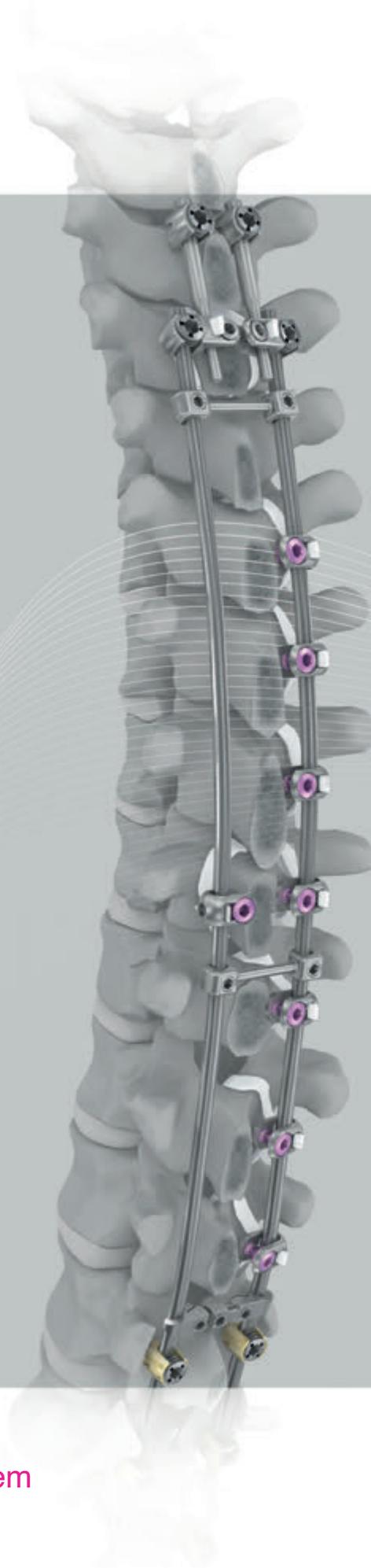


impla
net The permanent balance

Jazz[™]
Evo

Posterior Fixation System
of the Spine

Operative Technique





STERILE



Jazz™
Evo



Jazz™ Evo is a unique posterior fixation system meeting surgeons' requirements in the field of deformity correction.

Jazz™ Evo can be used with titanium alloy or non-alloyed or cobalt-chrome alloy union Rods.

Jazz™ Evo can be combined with any ISS-JAZZ Screw System implants. As such, it offers the option of long or short hybrid constructs, that may include either pedicle Screws, Hooks, Transverse Connectors or Ilio-sacral Connectors.

Jazz™ implants are delivered in **sterile packaging**.

Jazz™ Evo is made of:

- A range of multi-purpose Connectors enabling Jazz™ Evo to fit onto different rod diameters: Ø3.5, Ø4.0, Ø4.5, Ø4.75, Ø5.0, Ø5.5 and Ø6.0 mm.
- A dedicated screw for each connector, ensuring firm and secure locking of the Band / Connector / union Rod assembly.

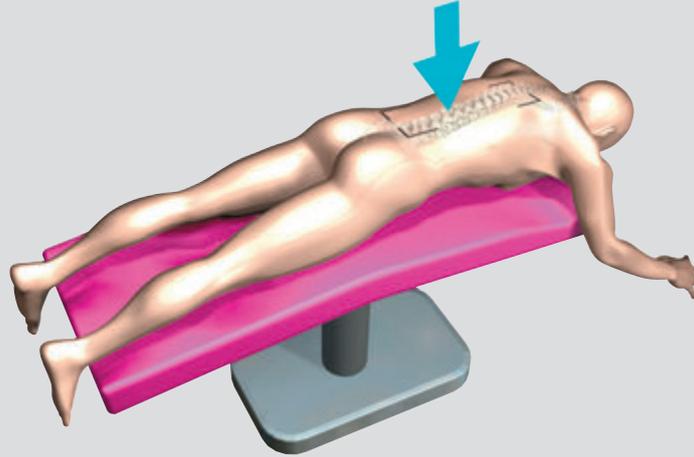
Jazz™ Evo is used with an ultra-resistant biocompatible polyester Band making it possible to create high-performance anatomical bone anchoring. Its flattened tubular shape enables load distribution on the vertebral bone structures on which it is fitted, while offering a minimal size.



Mechanical tests

Jazz™ Evo has been tested according to ASTM F1717.

