



Erisma[®] - **LP EVO**

HOOKS



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Erisma[®] -LP EVO

HOOKS



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Surgical Technique

Prior to using any Clariance device, please review the instructions for use and surgical technique for a complete listing of indications, contraindications, warnings, precautions, potential adverse events, and directions for use.



1 | INTRODUCTION

This surgical technique guide presents the Erisma-LP Evolution range of **Hooks** and associated instruments, serving as a complement to the Erisma-LP Evolution set.

Examples of **Hook** constructs for treatment of fractures:



Thoracic Spine



Lumbar Spine



Thoraco-Lumbar Junction

Note: the instruments item numbers and images featured in this surgical technique may have alternative options. Instruments and implants availability may vary upon markets. Please contact your local Sales Representative for more information.

2 | HOOKS IDENTIFICATION

Hooks are color coded according to size and are available in either small, medium and/or large.



HOOK TYPE

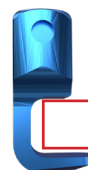
Pedicle Hooks

Pedicle Hooks can be recognized by the notch on the blade.



Infra Laminar Hooks

Infra Laminar Hooks have a square-shaped blade.



Transverse Hooks

The blade on the Transverse Hooks is situated in front of the tulip.



Supra Laminar Hooks

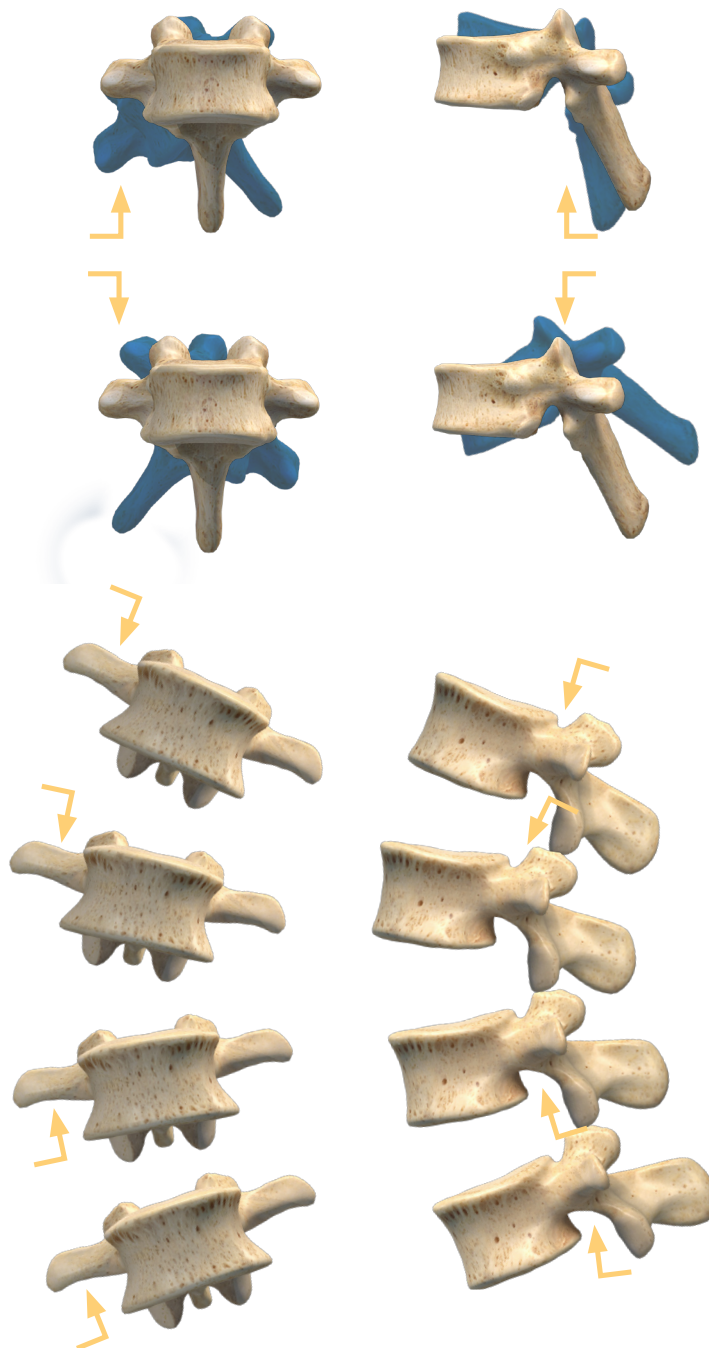
Supra Laminar Hooks have an oblique shape.



3 | GENERAL CONSIDERATIONS CONCERNING HOOK PLACEMENT

CRANIAL OR CAUDAL HOOK ORIENTATION

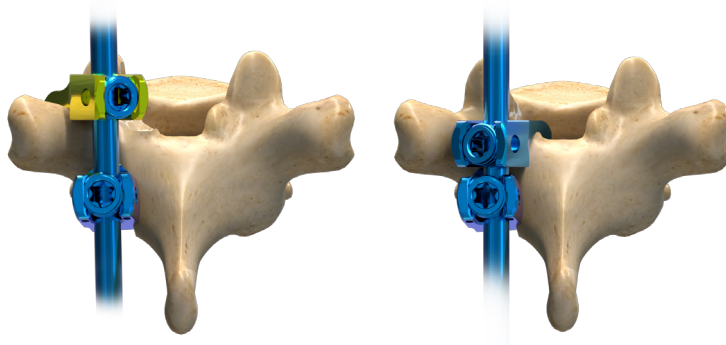
When using **Hooks** in segments that require correction maneuvers, the vertebral manipulation must first be considered. **Hooks** should be placed in a position that will increase the **Hook** stability during correction maneuvers.



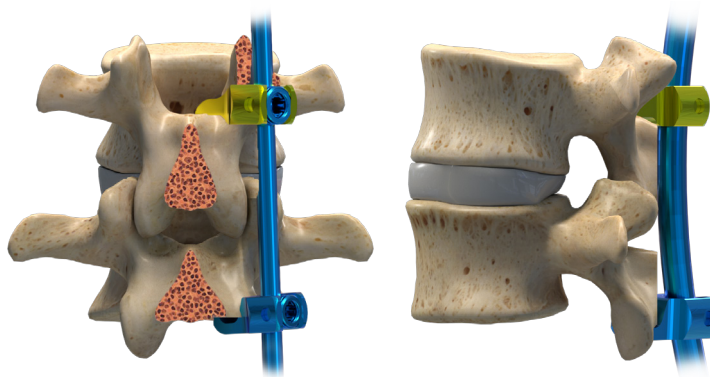
CLAWS

A **Claw** is a construct of cranially/caudally oriented **Hooks** used to protect the extremities of screw constructs or to apply compression to a level. A Claw can also be a combination of a **Pedicle Screw** and a caudally oriented **Hook**.

