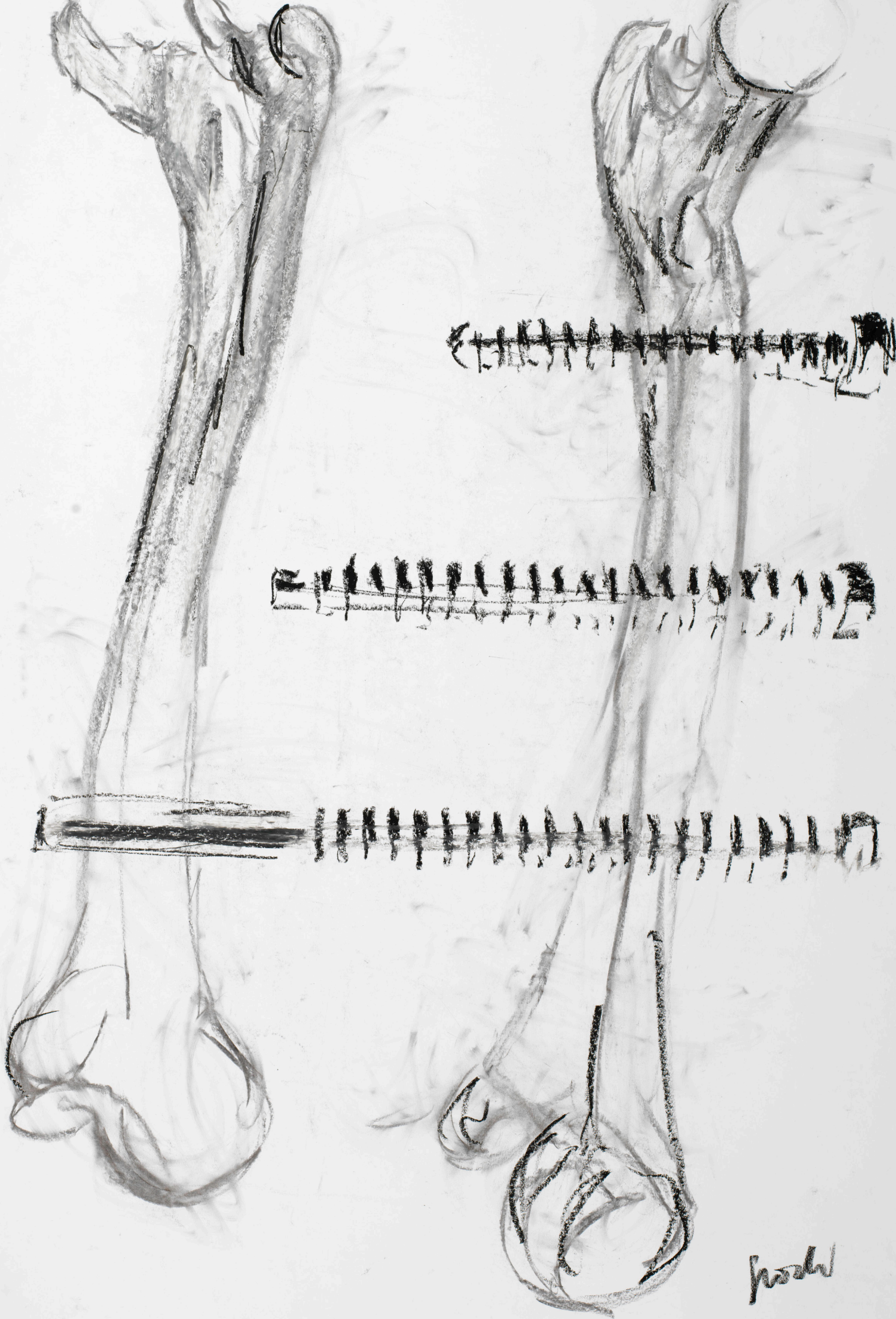
At ITS., we stand for long-term, trusting relationships with our customers, suppliers, and development partners. Through our devotion to innovation and development, we continuously seek to improve and optimize products and techniques in the field of traumatology.

We believe that the success of our mission lies in the combination of the technical expertise, compassion and dedication of surgeons and engineers to help patients regain their health and well-being. Join us in celebrating these remarkable individuals and *The Art of Trauma Surgery!*

About the Artist

The Austrian artist Oskar Stocker (b. 1956) lives and works in Graz, Austria. He has become known internationally through the exhibition *Facing Nations*, which consists of portraits of more than 120 people of various nationalities living in Graz; it was shown first in Graz itself, then in Vienna, and later culminated in 2010 with its display at the UN Headquarters in New York City.

In addition to the portraits of individual people, he devotes himself to the depiction of landscapes and objects, down to the smallest detail.



hosh

All ITS plates are preformed anatomically as a matter of principle. If adjustment of the plate to the shape of the bone is required, this is possible by carefully bending gently in one direction once. Particular care is required when bending in the region of a plate hole, as deformation of the plate may lead to a failure of the locking mechanism. The plate must not be buckled or bent several times. This is particularly important in the case of titanium implants, to prevent material fatigue and subsequent failure. The method of bending is the conscious responsibility of the operating doctor; I.T.S. GmbH can accept no liability whatsoever for this.

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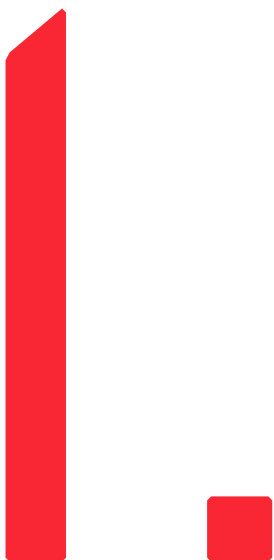
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Introduction