Operative technique



The surgeon can fit ISS-JAZZ Screw System range of implants, pedicle Screws and Hooks prior to fitting Jazz™ Evo implants and thus create hybrid assemblies. In this case, refer to the specific operative technique of the ISS-JAZZ Screw System range



Preparation of Jazz™ Evo

Connector

The Band is previously passed through the Connector at the rear slot therein. To do this, the distal part of the Band including a stainless steel strip for manual modelling is inserted through the rear slot of the Connector on the side of the orifice with the largest diameter in which the connector Screw is to be inserted (same as the reading direction of the diameter on the opposite image - diameter 6.0 mm).



Jazz™ Band



Jazz™ Passer Band

Fitting the braid around the anatomical structures

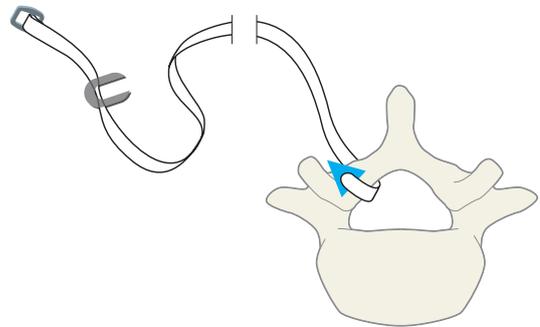
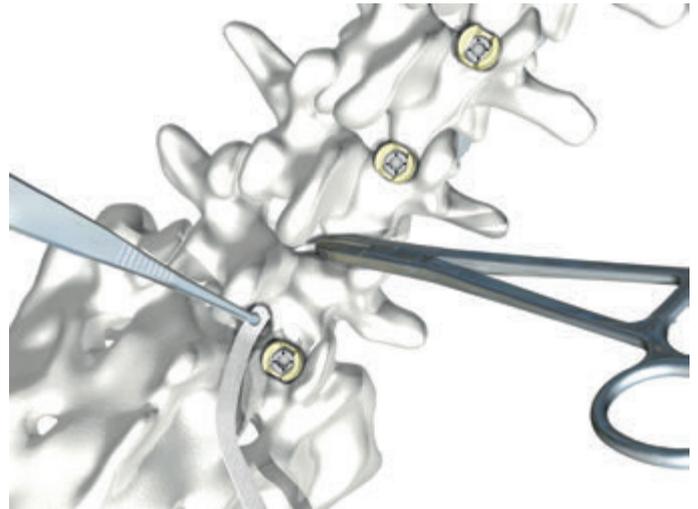
According to the surgeon's choice, the Braids are fitted around the various vertebral structures (laminae, transverse, spinous) as defined during the preoperative plan or perioperatively.

If using Jazz™ Band, the distal end of the Jazz™ Band must be manually pre-formed to facilitate insertion and passage beneath the laminae.

Using Jazz™ Passer Band requires the dedicated Jazz™ Passer instruments (please refer to the specific surgical technique).

This step enables optimal shaping and thus easier insertion and retrieval using suitable instruments, i.e. the Braid Forceps for insertion and the Braid Puller Forceps for retrieval.

Please note that for each step of this surgical procedure, it is recommended to only use specifically designed instruments from the Jazz™ Evo ancillary range.

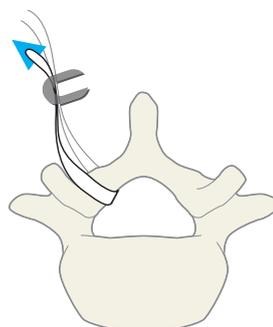


Closing the band after returning via the stirrup

After passing around the anatomical structures, the distal end is again inserted through the Jazz™ Evo Connector slot, this time inserting it on the side of the orifice with the smallest diameter receiving the connector Screw.

Note that the orifice with the largest diameter is actually facing the surgeon as shown in the illustration.

Important, during this step, take care to avoid any torsion or twisting of the Braid onto itself.

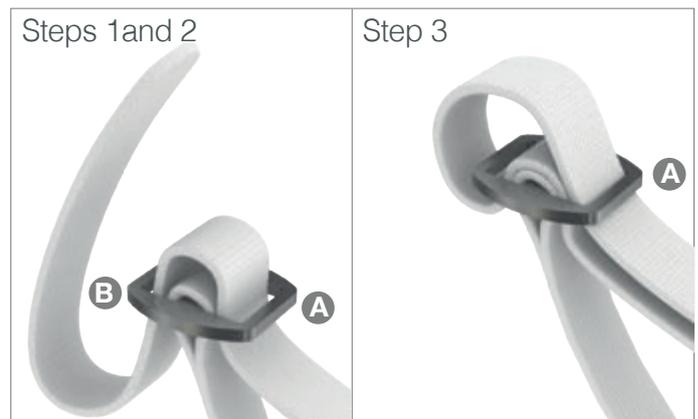


Closing of the band

The Band is closed using the pre-mounted buckle :

1. Passing at first through the buckle being on the same side than the tip of the Band (A), from bottom to top,
2. Then passing the Band through the buckle on the opposite side of the tip of the Band (B), from top to bottom,
3. Finally passing again inside the first part of buckle (A), but this time from top to bottom.

