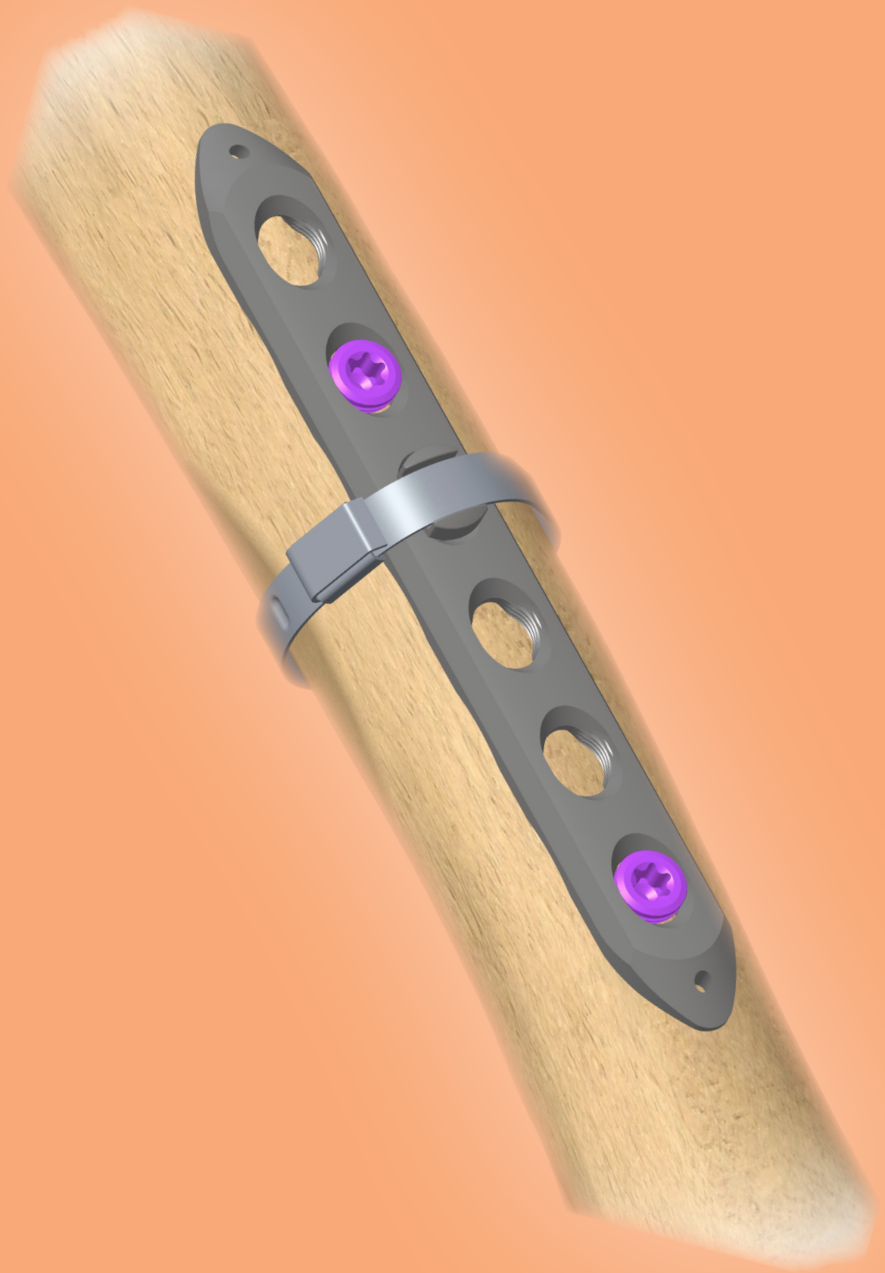
Sirtalis surgical description



Sanatmetal®
Manufacturer of Orthopaedic and Traumatologic Products

Content

The following surgical description contains general outlines for ruse of Sirtalis fixation system with Vortex attachment plates. The operating surgeon shall adapt the content to the patient, fracture type and all other relevant factors that may have influence on the outcome of the surgery.