○ System Overview

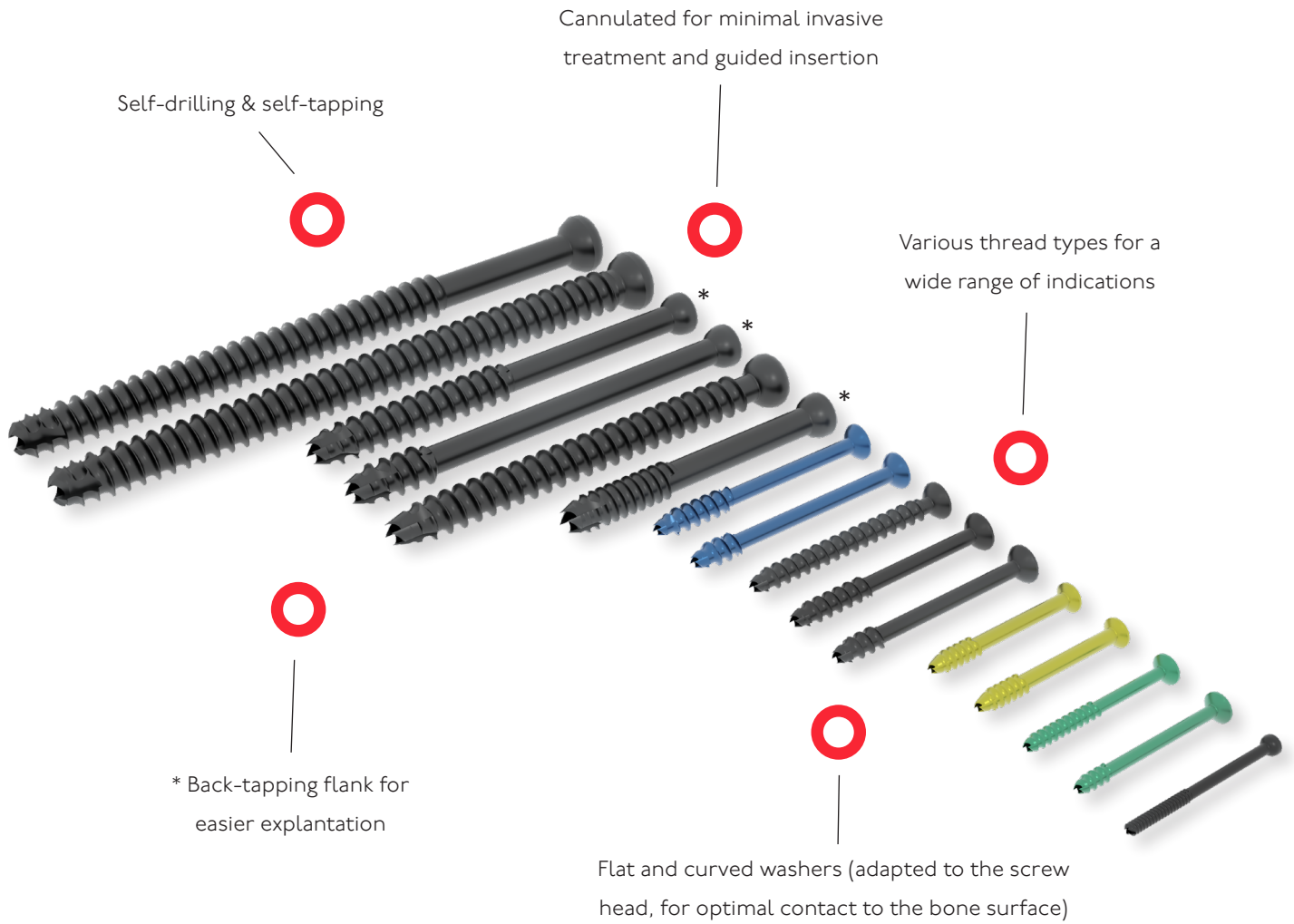
ITS. provides various cannulated screw types with different diameters and lengths covering a wide range of indications for fracture treatment in trauma surgery.

Low-profile screw heads with small diameters help minimize soft tissue irritation and are suitable for minimally invasive methods.


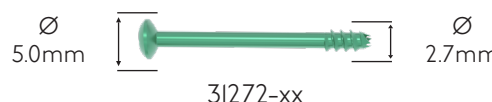
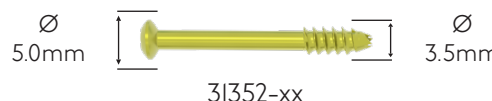

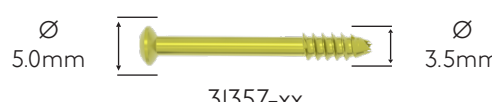





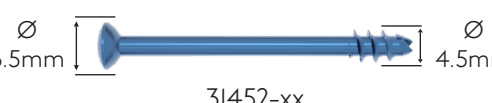

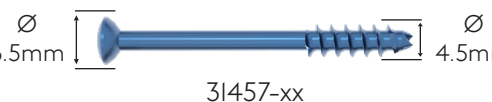
We offer customized equipping of surgical trays so that users can have trays put together according to their needs and preferences.


















○ Properties



○ Screw Overview

Description	Washer	Thread	Screw Length	
OPTIONAL: CAS 2.0 	-	Variable thread	8 - 30mm (Interval 2mm)	
CAS 2.7 	-	Short thread	12 - 30mm (Interval 2mm)	
	-	Variable thread	12 - 32mm (Interval 2mm)	
CAS 3.5 	OPTIONAL:  36351 OD: 7mm ID: 3.6mm	Short thread	16 - 50mm (Interval 2mm) 50 - 70mm (Interval 5mm)	
			Variable thread	16 - 50mm (Interval 2mm) 50 - 70mm (Interval 5mm)
CAS 4.0 	 36431 OD: 15mm ID: 4.5mm  36432 OD: 11mm ID: 4.5mm	9mm thread	16 - 50mm (Interval 2mm) 50 - 70mm (Interval 5mm)	
			Variable thread	16 - 50mm (Interval 2mm) 50 - 80mm (Interval 5mm)
			Fully thread	35 - 60mm (Interval 5mm)
CAS 4.5 	OPTIONAL:  36352 OD: 7mm ID: 4.6mm	Short thread	16 - 50mm (Interval 2mm) 50 - 70mm (Interval 5mm)	
CAS 4.5 		Variable thread	16 - 50mm (Interval 2mm) 50 - 70mm (Interval 5mm)	

Description		Washer	Thread	Screw Length
CAS 6.5		 36651 OD: 14mm ID: 7.0mm	22mm thread	25 - 120mm (Interval 5mm)
		 36653 OD: 12.6mm ID: 7.0mm		
		OPTIONAL:  36652 OD: 12.6mm ID: 7.0mm		
CAS 7.3		 36731 OD: 15mm ID: 7.5mm	Fully threaded	50 - 120mm (Interval 5mm)
		 36732 OD: 14mm ID: 7.5mm	16mm thread	40 - 120mm (Interval 5mm)
		 36732 OD: 14mm ID: 7.5mm	Variable thread	35 - 120mm (Interval 5mm)
CAS 8.5		 OD: 15/25mm ID: 9.0mm	Fully threaded	60 - 200mm (Interval 5mm) Optional: 205 - 250 mm
			Variable thread Constant non- threaded section (35mm)	60 - 200mm (Interval 5mm) Optional: 205 - 250 mm

○ Indications

4.0mm (Dens Axis)

3.5 / 4.0 / 4.5mm

3.5 / 4.0 / 4.5mm

2.0 / 2.7 / 3.5 / 4.0 / 4.5mm

6.5 / 7.3 / 8.5mm (Pelvis)