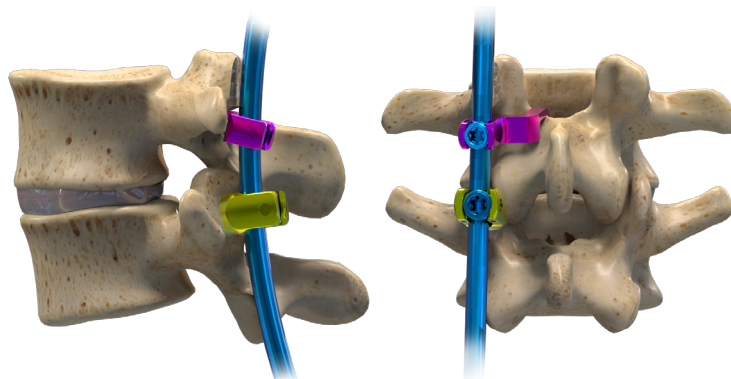
Thoracic Pediculo-Transverse Claw Thoracic Pediculo-Laminar Claw



Lumbar Lamino-Laminar Claw



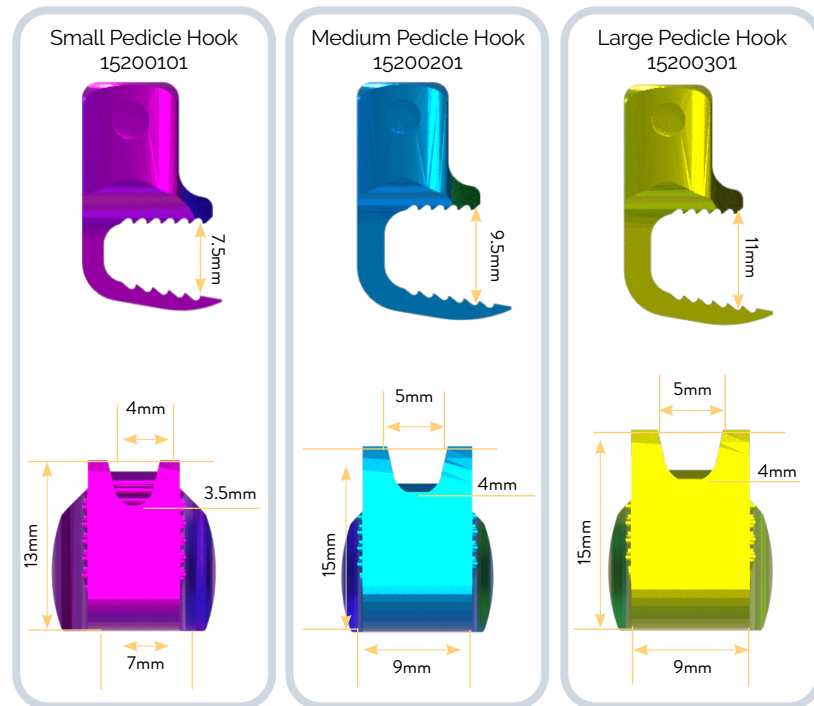
Lumbar Lamino-Pedicular Claw



4 | PEDICLE HOOKS

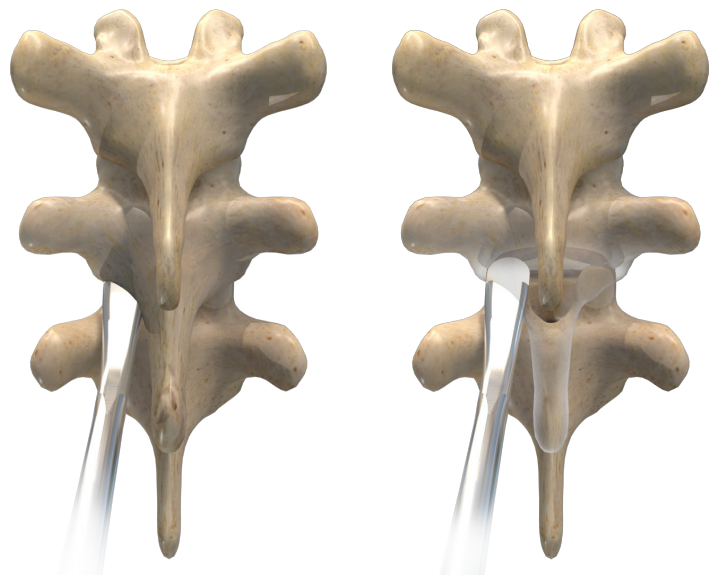
DESCRIPTION OF PEDICLE HOOKS

Pedicle Hooks are cranially oriented and can be used in a **Claw** or independently on any level of the thoracic spine.



PEDICLE HOOK INSERTION

- Open the capsule of the facet joint with the **Cobb Elevator with Stop**.



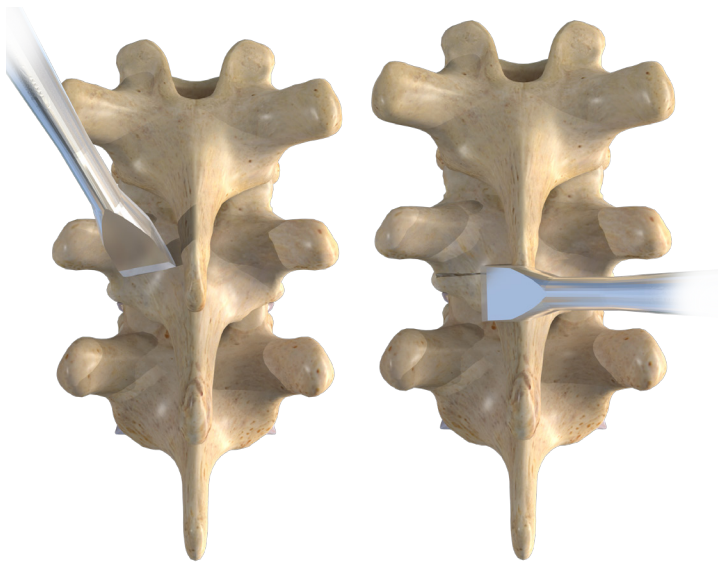
COBB ELEVATOR WITH STOP

18703004



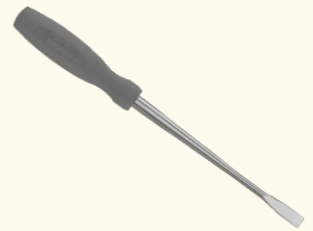
PEDICLE HOOKS

- Use the **Osteotome** to remove the inferior articular process for the proper **Pedicle Hook** placement.

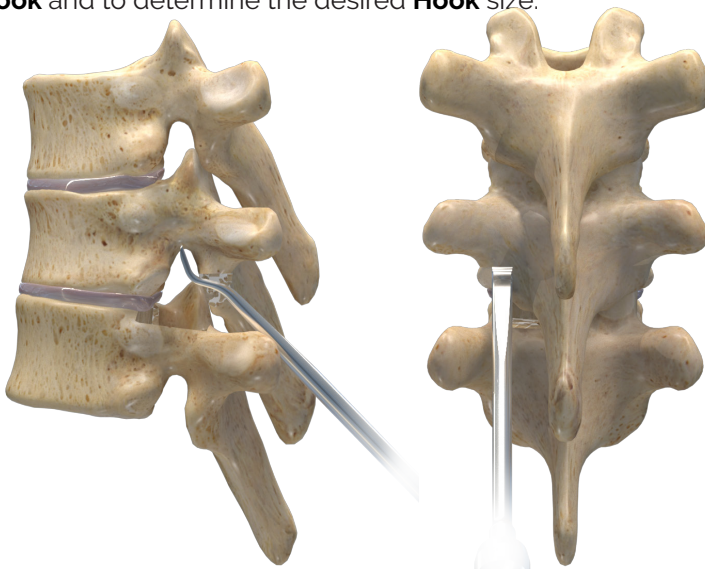


OSTEOTOME

04705010



- Use the **Pedicle Elevator** to assess the space for the **Pedicle Hook** and to determine the desired **Hook** size.