Therefore, Sanatmetal Ltd. strongly recommends participation on workshops and trainings prior to the initial operation.

Implants of Sirtalis fixation system and Vortex attachment plates were generally developed for osteosynthesis procedures in primary and revision prosthetizing.

Sirtalis and attachment plates are both compatible with Large implants of VDP (Vortex DiaPhysis) plates.

1.1 | The implant

Sirtalis cerclage system can be combined with the following plates:

- VDP Large - Vortex Diaphysis plate, Large
- VPF - Vortex Proximal Femur plate
- VDF - Vortex Distal Femur plate
- VPT-L - Vortex Proximal Tibia plate

Attachment plate:
Polyaxial angle-stable system with continuous screw positioning capability in ±15° range for 4 pieces of 3.5 Vortex screws.

- Optimal, pre-defined screw directions in plates
- Three possible attempts to correct wrong screw positions
- Round contours to protect neighbouring soft tissues
- Easy-to-contour plates
- Self-cutting screws with blunt tip
- Anodized titanium material
- Screw head with Torx drive.

Sirtalis cerclage band:

- Easy-to-contour, soft titanium material
- Impressions were created on the band to minimize bone-plate interface (facilitate blood flow)
- Oval hole at the end of the band to facilitate hook connection

Threaded band support:

- Screw with a self-guiding design to securely hold the Sirtalis band when used together with the Vortex plate

Spiked band support:

- Designed to minimize band-bone connection, and to provide axial stability to the band

1.2 | The instruments

- Instrument set for Large Vortex plate system

Sirtalis instrument set:

- All instruments and implants in one tray
- Optimized set with a small number of instruments

Having the instrument set for the given technique is a must – besides Sirtalis instrumentation – to perform surgery.

1.3 | Indications

In case of procedures in primary:

- intraoperative stem breakage
- greater trochanter fracture
- osteoporosis

In case pf procedures revision:

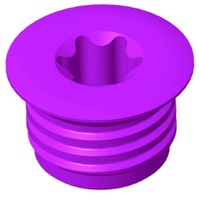
- increasing prosthesis stability if the bone is too weak
- osteoporosis
- fracture prevention

2.1 | Vortex attachment plate

Material
anodized titanium
Colour
purple
Size
Large 4H

2.2 | Vortex connection screw

Material
anodized titanium
Colour
purple
Size
Large



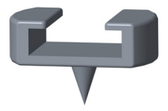
2.3 | Cerclage band

Material
titanium
Colour
gray
Size
6 mm

2.4 | Threaded band support

Material
anodized titanium
Colour
gray
Size
6 mm

2.5 | Spiked band support



Material
anodized titanium
Colour
gray
Size
6 mm

3 | Surgical description

3.1 | Patient positioning

Position the patient in the traditional way so that fluoroscopic imaging remains possible.

3.2 | Incision

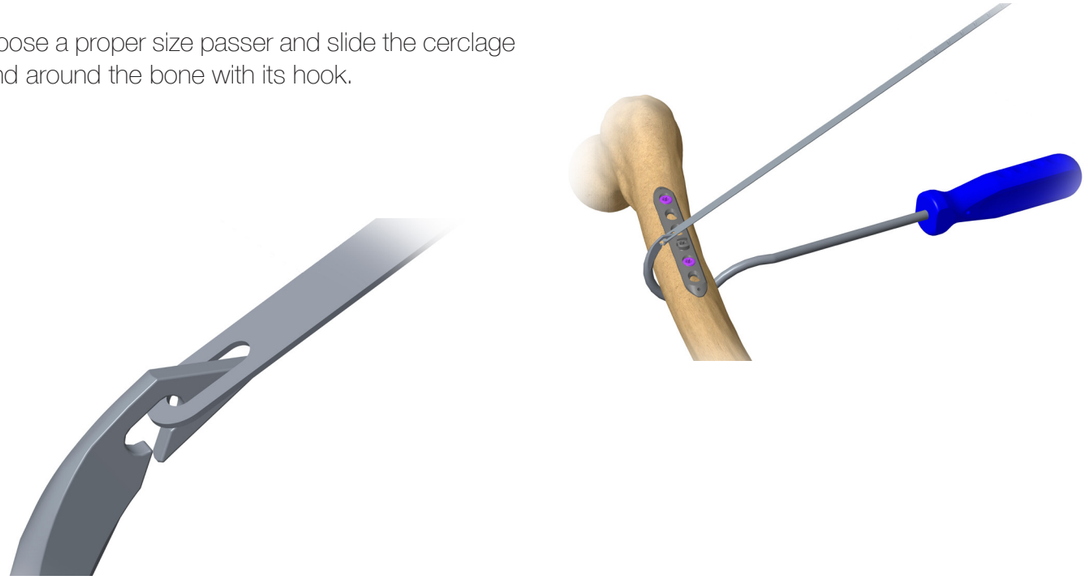
Perform skin incision and consider existing anatomic structures at the surgical site. Incision length and position are determined according to these factors by the operating surgeon.