2.0 / 2.7mm (distal Radius & Scaphoid Bone)
3.5 / 4.0mm

6.5 / 7.3mm

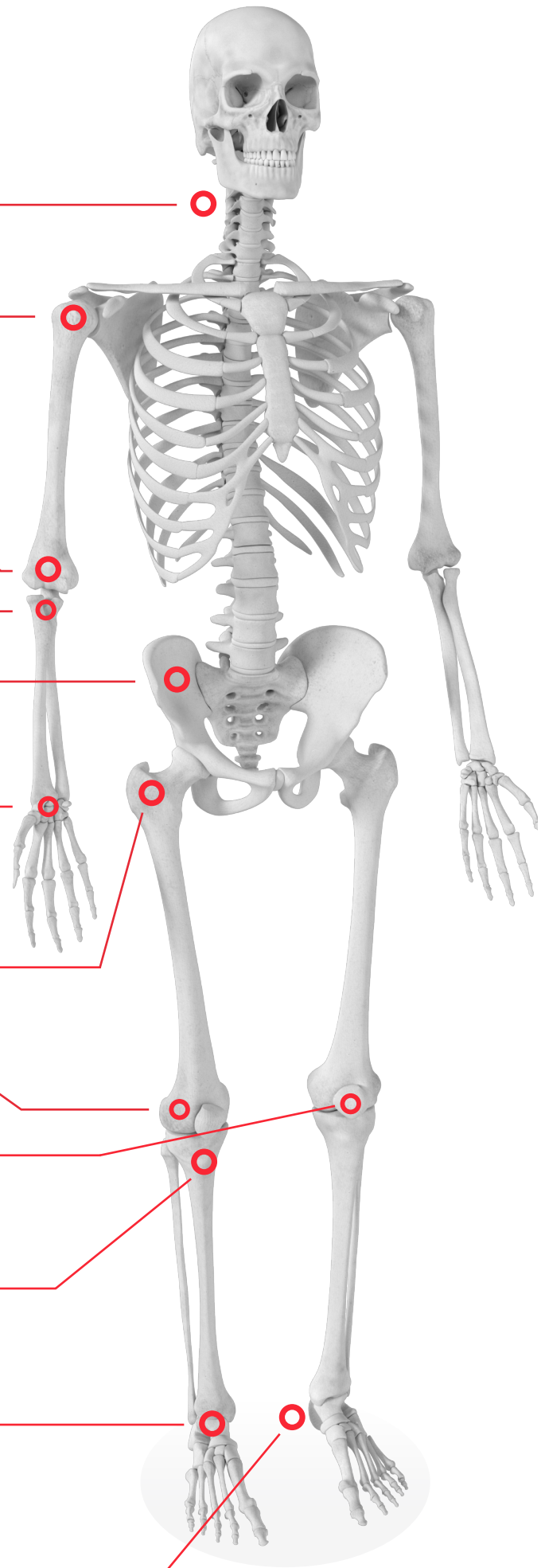
4.5 / 6.5 / 7.3 / 8.5mm

3.5 / 4.0mm (Patella)

4.5 / 6.5 / 7.3 / 8.5mm

3.5 / 4.0 / 4.5 / 8.5mm

2.0 / 2.7mm (Tarsal)
3.5mm (Tarsal, Talus)
4.0 / 4.5mm (Talus)
7.3 / 8.5mm (Calcaneus)



Screw	Indications	
2.0mm	<ul style="list-style-type: none"> Proximal and distal Radius Fractures Proximal Ulna Fractures 	<ul style="list-style-type: none"> Scaphoid Bone Fractures Tarsal Fractures
2.7mm	<ul style="list-style-type: none"> Proximal and distal Radius Fractures Proximal Ulna Fractures 	<ul style="list-style-type: none"> Scaphoid Bone Fractures Tarsal Fractures
3.5mm	<ul style="list-style-type: none"> Malleolus medialis/ lateralis Fractures Proximal and distal Radius and Humerus Fractures Proximal Ulna Fractures Patella Fractures 	<ul style="list-style-type: none"> Distal Tibia Fractures Upper ankle Fractures Tarsal Fractures Talus Fractures Ligament fixation
4.0mm	<ul style="list-style-type: none"> Dens Axis Fractures Proximal and distal Radius and Humerus Fractures Proximal Ulna Fractures Patella Fractures 	<ul style="list-style-type: none"> Distal Tibia Fractures Malleolus medialis/ lateralis Fractures Talus Fractures Ligament fixation
4.5mm	<ul style="list-style-type: none"> Proximal and distal Radius and Humerus Fractures Proximal Ulna and Radius Fractures Pelvic Fractures Supracondylar Fractures of the Femur 	<ul style="list-style-type: none"> Distal and proximal Tibia Fractures Malleolus medialis/lateralis Fractures Talus Fractures Ligament fixation
6.5mm	<ul style="list-style-type: none"> Pelvic Fractures Sacroiliac joint Fractures Femur neck Fractures Supracondylar Fractures of the Femur 	<ul style="list-style-type: none"> Proximal Tibia Fractures Arthrodesis of the upper and lower ankle
7.3mm	<ul style="list-style-type: none"> Pelvic Fractures Femur neck Fractures Supracondylar fractures of the Femur 	<ul style="list-style-type: none"> Proximal Tibia Fractures Calcaneus Fractures
8.5mm	<ul style="list-style-type: none"> Pelvic Fractures Distal Femur Fractures Proximal Tibia Fractures 	<ul style="list-style-type: none"> Upper and Lower Ankle Fractures and Arthrodesis Calcaneus Fractures and Corrective Osteotomies

○ Contraindications

- Diaphyseal fractures of long bones
- In advanced osteoporosis
- Obesity
- Lack of patient compliance

○ Time of Operation

- Primary: Within the first hours after trauma
- Secondary: After swelling subsides, intermediate fixation with external fixation or extension

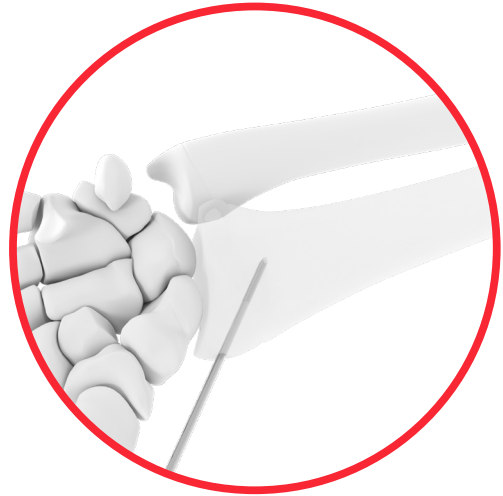
Surgical Technique

2.

○ Temporary Fixation with Guide Wire

- After placing a stab incision, provisionally fix the fracture segments using the guide wire corresponding to the screw diameter to be used (see table below).

Screw Ø	Guide Wire Ø	Guide Wire Article Number
2.0	0.9	35094-I00-H
2.7	1.2	35124-228
3.5	1.2	35124-228
4.0	1.6	35164-228
4.5	1.6	35164-228
6.5	3.2	35324-228
7.3	3.2	35324-228
8.5	3.2	35321-435



TIP: The 8.5mm Cannulated Screw can be inserted using the MIS Tissue Protection Sleeve in which a washer can be preloaded. For this technique, see P.XX.

For free-hand insertion over a Guide Wire (with or without washer) and for all other screw diameters, follow the steps listed next to it.