Depending on the desired path to the Braid Tensioner, the length of the loop is to be adjusted.



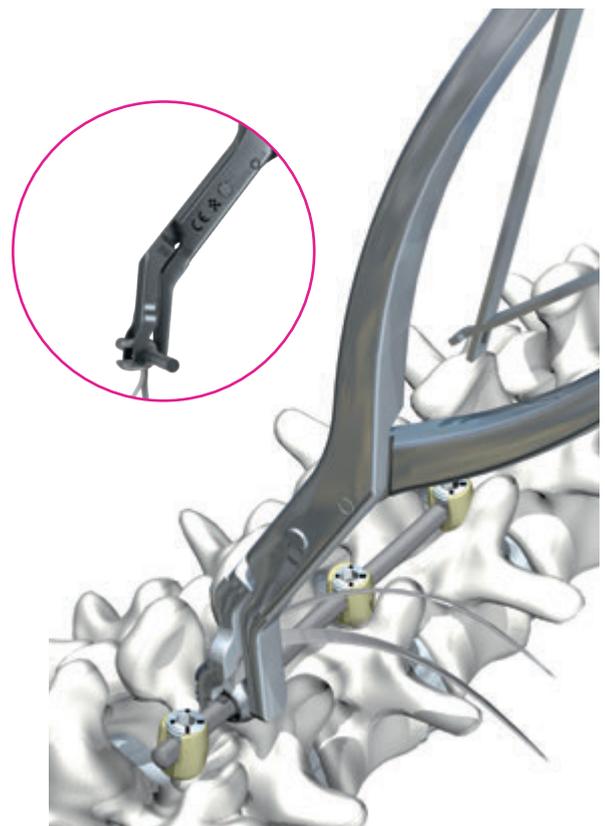
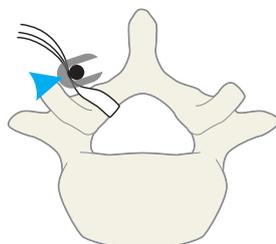
Preparation of rods

The bending and length of the union Rods should be determined on a case-by-case basis, particularly using the Rod Templates supplied with the ISS instrumentation.

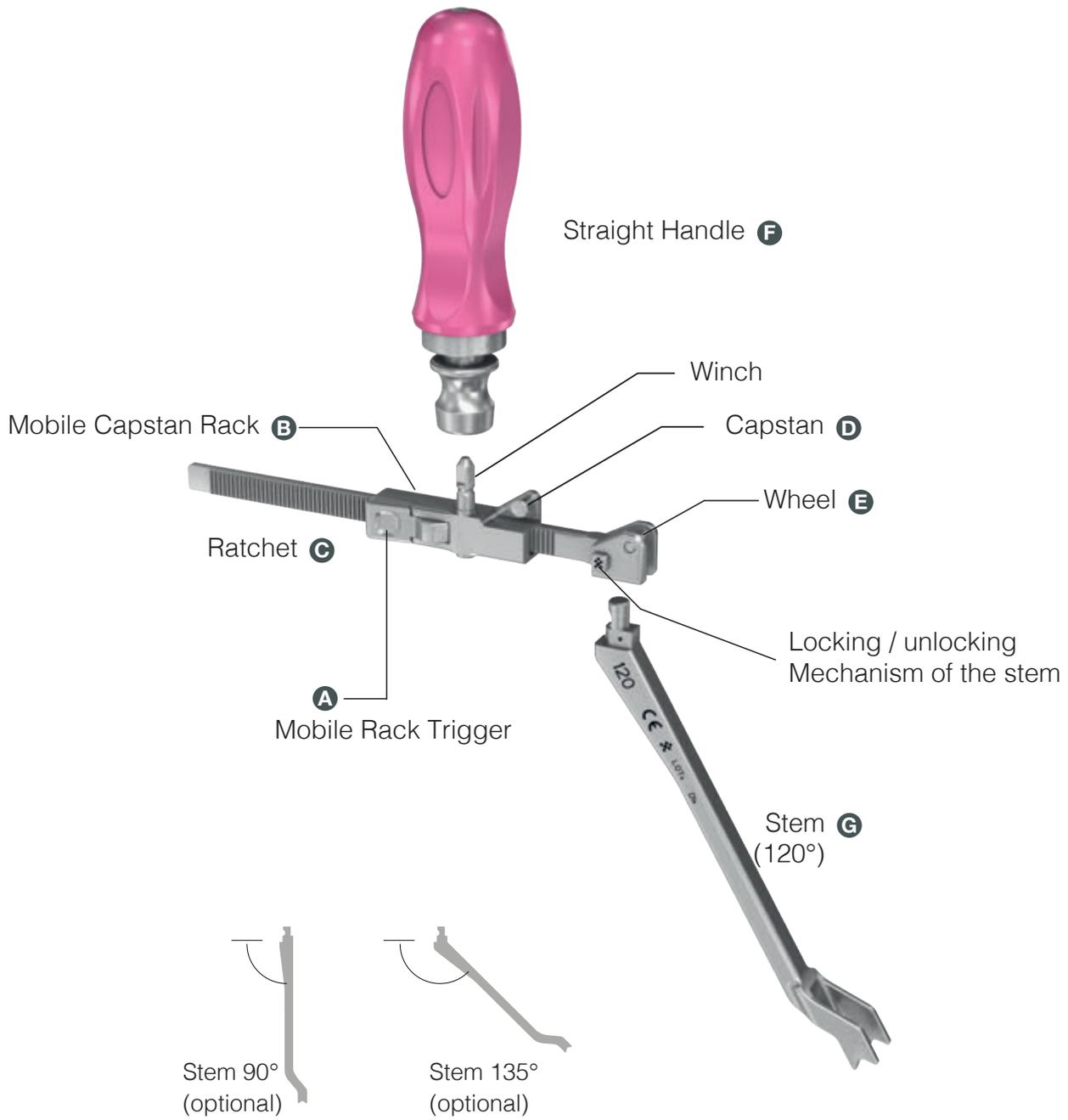
The Rods may be bent using the French Bender from the ISS ancillary range.