PEDICLE ELEVATOR

18703001



HOOK HOLDER

18710001



HOOK PUSHER

18711000



SNAP-ON HANDLE

99782003



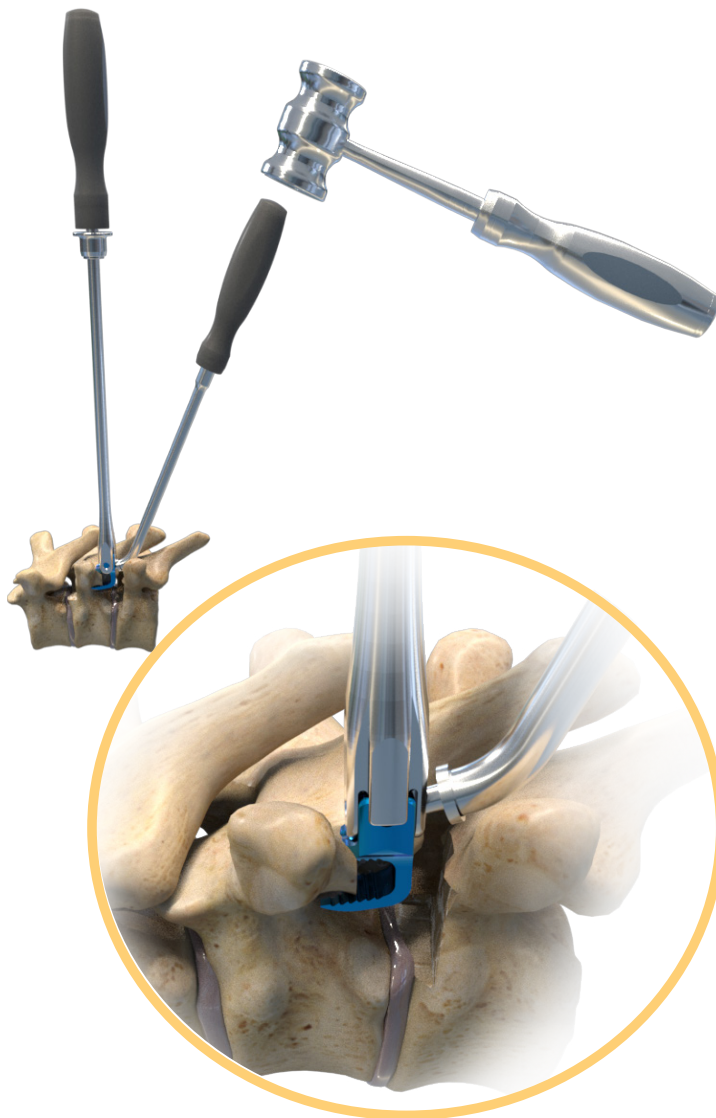
SNAP-ON HANDLE (FIXED)

99782003



INSERTION OF PEDICLE HOOKS

- Hold the **Pedicle Hook** with the **Hook Holder** and guide the **Pedicle Hook** with the **Hook Pusher**.
- If necessary, lightly impact the **Hook Pusher** until the **Hook** blade fits around the pedicle.



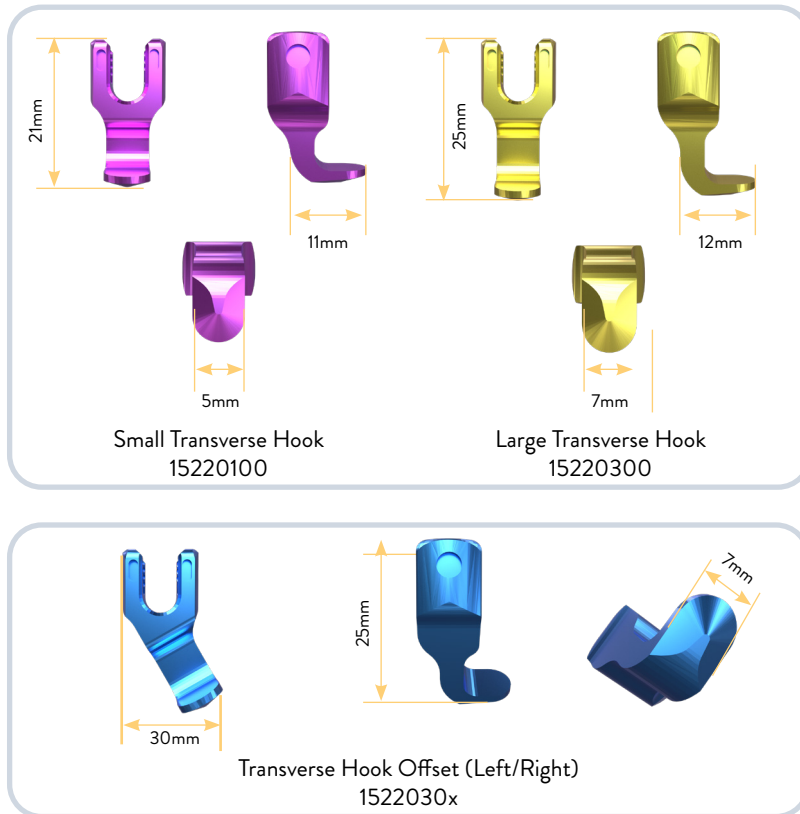
HANDLE FOR HOOK HOLDER:

Please note that fixed **Snap-on Handles** provides a better control of the hook. The handles in the standard Erisma-LP Evolution set are ratcheting.

Note: the instruments item numbers and images featured in this surgical technique may have alternative options. Instruments and implants availability may vary upon markets. Please contact your local Sales Representative for more information.

5 | TRANSVERSE HOOKS

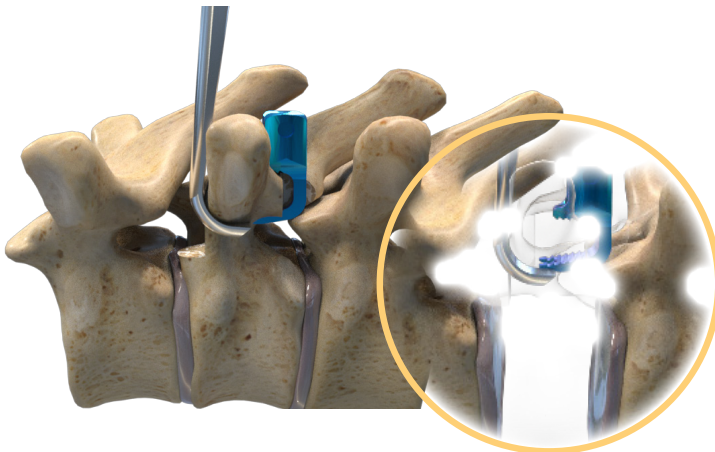
DESCRIPTION OF TRANSVERSE HOOKS



TRANSVERSE HOOK INSERTION

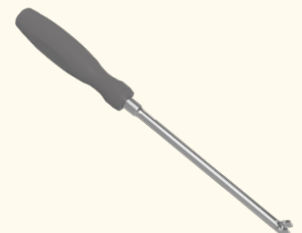
Transverse Hooks are oriented caudally and are used to create **Claws** in combination with **Pedicle Hooks**.

Use the **Transverse Elevator** to free the ligaments and create space for the **Hook** on the transverse process adjacent to the facet joint.