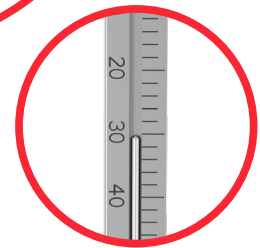
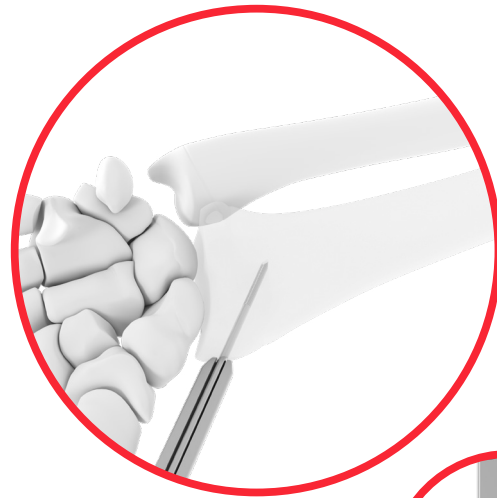
IMPORTANT: To avoid bending the guide wire, insert it carefully.

- Control the correct position of the guide wire under fluoroscopy.

○ Identification of Screw Length

- Place screw depth gauge over the guide wire and insert it through the soft tissue down to the bone.
- Read off the required length measurement at the end of the calibrated guide wire.

Screw Ø	Depth Gauge Ø	Depth Gauge Article Number
2.0	0.9	59029 & 59034
2.7	1.2	59162
3.5	1.2	59162
4.0	1.6	59162 (59163 Dens Axis)
4.5	1.6	59162
6.5	3.2	59321
7.3	3.2	59321
8.5	3.2	59328



○ OPTIONAL: Drilling

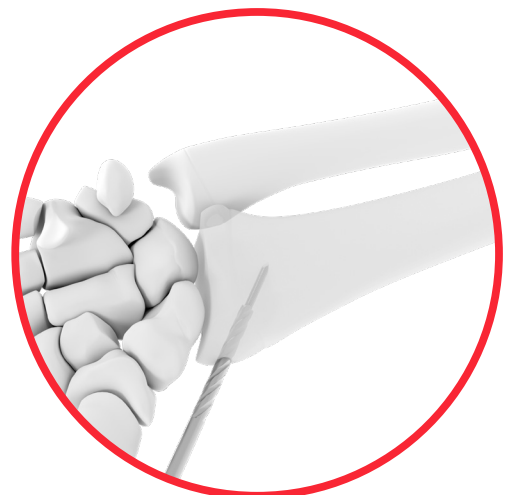
Predrilling is possible in strong cortical bone with a drill point equal to the core diameter of the screw.

For easier insertion of the cannulated screw, place the spiral drill, cannulated, AO Connector over the guide wire and perform drilling under fluoroscopy.

IMPORTANT: Do not drill further than the tip of the guide wire as this would impair the firm fixation of the guide wire. It is recommended to drill up to approx. 5mm before the end of the guide wire.

Screw Ø	Drill Ø	Drill Article Number
2.0	1.5	61152-100
2.7	2	61201-100
3.5	-	-
4.0	2.6	61262-220
4.5	-	-
6.5	5	61502-200
7.3	5	61502-200
8.5	6.2	61620-420

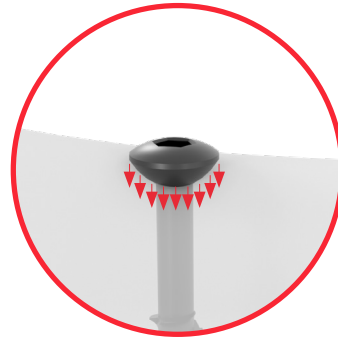
ALTERNATIVE: For the 2.7, 3.5, 4.0 & 4.5mm screws, you can use the soft tissue protection sleeve (62301) and for 6.5 & 7.3mm (62304) with corresponding drill guides.



○ OPTIONAL: Washer

- When needed, a washer can be inserted along with the screw (for screw diameters 4.0 - 8.5).

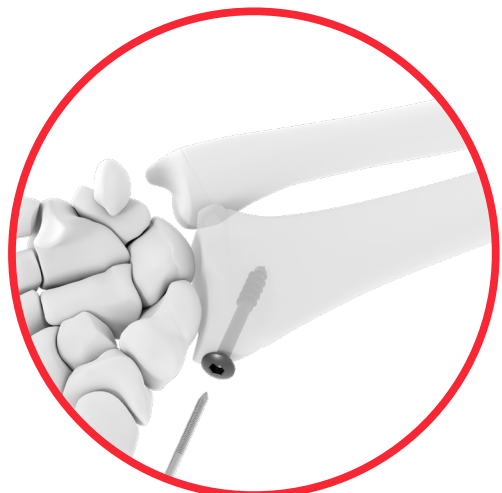
IMPORTANT: Through the additional bone contact surface, the screw load will be distributed across a larger are, thereby reducing countersinking of the screw head into osteoporotic bone.



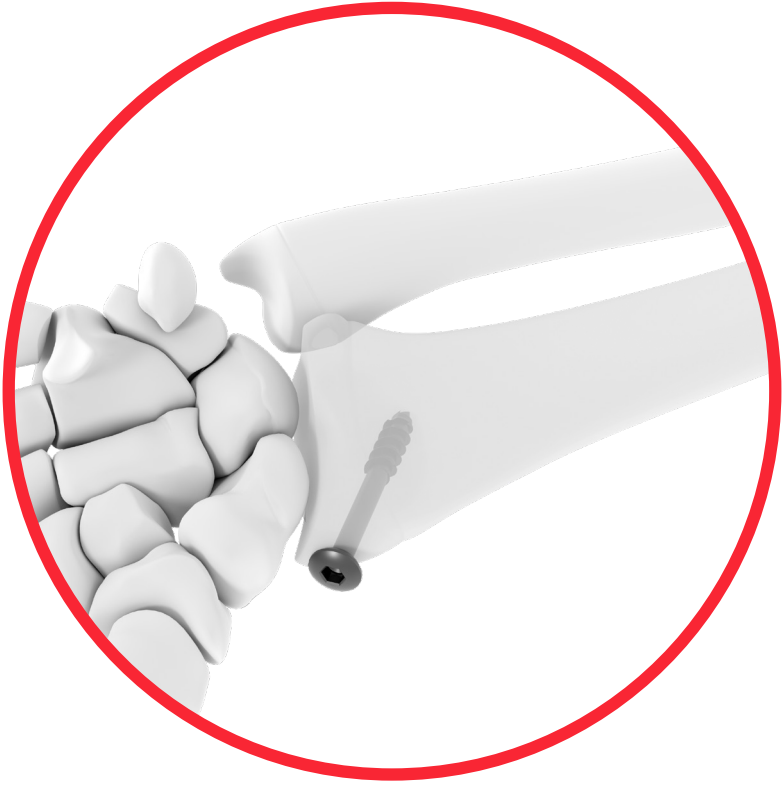
○ Placement of the Screw

- Place the selected cannulated Cortical Screw with a short or a partial thread over the guide wire and insert it using the corresponding screwdriver, cannulated or Hexagon-/Torque-Shank.