Connecting to the rods

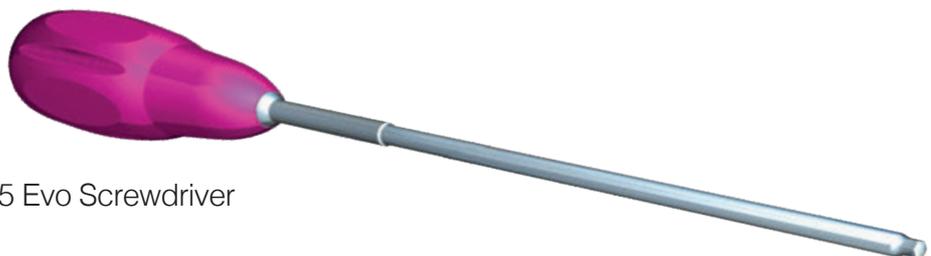
The Jazz™ Evo Connectors can be connected to the rod by clipping manually, but it is however preferable to use the Snapping Forceps for this operation. Using this instrument makes the following step consisting in inserting the locking Screw into the Connector using the Screw Holder considerably easier. It is essential to insert the Screw on a maximum of one or two turns, with no firm contact with the union Rod, so that the connector remains stable on the Rod while remaining mobile in both translation and rotation and the Band is free to slide through.



Tensioner Gen. II



Hexagonal 3.5 Evo Screwdriver



Tensioner assembly

The Tensioner Gen. II can be used to adapt various Stem angulations (G). The surgeon should determine the most suitable angle according to the indication and the patient's situation.

The selected Stem and the Straight Handle can then be connected to the Tensioner.

Positioning the tensioner and connecting the band

Before positioning the Tensioner on the union Rod as shown in the illustration, the Mobile Capstan Rack (B) should be moved as far forward as possible on the Ratchet (C) using the Mobile Rack Trigger (A). The Band is then fitted around the Capstan (D), guided by the Weel (E).