3.3 | Fracture reduction

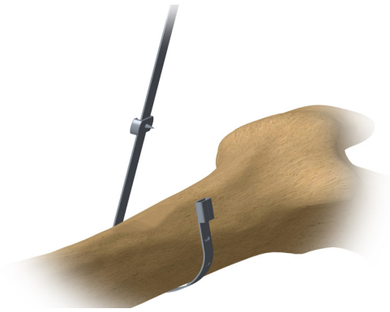
Perform fracture reposition as usual under fluoroscopic control. Stabilize the reduced fracture temporarily with Kirschner wires.

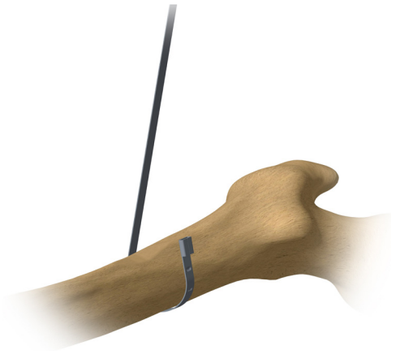
3.4 | Technique for using Sirtalis band without Vortex plate

Choose a proper size passer and slide the cerclage band around the bone with its hook.



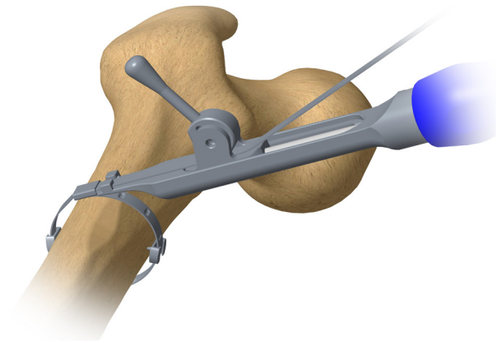
Attach the desired number of spiked band supports on the cerclage band, which rests around the bone.



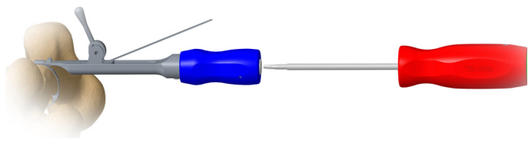


After defining spike positions, slip the end of the cerclage band through its dedicated hole located on the reverse side.
Afterwards, slide the end of the cerclage band with its oval hole into the tensioner.

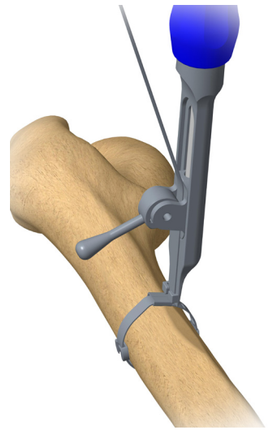
Keep the holder of the tensioner in its open position, then push the tensioner all the way to its stop when sliding the band in. After fully introducing the band, secure it with the holding arm.