Screw Ø	Screwdriver Article Number	Hexagon-/Torque*-Shank Articel Number
2.0	-	54097-80* or 54098-80*
2.7	56253-120	54100-100
3.5	56253-120	54100-100
4.0	56253-170	54100-100
4.5	56253-120	54100-100
6.5	56502	54502-120
7.3	56502	54502-120
8.5	56502-220	54502-250



- Finally, remove the guide wire and confirm the correct position under fluoroscopy.



OPTIONAL: Washer &
Placement of the Screw

Application 8.5mm Cannulated Screws

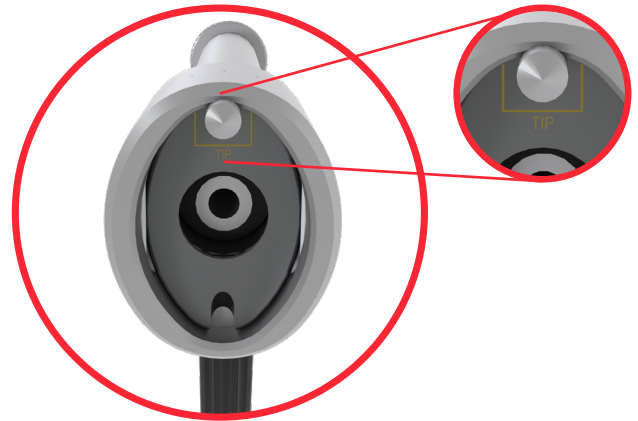


Washer
3685I

MIS Tissue Guide Assembly with Washer

1. First step is to load the MIS Tissue Guide with the washer. Press the washer into the front opening until a click is heard and the washer locks into place.

IMPORTANT: When inserting the washer correctly, the marked hole („TIP“) must be at the top.



Guide Wire Insertion

2. Insert the 3.2mm guide wire (3532I-435) through the K-wire sleeve within the MIS tissue protection sleeve (64018) via either an open approach or after placing a stab incision. Control its correct position under fluoroscopy.



Identification of Screw Length:

3. Remove the K-wire sleeve and place the screw depth gauge (59328) over the guide wire and insert it through the tissue protection sleeve down to the bone. Then read off the required length measurement at the end of the calibrated guide wire.

TIP: If desired, the depth gauge can be used as stand-alone without the MIS Tissue Protection Sleeve. Also in this case, the depth gauge should be pushed down to the bone.



Drilling (Optional):

4. Predrilling is possible if needed in strong cortical bone. When drilling, insert the drill (61620-420) through the tissue protection sleeve, and drill to desired depth. Control through fluoroscopy.

TIP: As an alternative when predrilling, the screw length can be read off the calibrated markings on the drill against the drill sleeve.

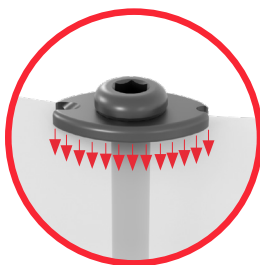


Placement of the Screw:

5. Place the D=8.5mm cannulated Cancellous Screw (partially threaded or fully threaded) over the guide wire and insert it using the cannulated screwdriver (54502-250 or 56502-220).

TIP: When using a preloaded washer, the washer becomes released onto the bone with deployment of the screw.

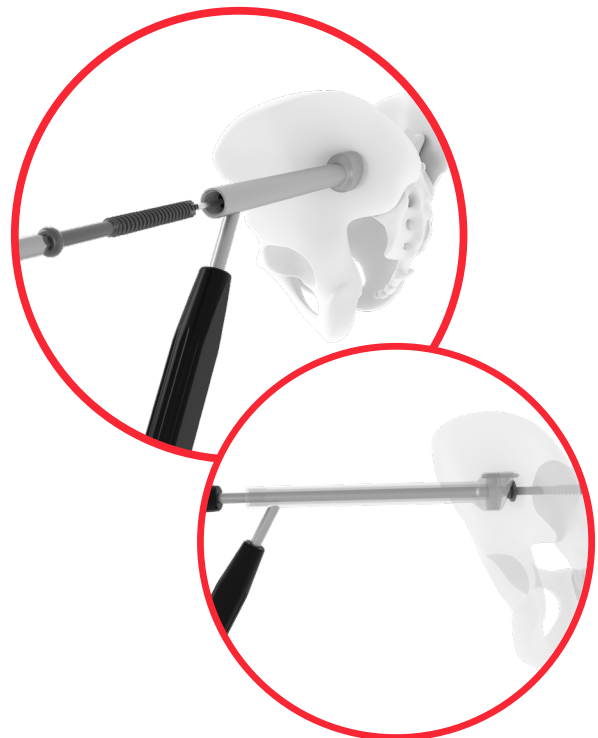
NOTE: Through the additional bone contact surface, the screw load will be distributed a larger area and reduce countersinking of the screw head into osteoporotic bone.



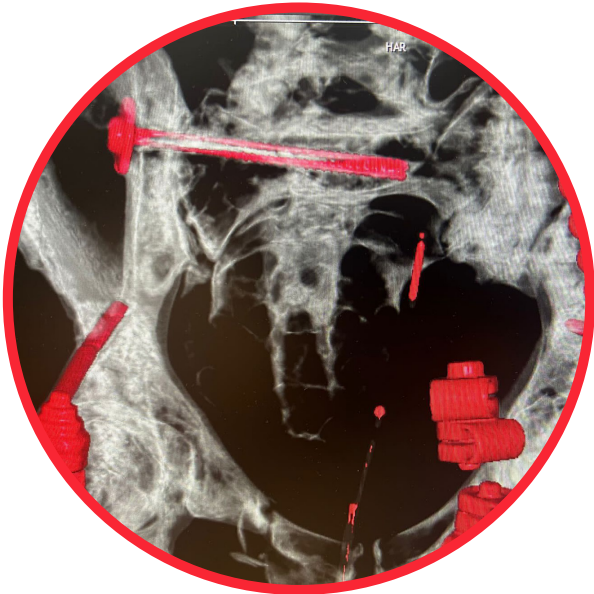
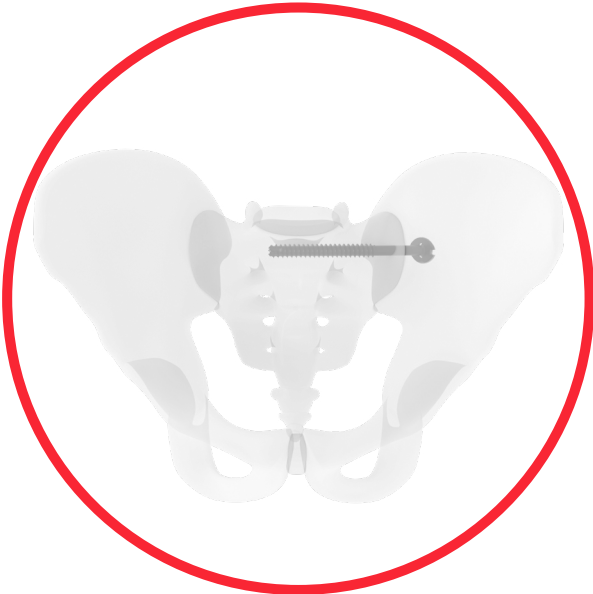
Fully threaded (31851-xx)



Partially threaded (31854-xx)



Finally remove the guide wire and MIS tissue protection sleeve. Then confirm the correct position under fluoroscopy.