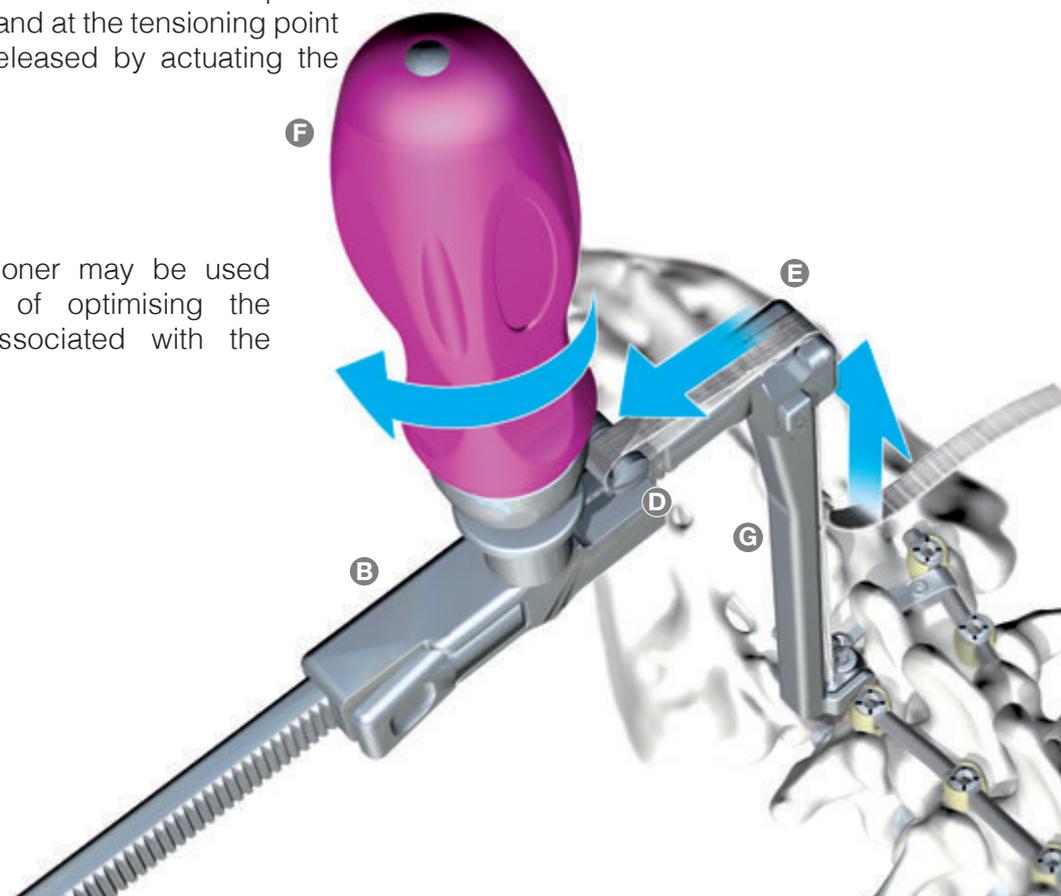
Insofar as is possible, care should be taken to position the metal buckle of the Braid such that it cannot interfere with the metal parts of the Tensioner during this operation.

Tensioning the band / reduction

Band tensioning and the reduction movement generated are actuated by rotating the Straight Handle (F) in the clockwise direction.

The anti-backout mechanism of the Mobile Capstan Rack (B) helps hold the Band at the tensioning point achieved, and can be released by actuating the Mobile Rack Trigger (A).

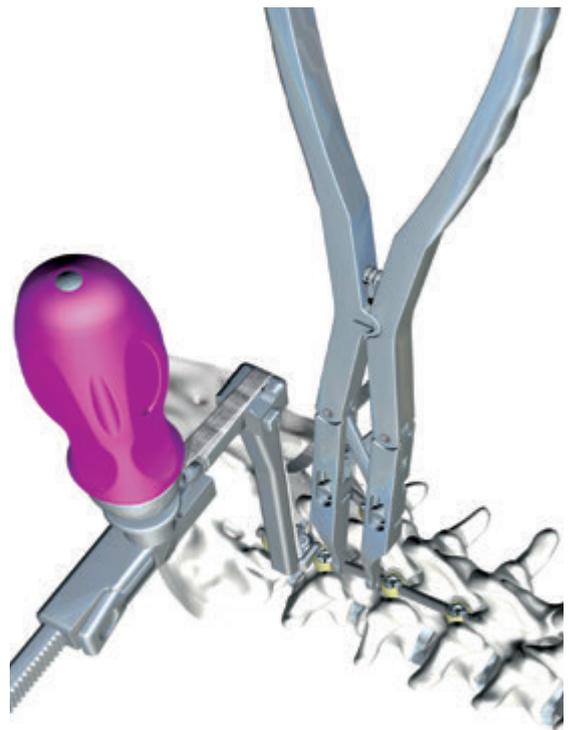
Note that multiple Tensioner may be used simultaneously in view of optimising the distribution of loads associated with the reduction operations.