TRANSVERSE ELEVATOR

18703003



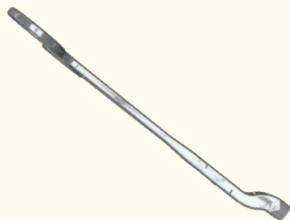
STRAIGHT IMPLANT HOLDER

18713003



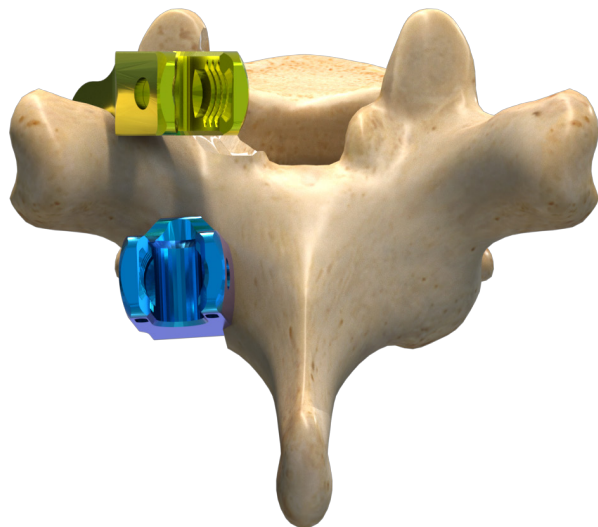
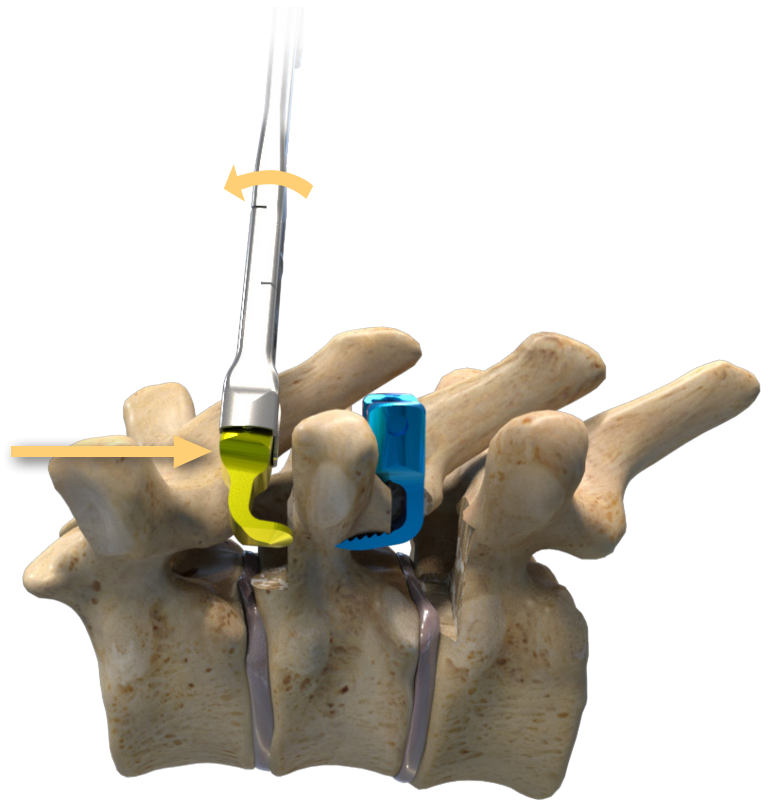
OFFSET IMPLANT HOLDER

18713004



TRANSVERSE HOOKS

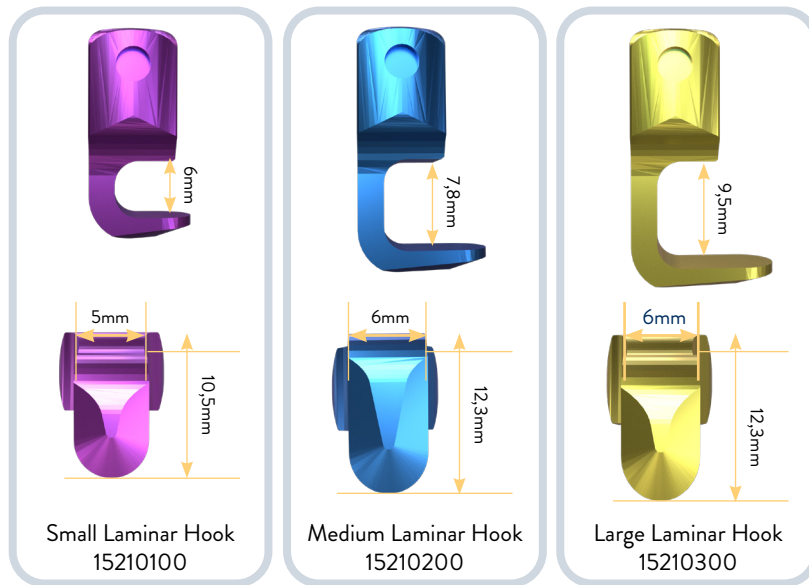
- Use the **Straight** or **Offset Implant Holder** to place the **Transverse Hook**.



6 | LAMINAR HOOKS

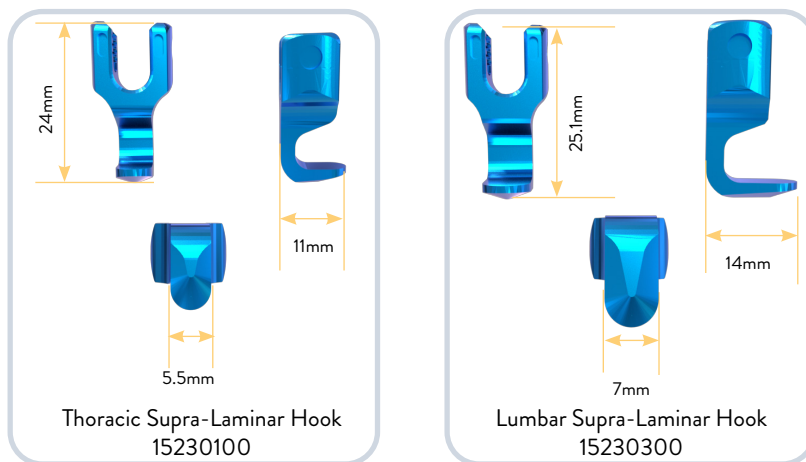
DESCRIPTION OF LAMINAR HOOKS

Laminar Hooks are oriented cranially and designed for infralaminar positioning. The **Laminar Hooks** can be used both in the thoracic and lumbar spine.



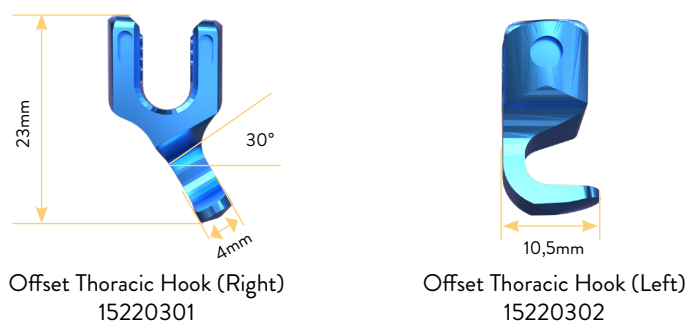
Thoracic and Lumbar Supra-Laminar Hooks

The **Supra-Laminar Hooks** are oriented caudally.



