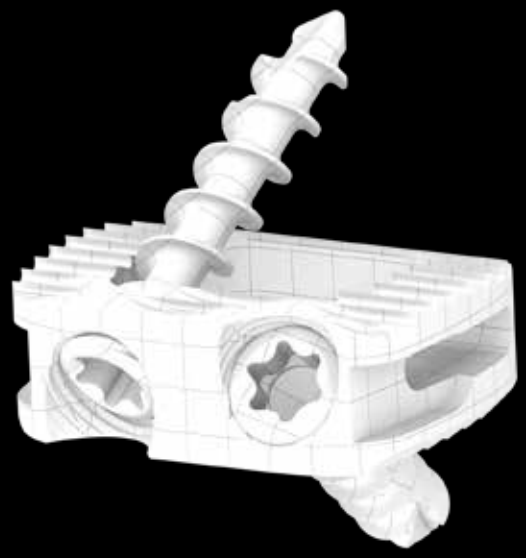
SCARLET® AC-T

BY SPINEART

SECURED CERVICAL CAGE



CONTENT

CONCEPT AND DESIGN

For over 9 years, Spineart has acquired expertise in Cervical Spine thanks to the success of its cervical disc BAGUERA®$_{C}$ * and its TRYPTIK® cervical range known worldwide. To sustain this expertise, Spineart's Marketing and Research & Development teams have worked hand in hand to develop a unique secured cervical cage, the SCARLET®$_{AC-T}$.

Inspired by « Gone with the Wind » from Margaret Mitchell, Scarlet is a person with a strong character, proud of her atypical beauty.
Our cage has been developed following that philosophy, a perfect design that makes the SCARLET®$_{AC-T}$ system a cutting-edge technology.

This device respects Spineart's philosophy which combines effectiveness, simplicity of use, security and quality.

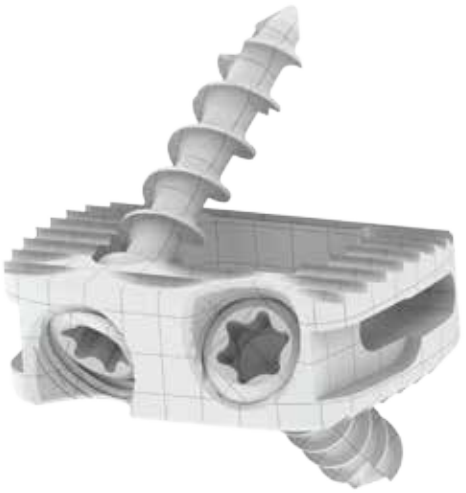
AT A GLANCE

SECURED CAGE

ZERO PROFILE

SIMPLICITY OF USE

TITANIUM



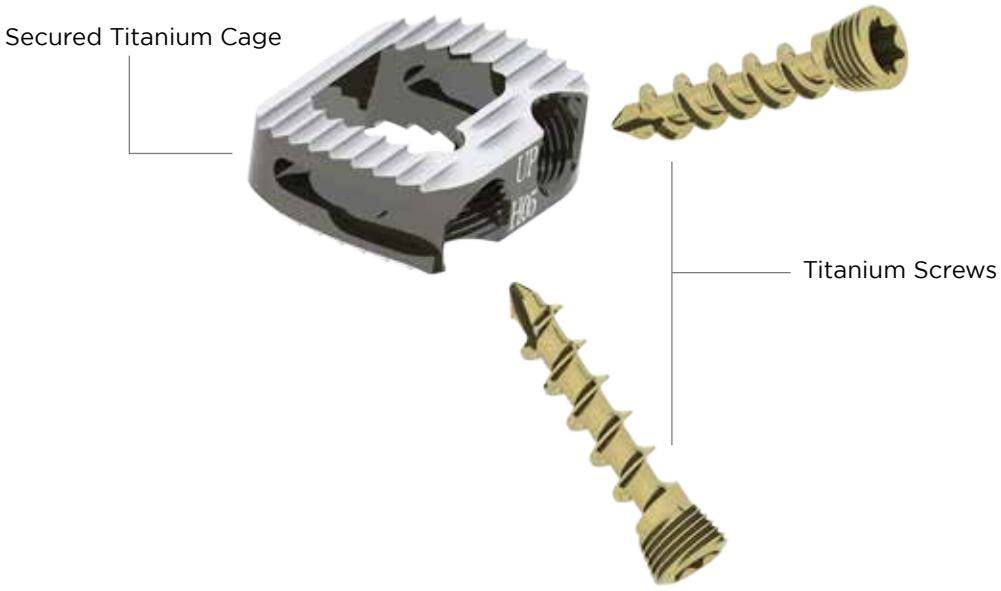
INDICATIONS

The SCARLET® range is indicated in following pathologies between C3 to C7:

- Cervical hernia
- Cervicarthrosis
- Degenerative disc disease
- Traumatology

* Not FDA approved.

IMPLANTS



REFERENCES	
ANATOMICAL CAGE	**SMALL FOOTPRINT**
Heights	12x15mm
5mm	SCA-AC TS 05-S
6mm	SCA-AC TS 06-S
7mm	SCA-AC TS 07-S
8mm	SCA-AC TS 08-S
9mm	SCA-AC TS 09-S
10mm	SCA-AC TS 10-S

REFERENCES	
ANATOMICAL CAGE	**LARGE FOOTPRINT**
Heights	14x17mm
5mm	SCA-AC TL 05-S
6mm	SCA-AC TL 06-S
7mm	SCA-AC TL 07-S
8mm	SCA-AC TL 08-S
9mm	SCA-AC TL 09-S
10mm	SCA-AC TL 10-S

REFERENCES	
LORDOTIC CAGE	**SMALL FOOTPRINT**
Heights	12x15mm
5mm	SCA-AC LS 05-S
6mm	SCA-AC LS 06-S
7mm	SCA-AC LS 07-S
8mm	SCA-AC LS 08-S
9mm	SCA-AC LS 09-S
10mm	SCA-AC LS 10-S

REFERENCES	
LORDOTIC CAGE	**LARGE FOOTPRINT**
Heights	14x17mm
5mm	SCA-AC LL 05-S
6mm	SCA-AC LL 06-S
7mm	SCA-AC LL 07-S
8mm	SCA-AC LL 08-S
9mm	SCA-AC LL 09-S
10mm	SCA-AC LL 10-S

IMPLANTS

Ø 3mm Ø 3,5mm

L12 L14 L16 L18

REFERENCES	
SCREWS	**Ø 3mm**
Lengths	
12mm	SCA-CS 30 12-S
14mm	SCA-CS 30 14-S
16mm	SCA-CS 30 16-S
18mm	SCA-CS 30 18-S

REFERENCES	
REVISION SCREWS	**Ø 3,5mm**
Lengths	
12mm	SCA-CS 35 12-S
14mm	SCA-CS 35 14-S
16mm	SCA-CS 35 16-S
18mm	SCA-CS 35 18-S

REFERENCES	
BONE SUBSTITUTE*	**SMALL FOOTPRINT**
Heights	
5mm	SCS-SC TS 05-S
6mm	SCS-SC TS 06-S
7mm	SCS-SC TS 07-S
8mm	SCS-SC TS 08-S
9mm	SCS-SC TS 09-S
10mm	SCS-SC TS 10-S

REFERENCES	
BONE SUBSTITUTE*	**LARGE FOOTPRINT**
Heights	
5mm	SCS-SC TL 05-S
6mm	SCS-SC TL 06-S
7mm	SCS-SC TL 07-S
8mm	SCS-SC TL 08-S
9mm	SCS-SC TL 09-S
10mm	SCS-SC TL 10-S

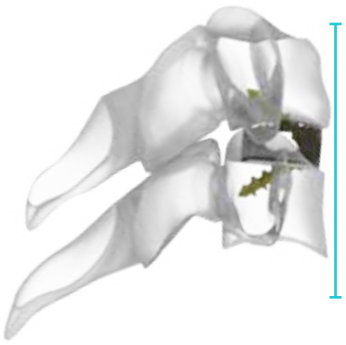
TECHNICAL FEATURES

SECURED CAGE

- The screws allow stabilization of the device.
- The screw head is micro-threaded and has a conical shape. This feature secures the screw reducing potential risk of expulsion once locked into the cage.

ZERO PROFILE IMPLANT

- The screw heads are completely integrated in the cage reducing potential risks associated to dysphagia.