Distraction / compression maneuvers

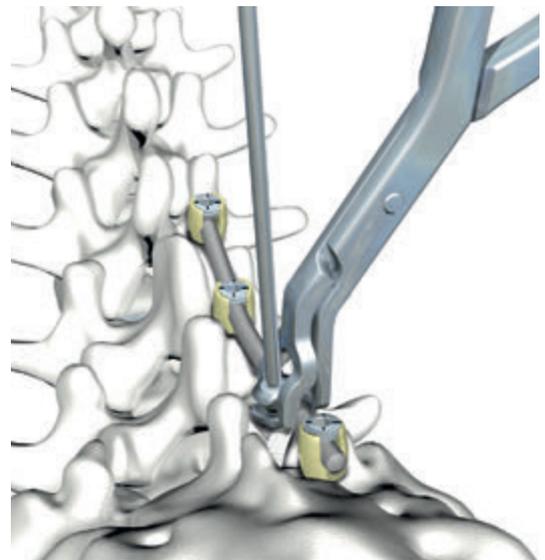
Any distraction/compression operations are carried out using Distractor or Compressor as shown in the illustration opposite. During these steps, the Tensioner remains in position and tensioned on the implant to be mobilised.

Once the required correction has been made, with the Tensioner still in position and tensioned, the Screw is fastened temporarily using the Hexagonal 3.5 Evo Screwdriver. At this stage, it is still possible to unfasten the Screw so as to release the tension and be able to mobilise the Jazz™ Evo implant once again. Note that, for this operation, it is preferable to keep the Tensioner in position and tensioned.



Final 2-in-1 locking of the screw

The Tensioner is removed beforehand after releasing the tension by actuating the Mobile Rack Trigger (A). The Band can then be disconnected from the Mobile Capstan Rack (B). For the final locking of the Connector, the Snapping Forceps is used simultaneously with the Hexagonal 3.5 Evo Screwdriver, as shown in the illustration. The Connector is kept under pressure by the surgeon so as to maximise the compression of the Band and prevent angular sweep of the Connector during clamping. At the same time, definitive tightening is carried out using the Hexagonal 3.5 Evo Screwdriver.



Cutting the band

Once the position of the Connector has been finalized, and the final tightening has been carried out, any surplus Band, with the loop and the stainless steel insert, is cut to approximately 1 cm above the Connector.

Important!

Under no circumstances should the malleable stainless steel strip and the buckle components be implanted.



Jazz™ Claw Solution

The Jazz™ Claw is aimed to secure the top of long constructs especially seen in deformity cases.

Jazz™ Claw components:

- A connector designed to receive two Rod diameters: 5.5 mm or 6.0 mm.
- A double diameter Rod of 70 mm length, Straight or Pre-bent:
 - ▶ 4.0 mm diameter on the 25 mm inferior portion of the Rod, fitting into the Jazz™ Claw Connector
 - ▶ 5.5 mm diameter on the 40 mm superior portion of the Rod, inserted into the selected Hook head

The operator will take this characteristic into account in view of the desired compression between the Hook and the Braid to shape the Claw.

Note! It is mandatory to remove the spinous process if the operator wants to use two Jazz™ Claws at the same level.



Jazz™ Claw connector preparation:

looping and closing of the band

Refer to the Jazz™ Evo operative technique above, from page 5 to page 7, for the following surgical steps:

- Preparation
- Passage of the Band
- Closing of the Band



Preparation of the tensioner

Refer to the instructions on page 9.

Connection of the double diameter rod to the connector

Refer to the 'Connecting to the Rods' section, page 7. Insert the Jazz™ Claw Connector Screw using the Snapping Forceps, in order to provisionally connect to the 4.0 mm portion of the Rod.



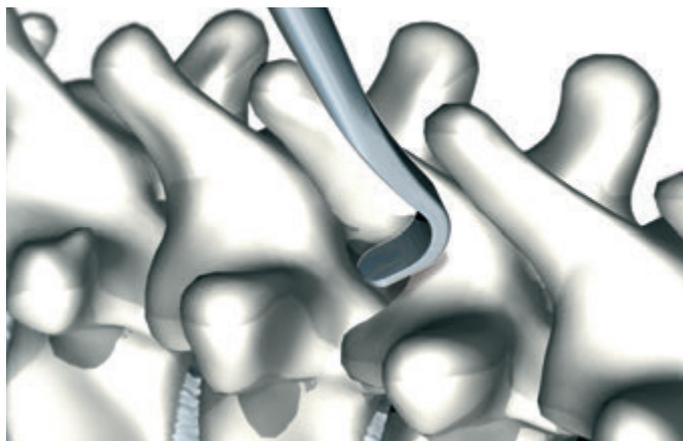
Preparation of hooks

insertion site

The Laminar Elevator is used to prepare the Hook insertion site and to check that the size is appropriate.

A window for the Hook blade size is created by a limited osteotomy of the lamina, after excision of the yellow ligament.

Note! the Laminar Elevator has the same function as the 4 Trial hooks previously used in the system.