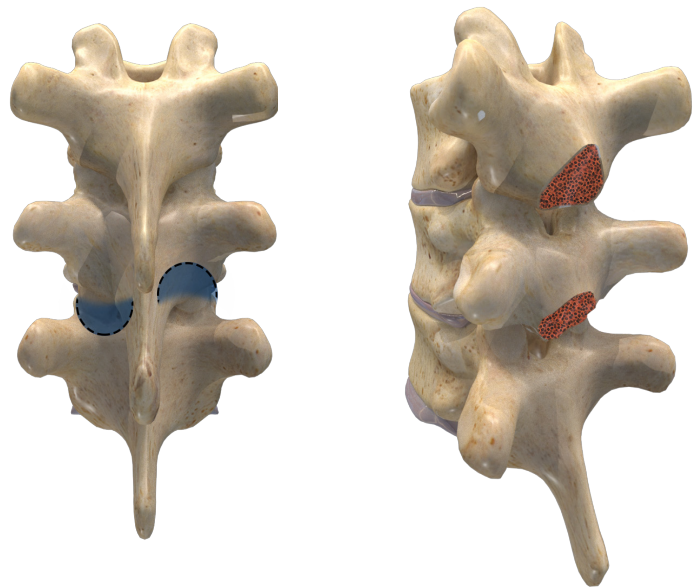
Description of Offset Thoracic Hook

The Offset Thoracic Hook should always be directed caudally.



INFRA AND SUPRA LAMINAR HOOK INSERTION

- Supra and/or intralaminar partial laminectomies may be performed to create sufficient space for the **Hook**. Open the Ligamentum Flavum.



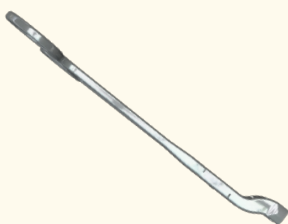
HOOK HOLDER

18710001



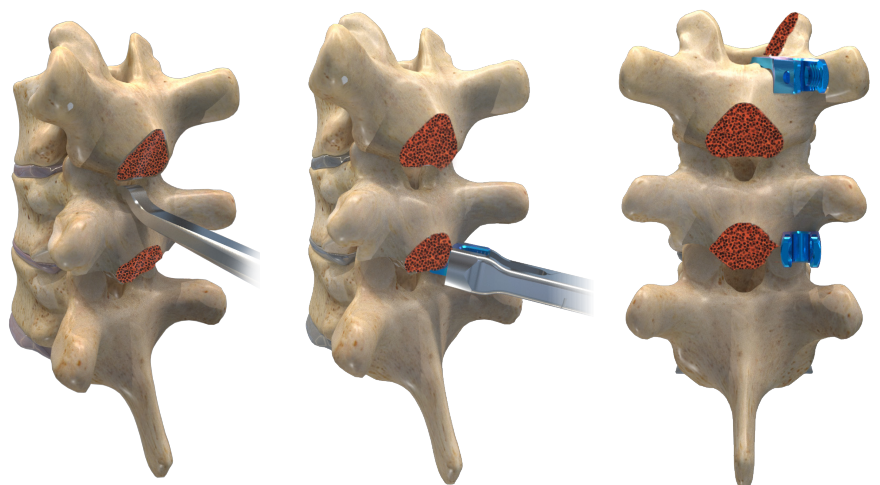
OFFSET IMPLANT HOLDER

18713004



INFRA LAMINAR HOOK INSERTION

- Use the **Hook Holder** or the **Offset Implant Holder Forceps** to manipulate the Infra **Laminar Hook** and delicately position it on the lamina.



SUPRA LAMINAR HOOK INSERTION

- Use the **Hook Holder** or the **Offset Implant Holder Forceps** to manipulate the **Supra Laminar Hook** and delicately position it on the lamina.



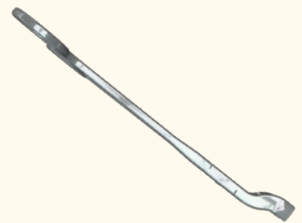
HOOK HOLDER

18710001



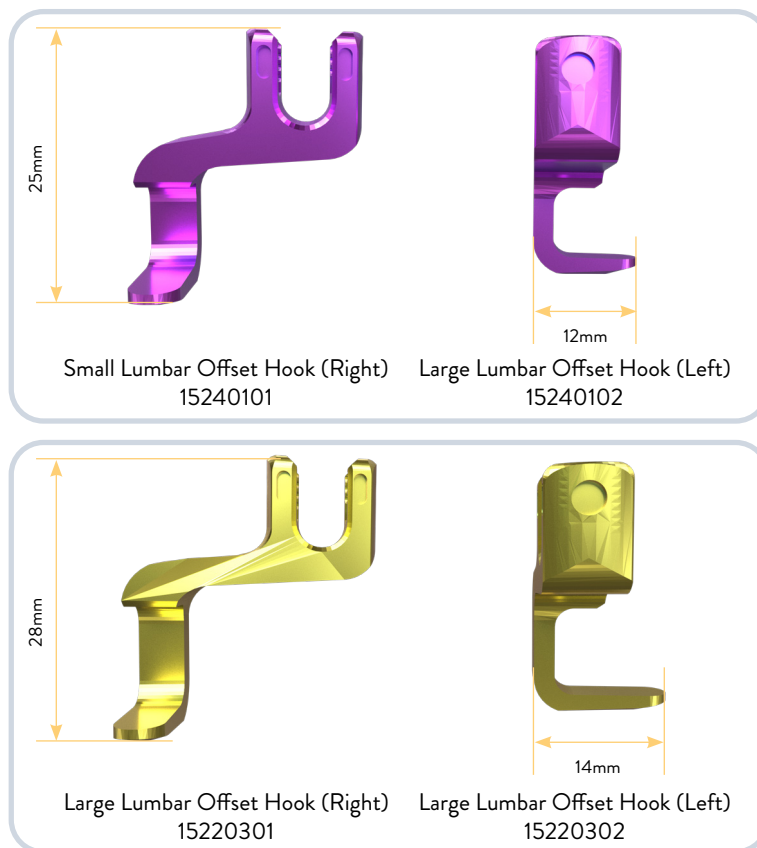
OFFSET IMPLANT HOLDER

18713004



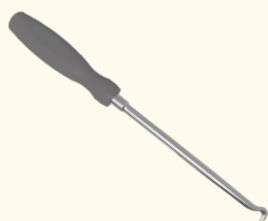
7 | LUMBAR OFFSET HOOKS

DESCRIPTION OF LUMBAR OFFSET HOOKS



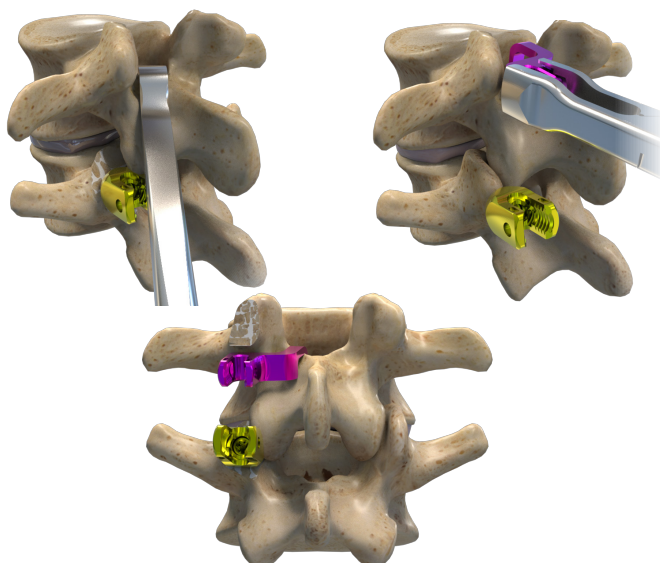
LAMINAR ELEVATOR

18703002



INSERTION OF LUMBAR OFFSET HOOKS

- Use the **Laminar Elevator** to free the ligament and identify the proper placement of the **Lumbar Offset Hook**. Select the appropriate Hook size according to the vertebral anatomy and level.
- Use the **Hook Holder** or the **Offset Implant Holder** to place the **Lumbar Offset Hook**.