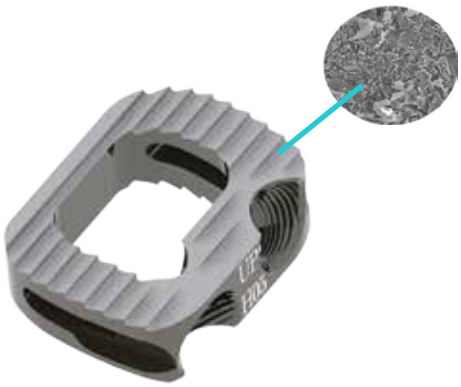
SIMPLICITY OF USE

- The SCARLET® $_{AC-T}$ system combines in one implant interbody device and cervical plate. The profile of the implant allows for an anatomical fit between endplates.
- The SCARLET® $_{AC-T}$ system offers a lordotic option of 7°.

TECHNICAL FEATURES

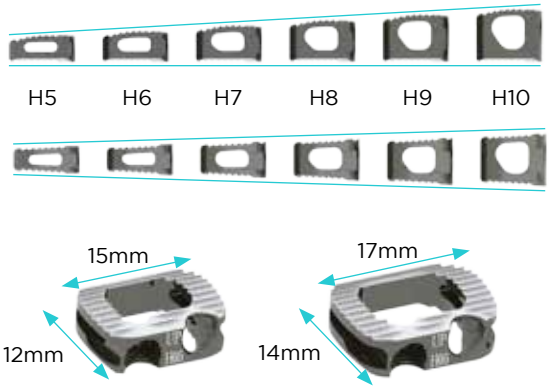
TITANIUM

- The device features a large graft window. The Titanium sandblasted surfaces of the implant facilitate primary stability and osseointegration.



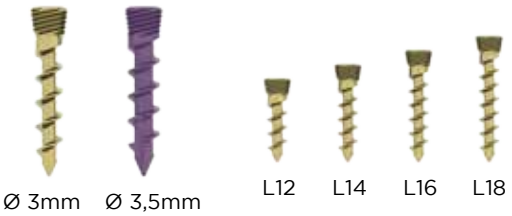
24 SIZES OF CAGE

- For an optimal fit, the SCARLET® $_{AC-T}$ is proposed in 6 heights, 2 footprints, and 2 profiles.