Positioning of the Jazz™ Claw Hook

Once the site is prepared, the Hook is loaded on the Implant Holder Hook. Depending on the choice of the surgeon, there are two possibilities for the Hook insertion:

A - The blade of the Hook is inserted perpendicularly to the spine then rotated 90° downwards (caudal) so that the Hook is seated on the lamina. This technique helps to stabilize the Hook, facilitating the introduction of the Rod.

B - The Hook is directly inserted, the blade facing down (caudal) but with a rocking motion so that the Hook blade tip follows the anterior surface of the lamina.



Disengage the implant holder hook



Two options for connection to the main 5.5/6.0 mm Rod:

Option 1

Construct Reduction with the Tensioner - Connection of the 5.5/6.0 mm Rod first and connection to the Hook second

5.5/6.0 mm assembly

Connect and lock the Jazz™ Claw Connector to the 5.5/6.0 mm Rod using the dedicated Implant Holder Blocker, and achieve final locking with the Blocker Screwdriver and T-Handle, combined with the Anti-torque Wrench and Straight Handle.



Tensioning of the band

Position the Tensioner on the 5.5/6.0 mm Rod, connect it to the Band and apply the tension in order to guide the Jazz™ Claw Connector and 5.5/6.0 mm Rod into the Jazz™ Claw Hook head.



Compression of the Jazz™ Claw

Once the construct is fully reduced, introduce the Blocker of the Jazz™ Claw Hook with the Implant Holder Blocker to lock or secure the Rod into the Hook head in order to apply a slight compression:

- ▶ If the operator locks the Hook first, the compression will slide the Rod down (caudal) in the Connector
- ▶ If the operator locks the Connector first, the compression will slide the Hook down (caudal) along the Rod



Tightening

Tighten the Jazz™ Claw Connector Screw and Hook Blocker.



Tensioner release

Before releasing the Tensioner, it is mandatory to tighten the Jazz™ Claw Connector Screw of the Connector in order to lock the Band to the Rod, thus maintaining the reduction.



Final locking

- Final locking of the Hook is achieved using the Blocker Screwdriver / T-Handle combined with the Anti-torque Wrench / Straight Handle
- Final locking of the Jazz™ Claw Connector Screw is achieved using the Hexagonal 3.5 Evo Screwdriver combined with the Snapping Forceps
- Final locking of the 5.5/6.0 mm Rod is achieved using the Blocker Screwdriver / T-Handle combined with the Anti-torque Wrench / Straight Handle



Cutting of the band

Cut the remaining piece of band – containing the buckle and the stainless steel strip, 1 cm above the Connector.



Important!

Under no circumstances should the malleable stainless steel strip and buckle components be implanted.

Option 2

Initial Reduction of the Jazz™ Claw Assembly first and Connection of the 5.5/6.0 mm Rod second

Positioning of the Jazz™ Claw

Bring the assembled Jazz™ Claw Connector and the dual diameter Rod to the spine.



Tensioning

Position the Tensioner on the 4.0 mm side of the dual diameter Rod, connect it to the Band and apply tension to set the pre-assembled Connector / 4.0 mm Rod onto the spine and into the Jazz™ Claw Hook head.



Compression of the Jazz™ Claw

Once the construct is fully reduced, introduce the Blocker of the Jazz™ Claw Hook with the Implant Holder / Blocker to lock or secure the Rod into the Hook head in order to apply a slight compression:

- ▶ If the operator locks the Hook first, the compression will slide the Rod down (caudal) in the Connector
- ▶ If the operator locks the Connector first, the compression will slide the Hook down (caudal) along the Rod



Tightening

Tighten the Jazz™ Claw Connector Screw and Hook Blocker.



Tensioner release

Before releasing the Tensioner, it is mandatory to tighten the Jazz™ Claw Connector Screw of the Connector in order to lock the Band to the Rod, thus maintaining the reduction.



Connection of the 5.5/6.0 mm rod

Connect the 5.5/6.0 mm Rod to the Jazz™ Claw Head and immediately introduce the Blocker with the Implant Holder Blocker.



Final locking

- Final locking of the Hook is achieved using the Blocker Screwdriver / T-Handle combined with the Anti-torque Wrench / Straight Handle
- Final locking of the Jazz™ Claw Connector Screw is achieved using the Hexagonal 3.5 Evo Screwdriver combined with the Snapping Forceps
- Final locking of the 5.5 / 6.0 mm Rod is achieved using the Blocker Screwdriver / T-Handle combined with the Anti-torque Wrench / Straight Handle



Cutting of the band

Cut the remaining piece of band – containing the buckle and the stainless steel strip, 1 cm above the Connector.