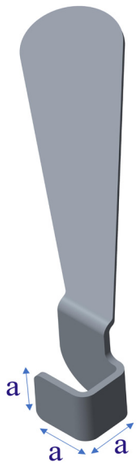
Afterwards, use the 1.5 Nm ratcheting torque screwdriver to achieve proper tension.



After pre-tightening the cerclage band, bend it at least by 90 degrees with the tightener. Then remove the tightener by releasing the holder arm.



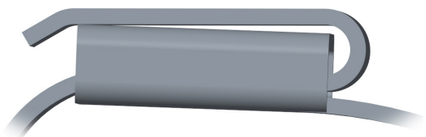
Use the cutting template to cut the Sirtalis band to the correct length.



Place the cutting template on the opposite side of the cerclage band onto its flat part according the figure.
The cutting template was designed with two identical sides so that it can be used in more positions.

Use the bender to bend the cut end of the cerclage band back onto the flat part.

Perform pre-bending with flat pliers before its final bending to avoid soft tissue irritation by the band-end.



3.5 | Technique for using Sirtalis band with Vortex Large plate *

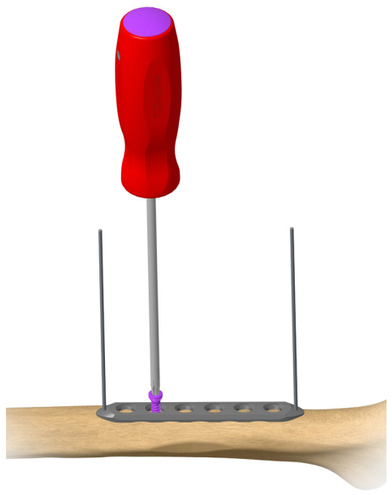
* Detailed surgical steps for using Large Vortex plate can be found in the surgical technique guide of Vortex Diaphysis

Slide the plate into its desired place and fix its position temporarily.

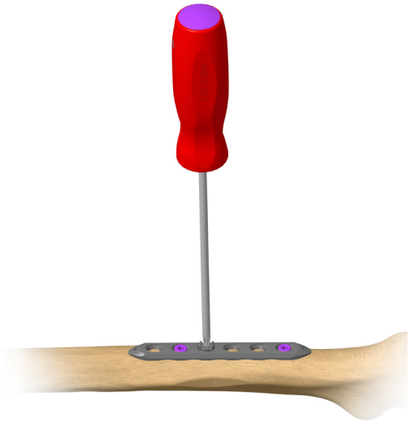
Conical and neutral ends of the 4 mm double drill sleeve both fit in the holes of the plate. Conical end provides ±15-degree angular freedom. Place the sleeve into the hole and perform drilling in the desired direction.
Use fluoroscopic control for drilling.

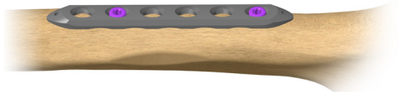
Perform depth gauging.

Insert the screw with the T25 screwdriver. Always use the torque screwdriver, which has red colour and purple ending, for final tightening of angle-stable screws!

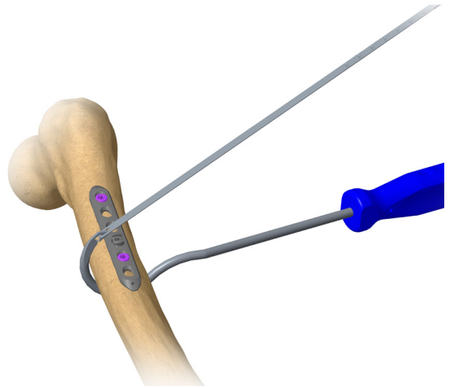


After inserting a proper number of 5.1 screws, insert the threaded band support into the corresponding hole of the desired cerclage band.
After fully introducing the threaded band support, loosen it slightly to adjust its position so that the cerclage band would be perpendicular to the plate.