KNO AG®

○ Postoperative Treatment

IMPORTANT: The postoperative treatment may vary depending on the patient's age, bone quality or type of fracture.

• General:	Partial weight bearing at week 4-6 Full weight bearing at week 6-10	
• Dens Axis:	Stiff Schanz' collar brace for 2 weeks Soft Schanz' collar brace for the following 6 weeks (depending on the fracture healing the Schanz' collar brace can be removed after 8 weeks)	
• Femoral neck:	Partial weight bearing (toe contact)	15kg at week 0-(6)-12 30kg at week 12-14
• Distal Femur:	Knee bandage in ligament fixation Partial weight bearing (toe contact)	15kg at week 0-6 30kg at week 6-10
• Patella:	Partial weight bearing (outstretched leg) Full weight bearing at week 6-8 (isometric quadriceps exercises)	30kg at week 0-6
• Proximal Tibia:	Knee bandage in ligament fixation Partial weight bearing (toe contact)	15kg at week 4-w8 30kg at week 6-10
• Malleolus:	Partial weight bearing (toe contact) Full weight bearing after week 6	15kg at week 0-4 30kg at week 4-6
• Calcaneus:	Removable plaster cast to avoid pes equinus position Partial weight bearing (toe contact) Full weight bearing after week 10-16	5kg at week 0-6 30kg at week 6-10

○ Explantation

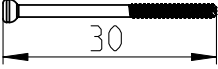
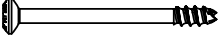
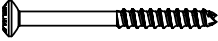
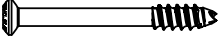
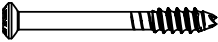
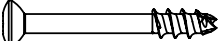
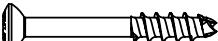

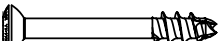
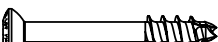
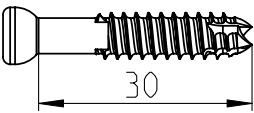
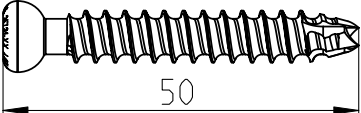
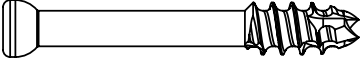

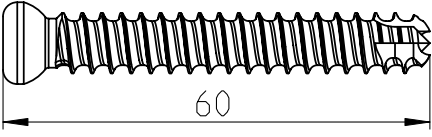
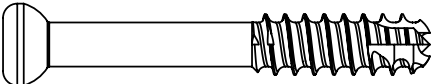
Removal is possible, if desired by the patient.

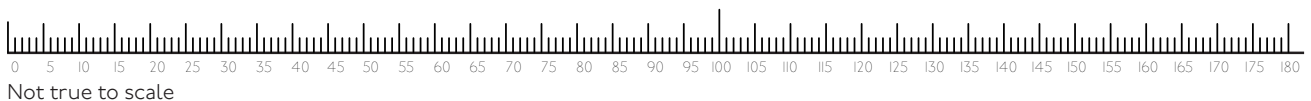
(Removal should be performed only after radiographic verification of the healed bone.)

Information

3.

○ Technical Information

	Name	Article Number	Available Lengths
	Cortical Screw 2.0 Cannulated Variable thread	31202-xx	8-30mm
	Cortical Screw 2.7 Cannulated Short thread	31272-xx	10-30mm
	Cortical Screw 2.7 Cannulated Variable thread	31277-xx	12-32mm
	Cortical Screw 3.5 Cannulated Short thread	31352-xx	14-70mm
	Cortical Screw 3.5 Cannulated Variable thread	31357-xx	14-70mm
	Cancellous Screw 4.0 Cannulated 9mm thread	31402-xx	16-70mm
	Cancellous Screw 4.0 Cannulated Variable thread	31404-xx	16-80mm
	Cancellous Screw 4.0 Cannulated Fully threaded	31407-xx	35-60mm
	Cancellous Screw 4.5 Cannulated Short thread	31452-xx	16-70mm
	Cancellous Screw 4.5 Cannulated Variable thread	31457-xx	16-70mm
	Cancellous Screw 6.5 Cannulated 22mm thread	31652-xx	25-120mm
	Cancellous Screw 7.3 Cannulated Fully thread	31731-xx	50-120mm
	Cancellous Screw 7.3 Cannulated 16mm thread	31732-xx	40-120mm
	Cancellous Screw 7.3 Cannulated Variable thread	31734-xx	35-120mm
	Cancellous Screw 8.5 Cannulated Fully threaded	31851-xx	60-200mm (Optional 205-200mm)
	Cancellous Screw 8.5 Cannulated Partially threaded	31854-xx	60-200mm (Optional 205-200mm)



For detailed cleaning and sterilization instructions, please refer to package insert.

○ Typ II Anodization

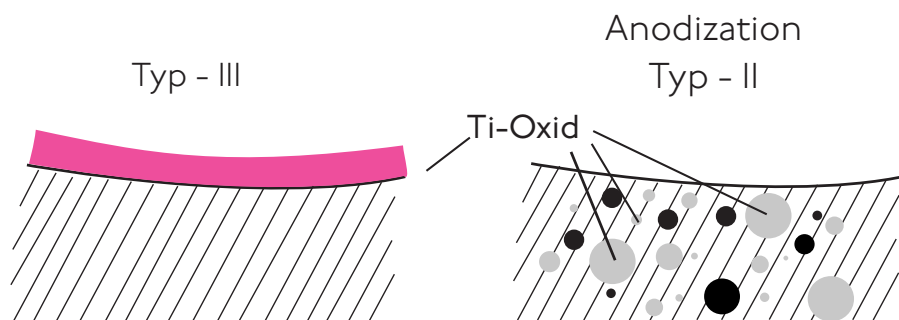
Chemical process - anodization in a strong alkaline solution*

Type III anodization

- Layer thickness 60-200nm
- + Different colors
- Implant surface remains sensitive to:
 - Chipping
 - Peeling
 - Discoloration

Type II anodization

- Layer thickness 2000-10 000nm
- + Film becomes an interstitial part of the titanium
- No visible cosmetic effect



Anodization Type II leads to the following benefits*

- Oxygen and silicon absorbing conversion layer
- Decrease in protein adsorption
- Closing of micro pores and micro cracks
- Reduced risk of inflammation and allergy
- Hardened titanium surface
- Reduced tendency of cold welding of titanium implants
- Increased fatigue resistance of implants
- Improved wear and friction characteristics

* White Paper: Ti6Al4V with Anodization Type II: Biological Behavior and Biomechanical Effects; Axel Baumann, Nils Zander

○ Ordering Information

(OPTIONAL) Cortical Screw 2.0 Cannulated



Length	Variable thread
8	31202-8
9	31202-9
10	31202-10
11	31202-11
12	31202-12
13	31202-13
14	31202-14
15	31202-15
16	31202-16
17	31202-17
18	31202-18
19	31202-19
20	31202-20
22	31202-22
24	31202-24
26	31202-26
28	31202-28
30	31202-30

All implants are available sterile-packed optionally. Add „-S“ to the article number for sterile-packed implants (e.g. 37304-12-S; 21031-3-S). Delivery times, prices & minimum quantity vary from standard.