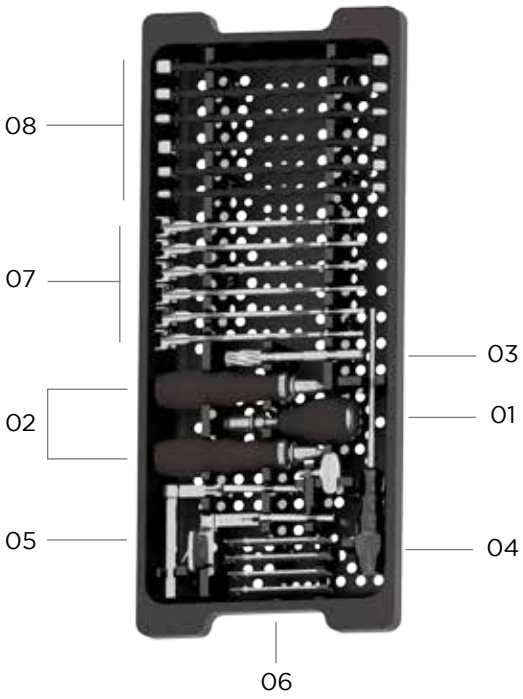


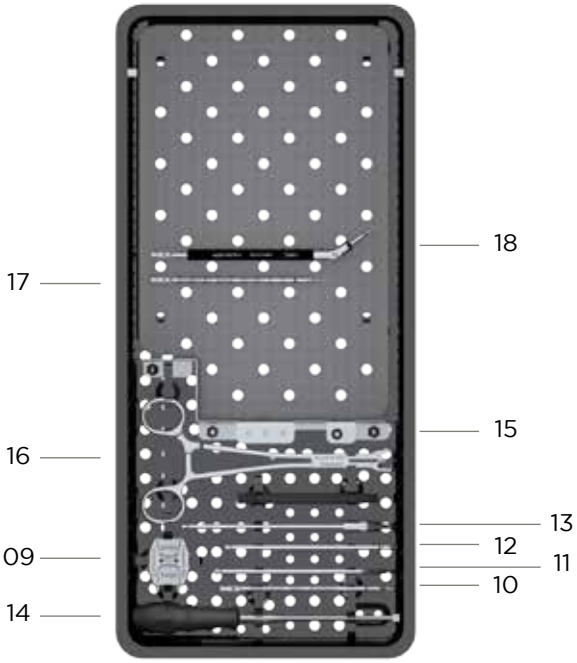
4 LENGTHS & 2 DIAMETERS

- The screws are available in 4 lengths from 12mm to 18mm and two diameters for an optimal fit.
- The revision screws are available in 4 lengths.



INSTRUMENT SET





#	DESCRIPTION	REFERENCE
01	AO CONNECTION DYNAMOMETRIC HANDLE 1,3 NM	HAN-SI DY 13-N
02	AO HANDLE	HAN-SI AO 08-N
03	IMPLANT HOLDER TUBE	SCA-IC 03 00-N
04	SCREWDRIVER FOR PINS	SCA-IC 07 00-N
05	ARTICULATED CERVICAL DISTRACTOR	CDP-IN 50 00-N
06	PINS	CDP-IN 30 12-N CDP-IN 30 14-N CDP-IN 30 16-N CDP-IN 30 18-N
07	IMPLANT HOLDERS	SCA-IC 03 05-N SCA-IC 03 06-N SCA-IC 03 07-N SCA-IC 03 08-N SCA-IC 03 09-N SCA-IC 03 10-N
08	RASP TRIALS	SCA-IC 2S 05-N SCA-IC 2S 07-N SCA-IC 2S 09-N SCA-IC 2L 05-N SCA-IC 2L 07-N SCA-IC 2L 09-N

#	DESCRIPTION	REFERENCE
09	COMPACTION BASE	SCA-IC 04 00-N
10	STRAIGHT SQUARE AWL	SCA-IC 05 00-N
11	ANGLED SQUARE AWL	SCA-IC 05 01-N
12	STRAIGHT SCREWDRIVER	SCA-IC 06 00-N
13	ANGLED SCREWDRIVER	SCA-IC 06 01-N
14	COMPACTOR	TRY-IN 01 00-N
15	NUT FOR PINS	CDP-IN 30 02-N
16	EXTRACTOR	SCA-IC 08 00-N
17	STRAIGHT DRILL	SCA-IC 09 00-N
18	ANGLED DRILL	SCA-IC 10 00-N
	INSTRUMENT CONTAINER	SCA-BX 10 01-N
	OPTION	
	SMOOTH TRIALS	SCA-IC 1S 05-N SCA-IC 1S 07-N SCA-IC 1S 09-N SCA-IC 1L 05-N SCA-IC 1L 07-N SCA-IC 1L 09-N
	LORDOTIC SMOOTH TRIALS	SCA-IC 3S 05-N SCA-IC 3S 07-N SCA-IC 3S 09-N SCA-IC 3L 05-N SCA-IC 3L 07-N SCA-IC 3L 09-N
	PINS	CDP-IN 40 12-N CDP-IN 40 14-N CDP-IN 40 16-N CDP-IN 40 18-N