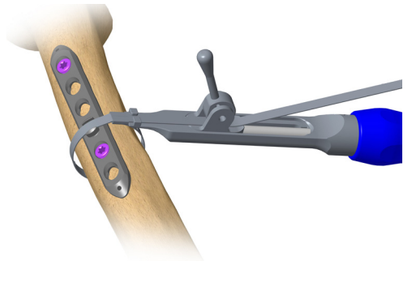




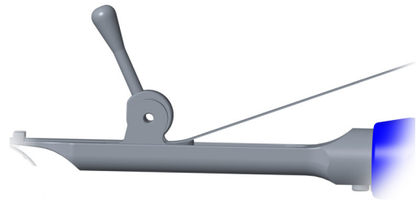
Choose a proper size passer and slide the cerclage band around the bone with its hook.



Impressions on Large plates and cerclage bands were designed to provide sufficient blood supply. Although, threaded band supports may also be used in this technique according to the previously presented technique, where no plates are used!

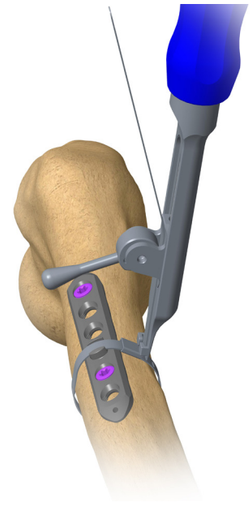


Slip the end of the cerclage band through its dedicated hole located on the reverse side. Afterwards, slide the end of the cerclage band with its oval hole into the tensioner.
Keep the holder of the tensioner in its open position, then push the tensioner all the way to its stop when sliding the band in. After fully introducing the band, secure it with the holding arm.



Afterwards, use the 1.5 Nm ratcheting torque screwdriver to achieve proper tension.

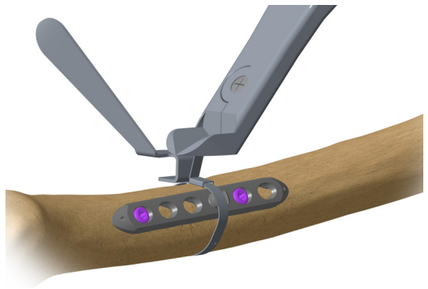
After pre-tightening the cerclage band, bend it at least by 90 degrees with the tightener. Then remove the tightener by releasing the holder arm.

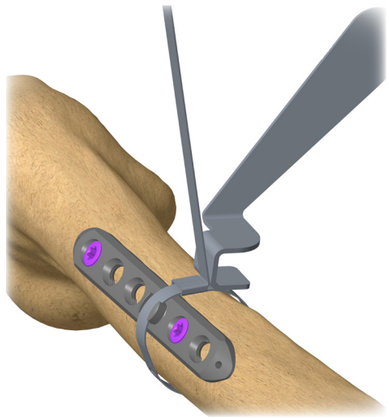


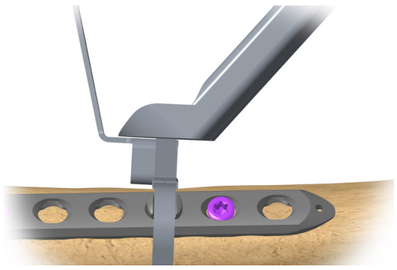
Use the cutting template to cut the Sirtalis band.

Place the cutting template on the opposite side of the cerclage band onto its flat part according the figure.

The cutting template was designed with two identical sides so that it can be used in more positions.

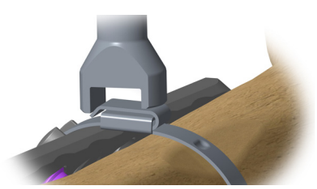


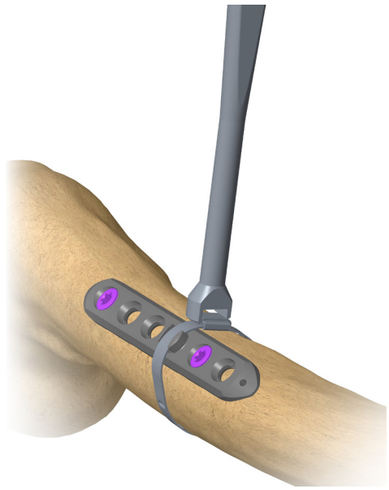


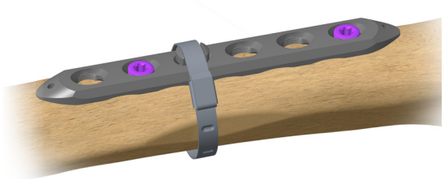


Use the bender to bend the cut end of the cerclage band back onto the flat part.