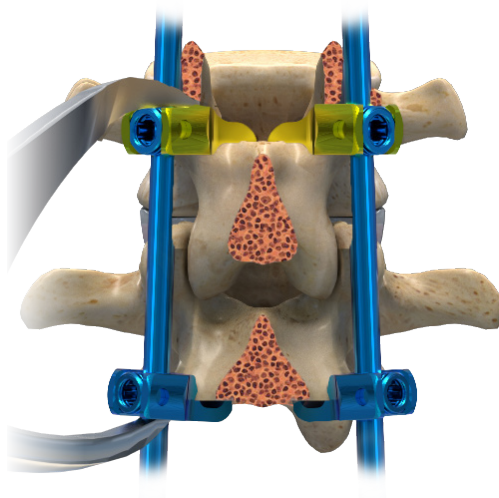
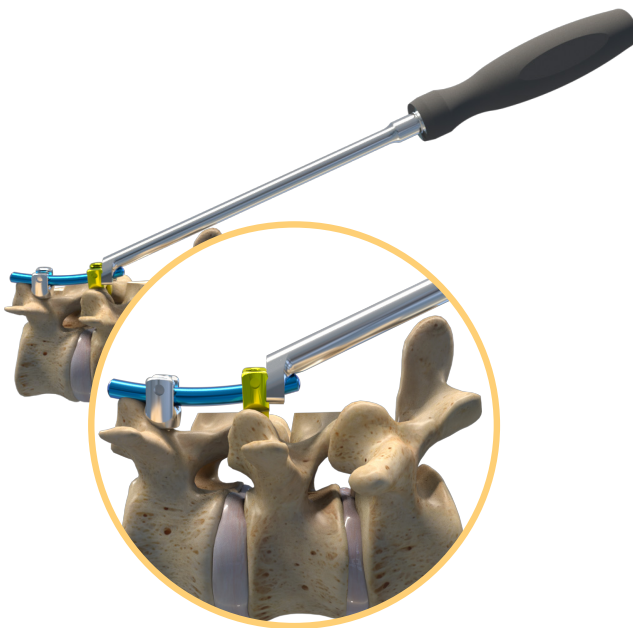


- After all **Pedicle Screws** and **Hooks** are inserted, the **Rods** are bent and inserted into the rod channel. **Set Screws** are then inserted on top of the **Rods**. If needed, additional instruments are available for persuading the **Rod** into the **Screw** heads to allow for **Set Screw** insertion.

*Note: The use of instruments related to **Rod**, **Set Screw** and **Crosslink** implantation is described in the *Erism-LP Evolution surgical technique*.*

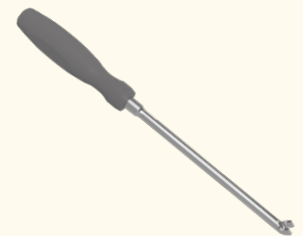
HOOK REPOSITIONING

- To increase contact between the **Hook** and bone after **Rod** insertion, use the **Guide** to direct the **Hook** on the **Compressor**.



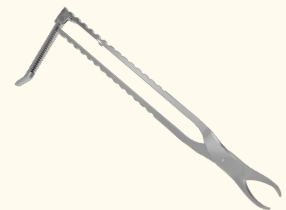
GUIDE

18716001



COMPRESSOR

99740005



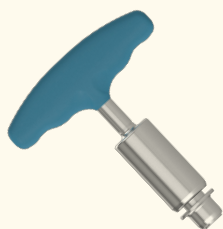
COUNTER TORQUE

18721002



TORQUE LIMITING HANDLE 12NM

99781212



SELF-RETAINING SET SCREWDRIVER

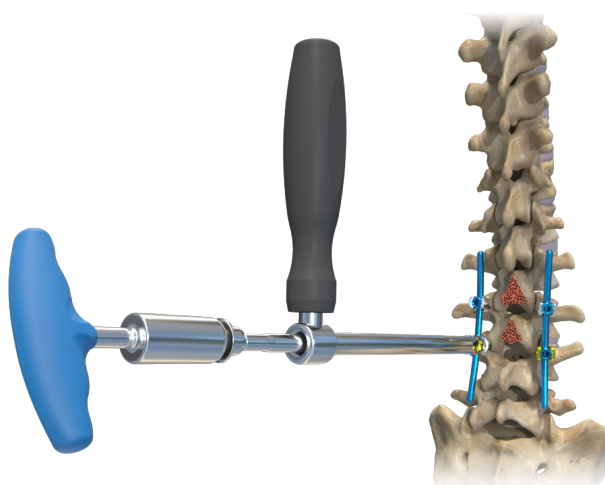
01720006



8 | IMPLANT CLOSURE AND MANEUVERS

FINAL TIGHTENING

- Place the **Counter Torque** on the **Hook** where the final tightening is performed.
- Connect the **Self-Retaining Set Screwdriver** to the **Torque Limiting Handle 12Nm** and insert it into the **Counter Torque** until contact with the **Set Screw** is achieved.
- To complete the final tightening, rotate the **Torque Limiting Handle** clockwise until a click is heard.

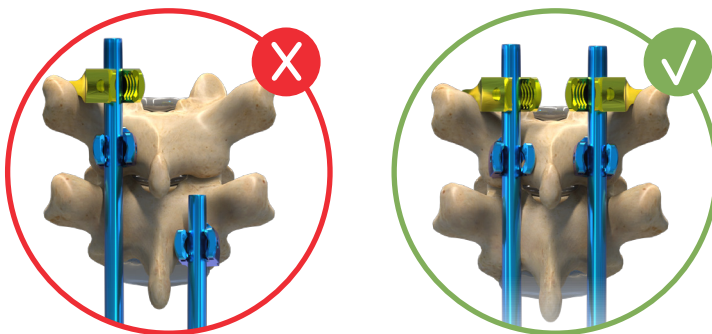


Note: Instruments described on this page are not part of the Erisma-LP **Hook** module. These instruments can be found in the Erisma-LP Evolution standard set.

Tips & Tricks

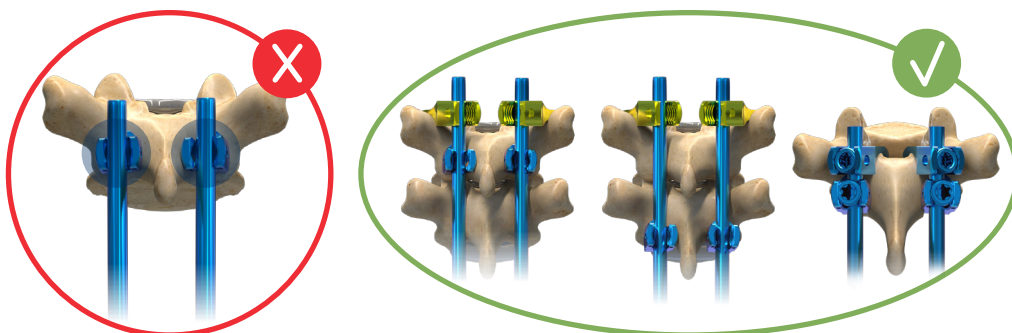
SYMMETRY

It is recommended to maintain symmetrical **Hook** placement at the extremities of the construct.