INSTRUMENTS

AO CONNECTION DYNAMOMETRIC HANDLE 1,3 NM	HAN-SI DY 13-N

AO HANDLE	HAN-SI AO 08-N

IMPLANT HOLDER TUBE	SCA-IC 03 00-N

ARTICULATED CERVICAL DISTRACTOR	CDP-IN 50 00-N

SCREWDRIVER FOR PINS	SCA-IC 07 00-N

PINS Ø3.6 L12	CDP-IN 30 12-N
PINS Ø3.6 L14	CDP-IN 30 14-N
PINS Ø3.6 L16	CDP-IN 30 16-N
PINS Ø3.6 L18	CDP-IN 30 18-N

PINS Ø4.2 L12	CDP-IN 40 12-N
PINS Ø4.2 L14	CDP-IN 40 14-N
PINS Ø4.2 L16	CDP-IN 40 16-N
PINS Ø4.2 L18	CDP-IN 40 18-N

INSTRUMENTS

COMPACTION BASE	SCA-IC 04 00-N

ANGLED SQUARE AWL	SCA-IC 05 01-N

ANGLED SCREWDRIVER	SCA-IC 06 01-N

IMPLANT HOLDERS	SCA-IC 03 XX-N

STRAIGHT DRILL	SCA-IC 09 00-N

ANGLED DRILL	SCA-IC 10 00-N

EXTRACTOR	SCA-IC 08 00-N

NUT FOR PINS	CDP-IN 30 02-N

STRAIGHT SQUARE AWL	SCA-IC 05 00-N

STRAIGHT SCREWDRIVER	SCA-IC 06 00-N

COMPACTOR	TRY-IN 01 00-N

RASP TRIALS	SCA-IC 2X XX-N

LORDOTIC SMOOTH TRIALS	SCA-IC 3S XX-N SCA-IC 3L XX-N

SMOOTH TRIALS	SCA-IC 1S XX-N SCA-IC 1L XX-N

SURGICAL TECHNIQUE

STEP **1**

PATIENT POSITIONING

Place the patient in a supine position on the operating table.

A pillow can be positioned under the neck of the patient to preserve the lordosis.

STEP **2**

DISTRACTION

Place the pins parallel to the endplates.
Once the pins are correctly placed, position the Articulated Cervical Distractor on the pins.
Attach the nuts to the screwdriver for pins and secure Cervical Distractor on the pins.

INSTRUMENT	REFERENCE
PINS	CDP-IN 30 12-N to CDP-IN 30 18-N
CERVICAL DISTRACTOR	CDP-IN 50 00-N
NUT FOR PINS	CDP-IN 30 02-N
SCREWDRIVER FOR PINS	SCA-IC 07 00-N

STEP **3**

PREPARATION OF THE ENDPLATES

The Rasp Trials can be used to further prepare the endplates.
A mallet can be used to gently advance the rasp trial.
Note that the «depth stopper» on the rasp can be used for midline positioning.

INSTRUMENT	REFERENCE
RASP TRIALS	SCA-IC 2S 05-N to SCA-IC 2S 09-N
RASP TRIALS	SCA-IC 2L 05-N to SCA-IC 2L 09-N

SURGICAL TECHNIQUE

STEP **3 bis**

SELECTION OF THE IMPLANT SIZE

Use the rasp trial to determine the height and footprint (depth and width) of the implant.
The selection of the implant size depends on the intervertebral space, patient anatomy and preparation technique.

The rasp trial must be placed in a correct cranio / caudal position centered as shown in the picture.
A mallet can be used to gently insert the trial, note that the «depth stopper» on the rasp can be used for midline positioning.

Perform an AP and Lateral control, release the distractor to verify the stability of the rasp trial implant.

INSTRUMENT	REFERENCE
RASP TRIALS	SCA-IC 2S 05-N to SCA-IC 2S 09-N
RASP TRIALS	SCA-IC 2L 05-N to SCA-IC 2L 09-N

STEP **4**

ASSEMBLY OF THE IMPLANT HOLDER

Select the implant holder shaft according to the height previously selected. Assemble the implant holder tube on the implant holder shaft and turn the tube until it passes the first set of threads.

Attach the AO handle to the implant holder shaft.
To facilitate the assembly of the two elements ensure that the two arrows are correctly aligned.
Pull and twist the handle to ensure it is fixed properly.

Align the UP markings on the inserter with the top of the implant and attach the implant into the inserter. Turn the tube down towards the implant to lock it in place. Do not over tighten.

INSTRUMENT	REFERENCE
IMPLANT HOLDER	SCA-IC 03 05-N to SCA-IC 03 10-N
IMPLANT HOLDER TUBE	SCA-IC 03 00-N
AO CONNECTION HANDLE	HAN-SI AO 08-N

SURGICAL TECHNIQUE

STEP **5**

CAGE PREPARATION

Place the cage on the compaction base and fill it with bone graft by using the compactor.

Please note that the compaction base can also be used as a base for screws, to facilitate the connection between screws and self retaining screwdriver.