Perform pre-bending with flat pliers on the end of the cerclage band before its final bending to avoid soft tissue irritation by the band-end.



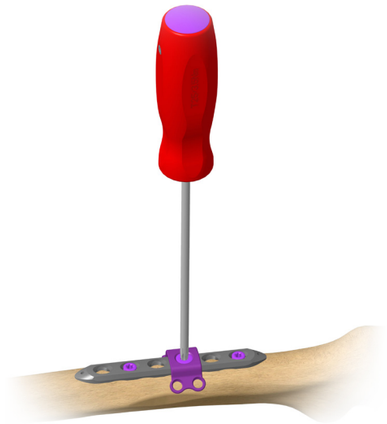




3.6 | Vortex attachment plate

Place a Large Vortex plate of the desired size as previously described in the **'Technique for using Sirtalis band with Vortex Large plate'** section.

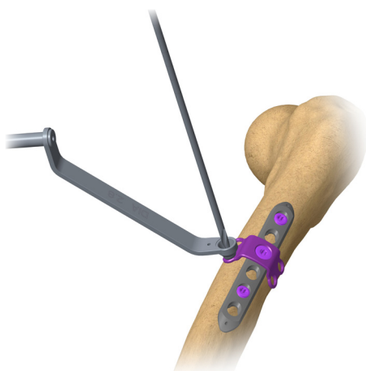
Secure the attachment plate with a Vortex connection screw on the base Vortex Large plate in the correct position.
Tighten the connection screw with the purple-ended torque screwdriver.



Holes on the attachment plate facilitate polyaxial insertion for 3.5 mm Vortex screws. Conical and neutral ends of the 2.8 mm double drill sleeve both fit in the holes of the plate. Conical end provides ±15-degree angular freedom.

Place the sleeve into the hole and perform drilling in the desired direction.

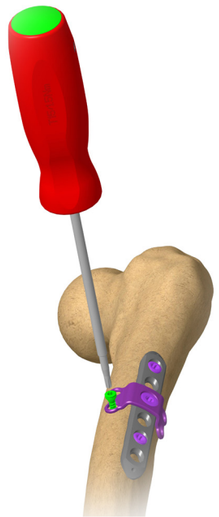
Use fluoroscopic control for drilling.

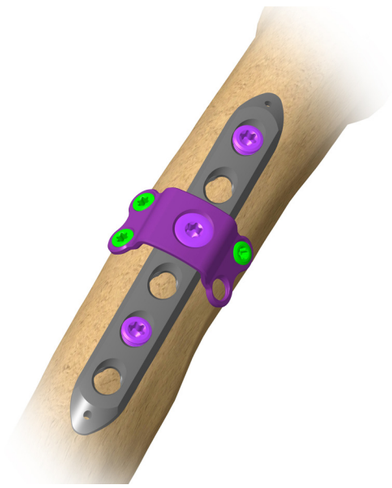


Perform depth gauging after drilling.

Insert the screw with the T15 screwdriver.

Always use the torque screwdriver, which has red colour and green ending, for final tightening of angle-stable screws!