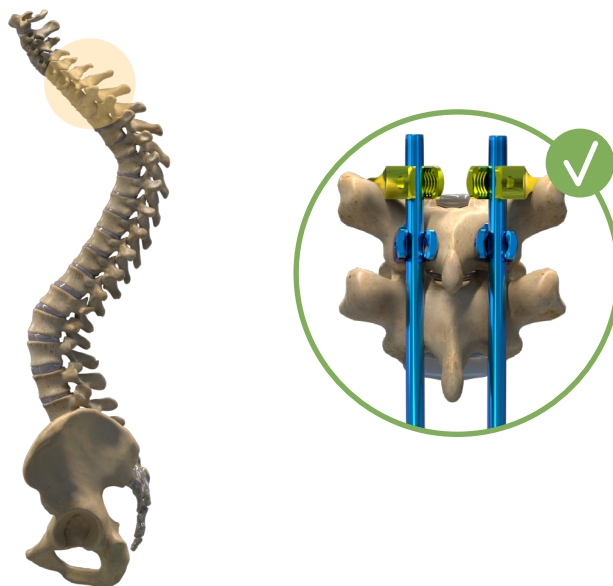
UPPER CONSTRUCT EXTREMITY CLAW

It is recommended to use a **Claw** on the superior vertebra of a scoliosis construct. This technique will prevent disengagement of the construct during forward bending.



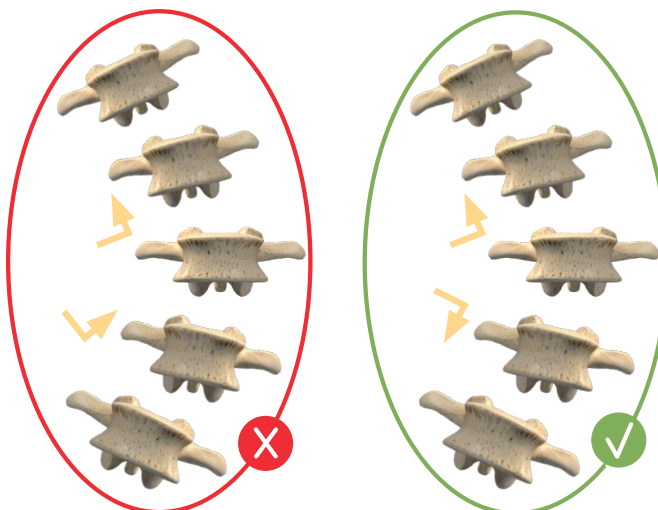
PEDICULO-TRANSVERSE CLAW AT UPPER CONSTRUCT EXTREMITY

It is recommended to use a bilateral **Pediculo-Transverse Claw** on the superior vertebra in a kyphosis construct. This technique will enhance sagittal rotation control and minimize the risk of **Hook** dislodgement in anterior bending.



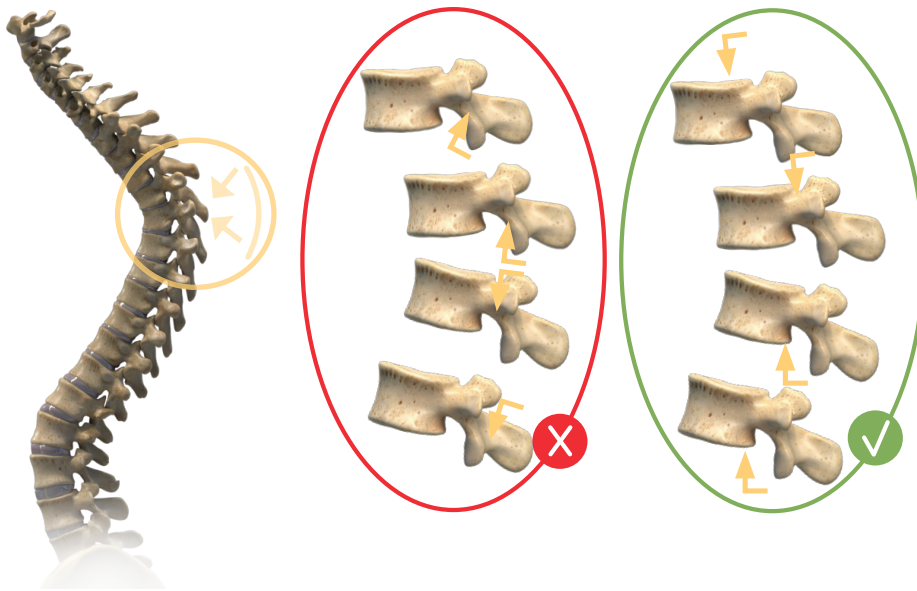
HOOK ORIENTATION IN APICAL CONCAVITY

Avoid instrumenting the intermediary vertebrae with **Hooks** pointing in the same direction. If all **Hooks** are oriented the same way, an apical concave opening will not be possible to achieve.



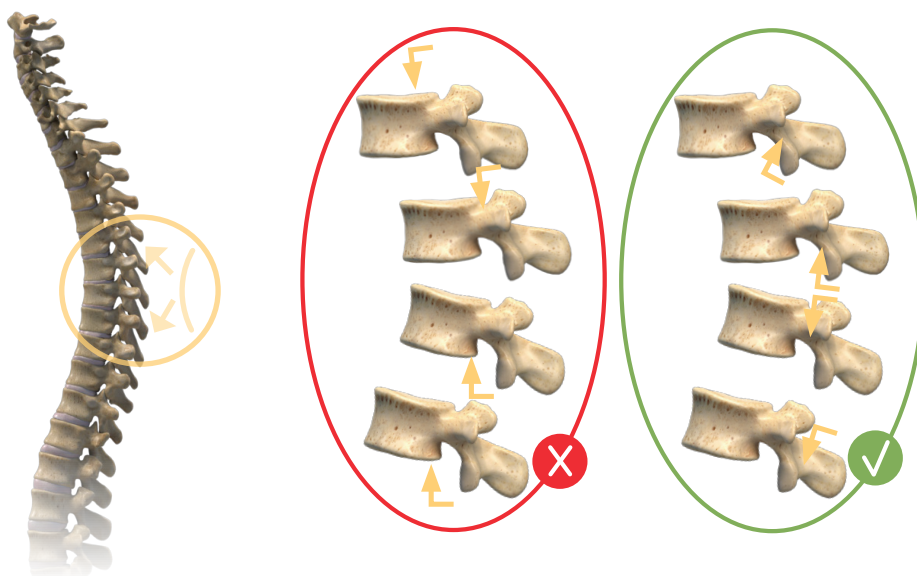
HOOK ORIENTATION IN CASE OF HYPERKYPHOSIS

To reduce hyperkyphosis, **Hooks** must be placed in a manner allowing for compression.



HOOK ORIENTATION IN CASE OF THORACIC "FLAT BACK"

To reduce hypokyphosis, **Hooks** must be placed in a manner allowing for distraction.



Implants

Product availability may vary upon markets.
Please check with your local Sales Representative.



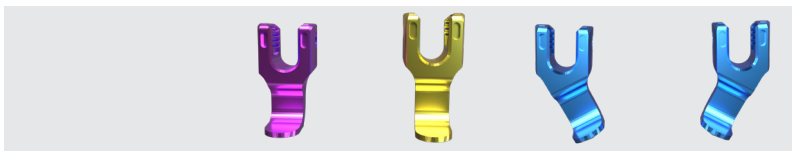
PEDICLE HOOK

	Small	Medium	Large
	15200101	15200201	15200301



LAMINAR HOOK

	Small	Medium	Large
	15210100	15210200	15210300



TRANSVERSE HOOK

	Small	Large	Offset Right	Offset Left
	15220100	15220300	15220301	15220302



THORACIC OFFSET HOOK

	Right	Left
	15240001	15240002



LUMBAR OFFSET HOOK

	Small Right	Small Right	Large Right	Large Left
	15240101	15240102	15240301	15240302



SUPRA LAMINAR HOOK

	Thoracic	Lumbar
	15230100	15230300

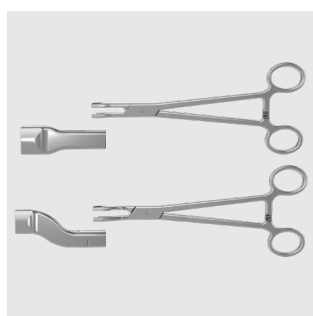
Instruments

The instruments item numbers and images featured in this surgical technique may have alternative options. Product availability may vary upon markets. Please contact your local Sales Representative for more information.