Cortical Screw 2.7 Cannulated



Length	Short thread	Variable thread
12	31272-12	31277-12
14	31272-14	31277-14
16	31272-16	31277-16
18	31272-18	31277-18
20	31272-20	31277-20
22	31272-22	31277-22
24	31272-24	31277-24
26	31272-26	31277-26
28	31272-28	31277-28
30	31272-30	31277-30

All implants are available sterile-packed optionally. Add „-S“ to the article number for sterile-packed implants (e.g. 37304-12-S; 21031-3-S). Delivery times, prices & minimum quantity vary from standard.

Cortical Screw 3.5 Cannulated



Length	Short thread	Variable thread
14	31352-14	31357-14
16	31352-16	31357-16
18	31352-18	31357-18
20	31352-20	31357-20
22	31352-22	31357-22
24	31352-24	31357-24
26	31352-26	31357-26
28	31352-28	31357-28
30	31352-30	31357-30
32	31352-32	31357-32
34	31352-34	31357-34
36	31352-36	31357-36
38	31352-38	31357-38
40	31352-40	31357-40
42	31352-42	31357-42
44	31352-44	31357-44
46	31352-46	31357-46
48	31352-48	31357-48
50	31352-50	31357-50
55	31352-55	31357-55
60	31352-60	31357-60
65	31352-65	31357-65
70	31352-70	31357-70

All implants are available sterile-packed optionally. Add „-S“ to the article number for sterile-packed implants (e.g. 37304-I2-S; 21031-3-S). Delivery times, prices & minimum quantity vary from standard.

Cortical Screw 4.0 Cannulated



Length	9mm thread	Variable thread	Fully thread
16	31402-16	31404-16	-
18	31402-18	31404-18	-
20	31402-20	31404-20	-
22	31402-22	31404-22	-
24	31402-24	31404-24	-
26	31402-26	31404-26	-
28	31402-28	31404-28	-
30	31402-30	31404-30	-
32	31402-32	31404-32	-
34	31402-34	31404-34	-
35	-	-	31407-35
36	31402-36	31404-36	-
38	31402-38	31404-38	-
40	31402-40	31404-40	31407-40
42	31402-42	31404-42	-
44	31402-44	31404-44	-
45	-	-	31407-45
46	31402-46	31404-46	-
48	31402-48	31404-48	-
50	31402-50	31404-50	31407-50
55	31402-55	31404-55	31407-55
60	31402-60	31404-60	31407-60
65	31402-65	31404-65	-
70	31402-70	31404-70	-
75	-	31404-75	-
80	-	31404-80	-

All implants are available sterile-packed optionally. Add „-S“ to the article number for sterile-packed implants (e.g. 37304-I2-S; 21031-3-S). Delivery times, prices & minimum quantity vary from standard.

Cancellous Screw 4.5 Cannulated



Length	Short thread	Variable thread
16	31452-16	31457-16
18	31452-18	31457-18
20	31452-20	31457-20
22	31452-22	31457-22
24	31452-24	31457-24
26	31452-26	31457-26
28	31452-28	31457-28
30	31452-30	31457-30
32	31452-32	31457-32
34	31452-34	31457-34
36	31452-36	31457-36
38	31452-38	31457-38
40	31452-40	31457-40
42	31452-42	31457-42
44	31452-44	31457-44
46	31452-46	31457-46
48	31452-48	31457-48
50	31452-50	31457-50
55	31452-55	31457-55
60	31452-60	31457-60
65	31452-65	31457-65
70	31452-70	31457-70

All implants are available sterile-packed optionally. Add „-S“ to the article number for sterile-packed implants (e.g. 37304-I2-S; 2103I-3-S). Delivery times, prices & minimum quantity vary from standard.

Cancellous Screw 6.5 Cannulated



Length	22mm thread
25	31652-25
30	31652-30
35	31652-35
40	31652-40
45	31652-45
50	31652-50
55	31652-55
60	31652-60
65	31652-65
70	31652-70
75	31652-75
80	31652-80
85	31652-85
90	31652-90
95	31652-95
100	31652-100
105	31652-105
110	31652-110
115	31652-115
120	31652-120

All implants are available sterile-packed optionally. Add „-S“ to the article number for sterile-packed implants (e.g. 37304-12-S; 21031-3-S). Delivery times, prices & minimum quantity vary from standard.

Cancellous Screw 7.3 Cannulated



Length	Fully thread	16mm thread	Variable thread
35	-	-	31734-35
40	-	31732-40	31734-40
45	-	31732-45	31734-45
50	31731-50	31732-50	31734-50
55	31731-55	31732-55	31734-55
60	31731-60	31732-60	31734-60
65	31731-65	31732-65	31734-65
70	31731-70	31732-70	31734-70
75	31731-75	31732-75	31734-75
80	31731-80	31732-80	31734-80
85	31731-85	31732-85	31734-85
90	31731-90	31732-90	31734-90
95	31731-95	31732-95	31734-95
100	31731-100	31732-100	31734-100
105	31731-105	31732-105	31734-105
110	31731-110	31732-110	31734-110
115	31731-115	31732-115	31734-115
120	31731-120	31732-120	31734-120

All implants are available sterile-packed optionally. Add „-S“ to the article number for sterile-packed implants (e.g. 37304-I2-S; 21031-3-S). Delivery times, prices & minimum quantity vary from standard.

Cancellous Screw 8.5 Cannulated



Length	Fully thread	Variable thread
60	3185I-60	31854-60
65	3185I-65	31854-65
70	3185I-70	31854-70
75	3185I-75	31854-75
80	3185I-80	31854-80
85	3185I-85	31854-85
90	3185I-90	31854-90
95	3185I-95	31854-95
100	3185I-100	31854-100
105	3185I-105	31854-105
110	3185I-110	31854-110
115	3185I-115	31854-115
120	3185I-120	31854-120
125	3185I-125	31854-125
130	3185I-130	31854-130
135	3185I-135	31854-135
140	3185I-140	31854-140
145	3185I-145	31854-145
150	3185I-150	31854-150
155	3185I-155	31854-155
160	3185I-160	31854-160
165	3185I-165	31854-165
170	3185I-170	31854-170
175	3185I-175	31854-175
180	3185I-180	31854-180
185	3185I-185	31854-185
190	3185I-190	31854-190
195	3185I-195	31854-195
200	3185I-200	31854-200

All implants are available sterile-packed optionally. Add „-S“ to the article number for sterile-packed implants (e.g. 37304-I2-S; 2103I-3-S). Delivery times, prices & minimum quantity vary from standard.