INSTRUMENT	REFERENCE
COMPACTION BASE	SCA-IC 04 00-N
COMPACTOR	TRY-IN 01 00-N

STEP **6**

INSERTION

Insert the implant in the intervertebral space. The implant inserter is equipped with a depth stop.
Impact gently with a hammer if needed.

Remove the Articulated Cervical Distractor and Pins.

OPTION: Place a small amount of bone wax in the holes created by the Distractor Pins.

INSTRUMENT	REFERENCE
IMPLANT HOLDER	SCA-IC 03 05-N to SCA-IC 03 10-N

SURGICAL TECHNIQUE

STEP **7**

PREPARATION OF THE FIRST SCREW SITE

Prepare the insertion hole for the cervical screw in the superior vertebra by inserting the straight or angled square awl into the guide hole of the implant holder.

Both square awls measure 14mm length. This helps estimate the final screw length with a lateral image control.

INSTRUMENT	REFERENCE
STRAIGHT SQUARE AWL	SCA-IC 05 00-N
ANGLED SQUARE AWL	SCA-IC 05 01-N
IMPLANT HOLDER	SCA-IC 03 05-N to SCA-IC 03 10-N

STEP **8**

FIRST SCREW INSERTION

Assemble the selected screwdriver.
While keeping in place the implant holder, insert the superior screw using the straight or angled screwdriver.

Use AP and Lateral images to verify the implant position.
It is necessary to create pilot holes prior to insert the SCARLET®$_{AC-T}$ locking screws.

INSTRUMENT	REFERENCE
IMPLANT HOLDER	SCA-IC 03 05-N to SCA-IC 03 10-N
STRAIGHT SCREWDRIVER	SCA-IC 06 00-N
ANGLED SCREWDRIVER	SCA-IC 06 00-N
AO CONNECTION DYNAMOMETRIC HANDLE 1,3 NM	HAN-SI DY 13-N

SURGICAL TECHNIQUE

STEP **9**

PREPARATION OF THE SECOND SCREW SITE

Prepare the insertion hole of the screws in the inferior vertebra by inserting the bone awl in the guide holes on the implant holder.

INSTRUMENT	REFERENCE
STRAIGHT SQUARE AWL	SCA-IC 05 00-N
ANGLED SQUARE AWL	SCA-IC 05 01-N

STEP **10**

SECOND SCREW INSERTION

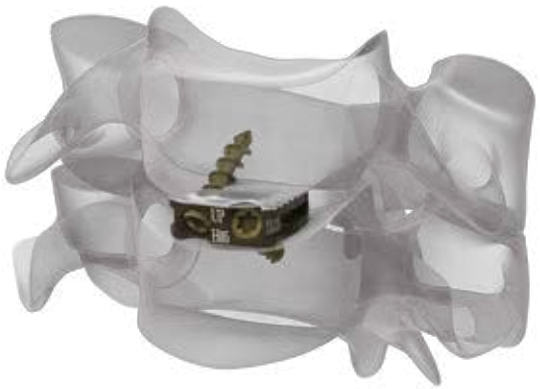
Insert the inferior screw using the straight or angled screwdriver.

Verify implant placement with AP and lateral image.

INSTRUMENT	REFERENCE
AO CONNECTION DYNAMOMETRIC HANDLE 1,3 NM	HAN-SI DY 13-N
STRAIGHT SCREWDRIVER	SCA-IC 06 00-N
ANGLED SCREWDRIVER	SCA-IC 06 01-N
IMPLANT HOLDER	SCA-IC 03 05-N to SCA-IC 03 10-N

SURGICAL TECHNIQUE

FINAL CONSTRUCT



REVISION

In case of revision, remove both screws using the straight or angled screwdriver.

Use the implant remover forceps to remove the implant.

Gently pull the implant out of the vertebral space.

INSTRUMENT	REFERENCE
STRAIGHT SCREWDRIVER	SCA-IC 06 00-N
ANGLED SCREWDRIVER	SCA-IC 06 01-N
EXTRACTOR	SCA-IC 08 00-N

NOTE

spineart.com

SPINEART SA
20 route de Pré-Bois
1215 Geneva 15
Switzerland

SPINEART USA
227 East 58th St. 2nd Floor
New York, NY 10022
United States of America

9200 Irvine Center Drive, Suite 150
Irvine, CA 92618
United States of America

SWISS MADE

CE 1250
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