ELEVATOR

18703001	Pedicle
18703002	Laminar
18703003	Transverse
18703004	Cobb



IMPLANT HOLDER

18713003	Straight
18713004	Offset



OSTEOTOME

04705010



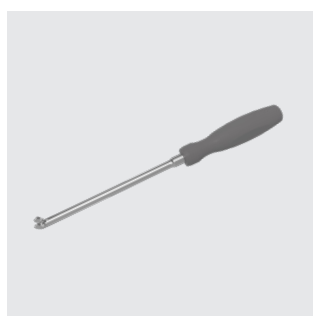
HOOK PUSHER

18711000



HOOK HOLDER

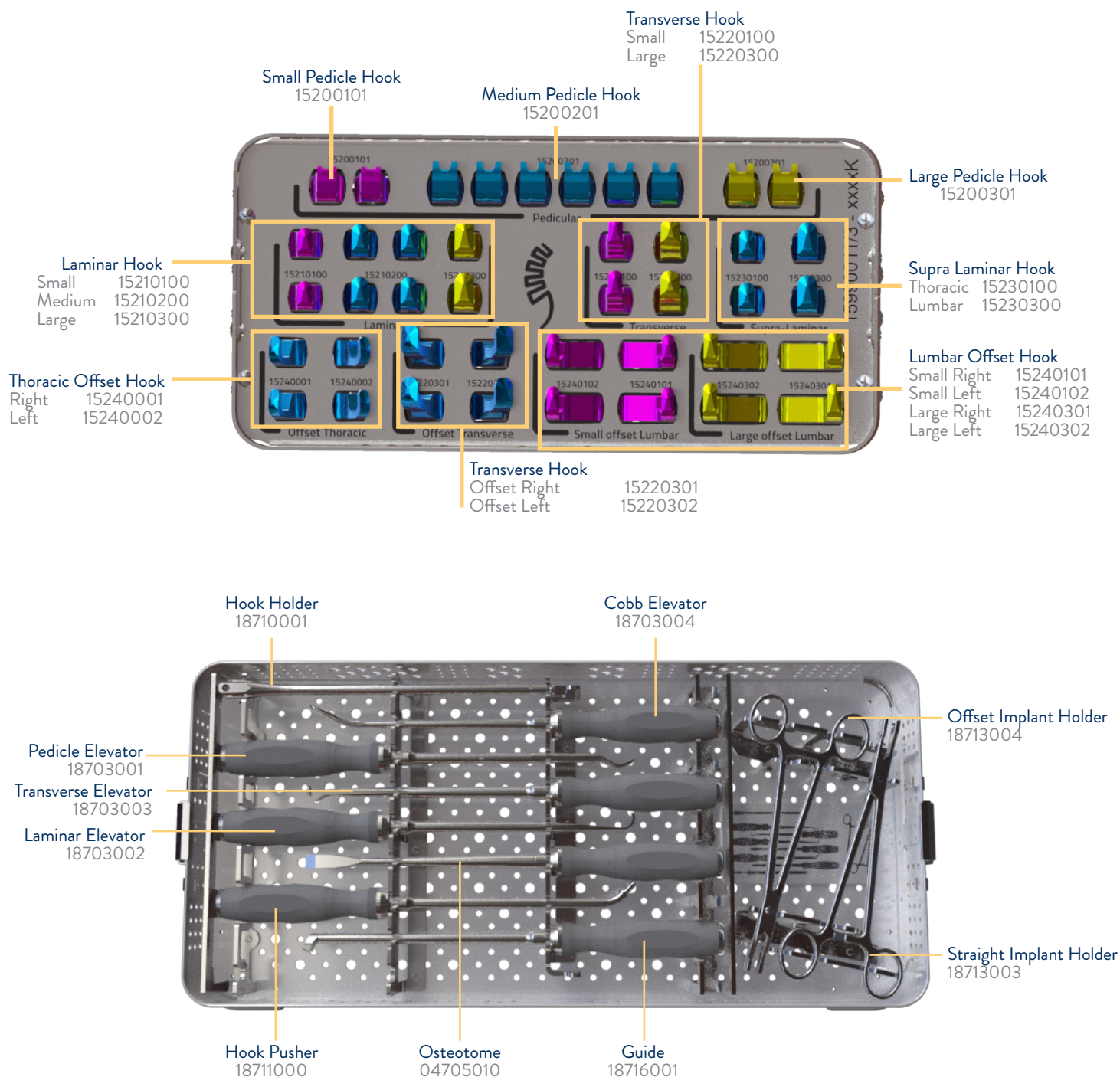
18710001

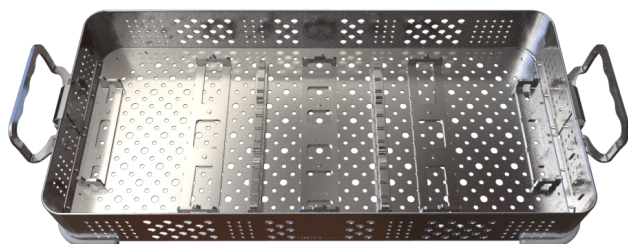
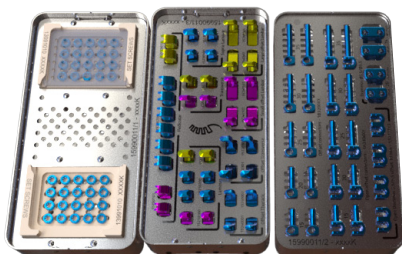


GUIDE

18716001

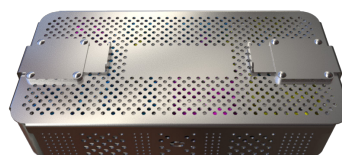
Trays



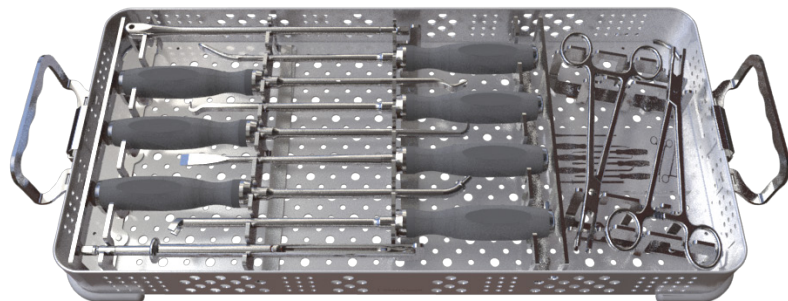


Erisma-Deformity

15990012	Lid Implants
15990011/1	Implants Set Screws*
15990011/2	Implants Set Screws Connectors*
15990011/3	Implant Hooks*
15990015	Container Base



*Any of the Erisma-Deformity Rack Implant Container can be shipped independently from the tray.



Erisma-Deformity

15990015	Lid Hooks & Connectors
15990012	Instruments



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Notified Body N°2460 - As some references are not covered by the  marking, refer to the product label which bears the  marking