(OPTIONAL)




Length	Full threaded	Variable thread
205	31851-205	31854-205
210	31851-210	31854-210
215	31851-215	31854-215
220	31851-220	31854-220
225	31851-225	31854-225
230	31851-230	31854-230
235	31851-235	31854-235
240	31851-240	31854-240
245	31851-245	31854-245
250	31851-250	31854-250

All implants are available sterile-packed optionally. Add „-S“ to the article number for sterile-packed implants (e.g. 37304-I2-S; 21031-3-S). Delivery times, prices & minimum quantity vary from standard.

Washer

	Description	Article Number
	Washer, Flat, OD=11.0mm, ID=4.5mm	36431
	Washer, Concave, OD=11mm, ID=4.5mm,PPS	36432
	Washer, Flat, OD=14.0mm, ID=7.0mm	36651
	Washer, Concave, OD=12.6mm, ID=7.0mm	36653
	Washer, Flat, OD=15.0mm, ID=7.5mm	36731
	Washer, Concave, OD=14.0mm, ID=7.5mm	36732
	Washer, OD=16/25mm, ID=9mm	36851

(OPTIONAL)

	Description	Article Number
	Washer, Flat, OD=7.0mm, ID=3.6mm	36351
	Washer, Flat, OD=7.0mm, ID=4.6mm	36352
	Washer, Flat, OD=12.0mm, ID=7.0mm	36652

All implants are available sterile-packed optionally. Add „-S“ to the article number for sterile-packed implants (e.g. 37304-12-S; 21031-3-S). Delivery times, prices & minimum quantity vary from standard.

Instruments

Guide Wire



35094-100



35124-228



35164-228



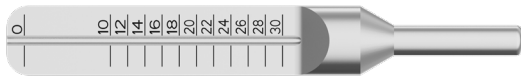
35324-228



35321-435

Description	Article Number
Guide Wire, Steel,D=0.9mm, L=100mm, TR, RD	35094-100
Guide Wire, Steel,D=1.2mm, L=228mm, TR, w. thread	35124-228
Guide Wire, Steel,D=1.6mm, L=228mm, TR, w. thread	35164-228
Guide Wire, Steel,D=3.2mm, L=228mm, TR, w. thread	35324-228
Guide Wire, Steel, D=3.2mm, L=435mm, TR, RD	35321-435

Depth Gauge - Guide Wire



59029



59034

Description	Article Number
Depth Gauge, for D=0.9mm Guide Wire	59029
Depth Gauge, for D=0.9mm Guide Wire, Long	59034

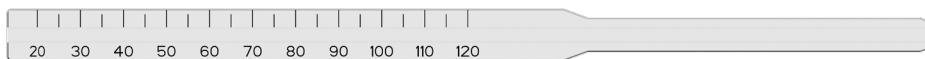
Depth Gauge



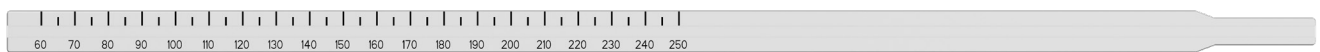
59162



59163



59321



59328

Description	Article Number
Depth Gauge 1.6mm Can. 4.0mm Screw, var. thread	59162
Depth Gauge 1.6mm Can. 4.0mm Screw, 9mm thread	59163
Depth Gauge 3.2mm Can. 6.5mm/7.3mm Screw	59321
Depth Gauge 3.2mm, Can. 8.5mm Screw	59328

Spiral Drill



61152-100



61201-100



61262-220



61502-200



61620-420

Description	Article Number
Spiral Drill, Cannulated, D=1.5mm/D=1.0mm	61152-100
Spiral Drill, Cannulated, D=2.0mm/1.3mm, L=100mm, AO Connector	61201-100
Spiral Drill, Cannulated, D=2.6mm, L=220mm, AO Connector	61262-220
Spiral Drill, Cannulated, D=5.0mm, L=200mm	61502-200
Spiral Drill, Cannulated, Large AO Connector, D=6.2mm, L=420mm	61620-420

Screwdriver



56253-120

 SW 2.5



56253-170

 SW 2.5



56502

 SW 5




56502-220

 SW 5

Description	Article Number
Screwdriver, Handle 25mm, SW 2.5, L=120mm, Can. 1.7mm	56253-120
Screwdriver, Handle 25mm, SW 2.5, L=170mm, Can. 1.7mm	56253-170
Screwdriver SW 5.0, Cannulated	56502
Screwdriver, Cannulated, SW 5.0, L=220mm	56502-220

Hexagon-/Torque Shank



54097-80  T7



54098-80  T7



54100-100  SW 2.5



54502-120  SW 5



54502-250  SW 5

Description	Article Number
Torque Shank, T7x80, AO Connector	54097-80
Torque Shank, T7x80, Cannulated, AO Connector	54098-80
Hexagon Shank, SW 2.5, L=100mm Cannulated, AO Connector	54100-100
Hexagon Shank, Cannulated, SW 5.0, L=120mm	54502-120
Hexagon Shank, Cannulated, Large AO Connector, SW 5.0, L=250mm	54502-250

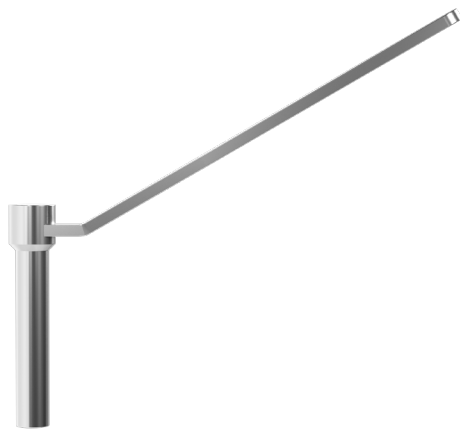
Drill Guide / Tissue Protection Sleeve



5704I



62300



6230I



62304-I



622I0



62304-2



62304-3

Description	Article Number
Trochar, w. Sleeve	5704I
Tissue Protection Sleeve, Can. 4.0mm Screw, 9mm Thread	62300
Tissue Protection Sleeve	6230I
Drill Guide, D=1.7mm	622I0
Parallel Drill Guide, 6.5/7.3/8.5mm Cann. Screws	62304-I
K-Wire Sleeve, Parallel Drill Guide, 6.5/7.3/8.5mm Cann. Screws	62304-2
Fixation Nut, K-Wire Sleeve, Parallel Drill Guide, 6.5/7.3/8.5mm Cann. Screws	62304-3



64018



64018-2

Description	Article Number
Tissue Protection Sleeve, Can. 4.0mm Screw, 9mm Thread	62300
Tissue Protection Sleeve, Cannulated Cancellous Screw D=8.5mm	64018
K-Wire Sleeve, D=3.3mm, Tissue Protection Sleeve, Cannulated Cancellous Screw D=8.5mm	64018-2



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