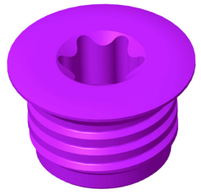


Implant list | 4

4.1 | Vortex attachment plate

Size	Anodized titanium
Large 4H	280122001

4.2 | Vortex connection screw



Size	Anodized titanium
Large	260800001

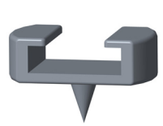
4.3 | Cerclage band

Size	Anodized titanium
6 mm	410014001

4.4 | Threaded band support

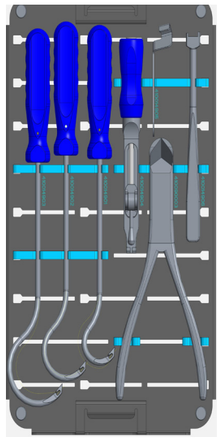
Size	Anodized titanium
6 mm	410014003

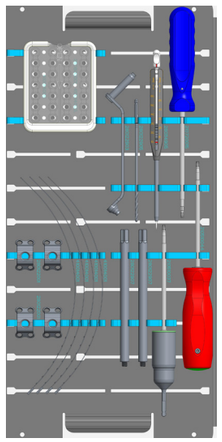
4.5 | Spiked band support



Size	Anodized titanium
6 mm	410014005

5.1 | Filled-up tray

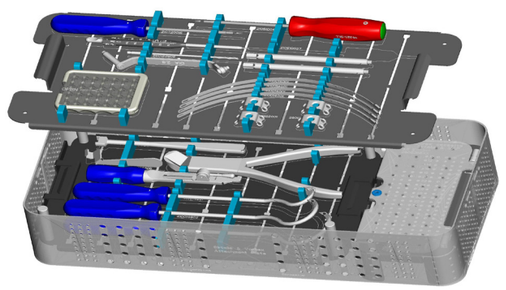




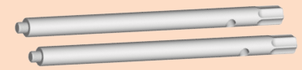
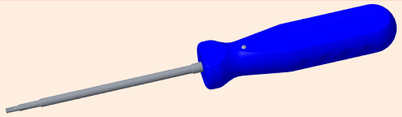
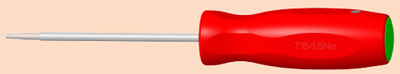
Surgical instruments

Description	Size	Quantity	Cat. no.
Plate bender	6 mm	2	280122907
Depth gauge	2.7-3.5 mm	1	280114905
Double drill sleeve – PAS	2.8 mm	1	280122903
Screwdriver	T15	1	210720015
Torque screwdriver	T15 / 1.5 Nm	1	210510044
Spiral drill with quick-connecting end	2,8x135 mm	1	280122905
Passer	35 mm	1	410014901
Passer	50 mm	1	410014902
Passer	65 mm	1	410014903
Tensioner		1	410014904
Cutting pliers		1	0929990278* 410090003 30-101.22
Bender		1	410014906
Cutting template		1	410014905
Tray – Sirtalis & VAP		1	410014801
Filled-up tray (Sirtalis & VAP)		**1**	**410014800**

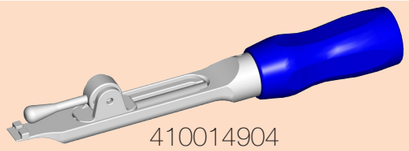
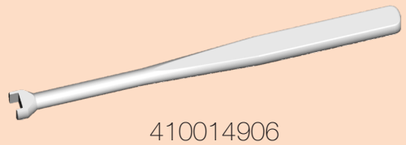
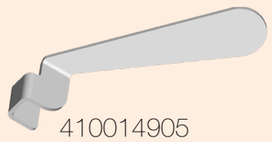
* By products of other manufacturers Sanatmetal Ltd. only have the role of a distributor.
Please contact the manufacturer with observations regarding the products (the manufacturer takes the responsibility).



5.2 | Intruments

Plate bender (6mm)	 280122907
Depth gauge	 280114905
Double drill sleeve - PAS (2.8mm)	 280122903
Screwdriver (T15)	 210720015
Torque screwdriver	 210510044
Spiral drill with quick-connecting end (2.8x135 mm)	 280122905
Passer	 410014901
Passer	 410014902
Passer	 410014903

5 | Instrument list

Tensioner	 410014904
Cutting plier	 0929990278
Bender	 410014906
Cutting template	 410014905
Tray - Sirtalis & VAP	410014801

Contact

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e-mail: metal@sanatmetal.hu
phone: +36 36 512 900
fax: +36 36 512 932