Important!

Under no circumstances should the malleable stainless steel strip and buckle components be implanted.

The Frame technique option

A Jazz™ Frame technique can be performed using Union Rods and fixed closed Jazz™ Frame T-Bar connectors

The Jazz™ Frame technique allows a simultaneous correction of the concavity and of the convexity applying a cantilever effect on the spine when the Braids positioned in the concavity are tensioned.

The Jazz™ Frame stiffness provides a stronger reduction.

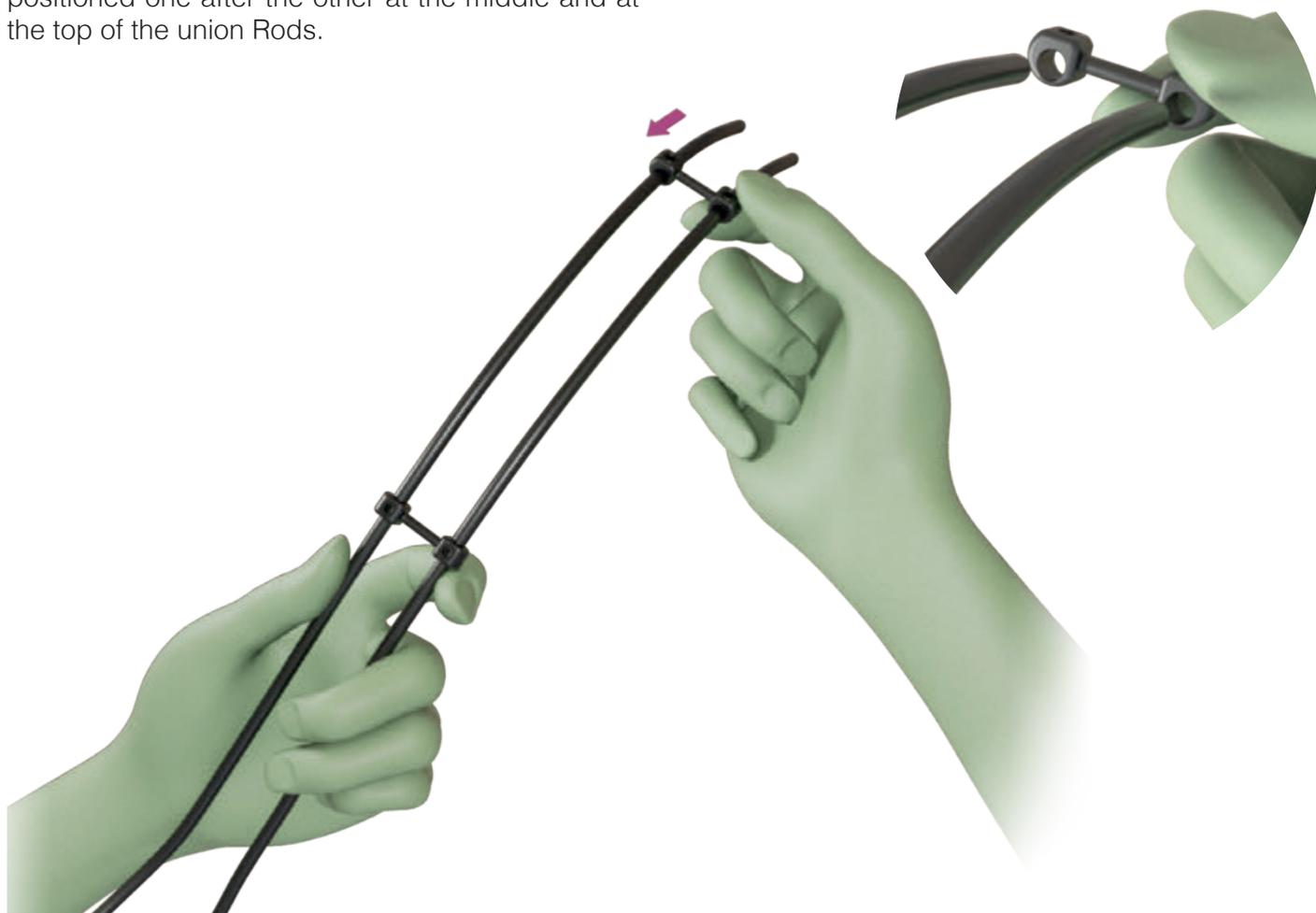
In general, two Jazz™ Frame T-Bar Connectors are positioned at the top and at the centre of the construct. Upon the surgeon choice an additional Transverse Connector can be placed at the bottom of the frame.

Preparation of rods

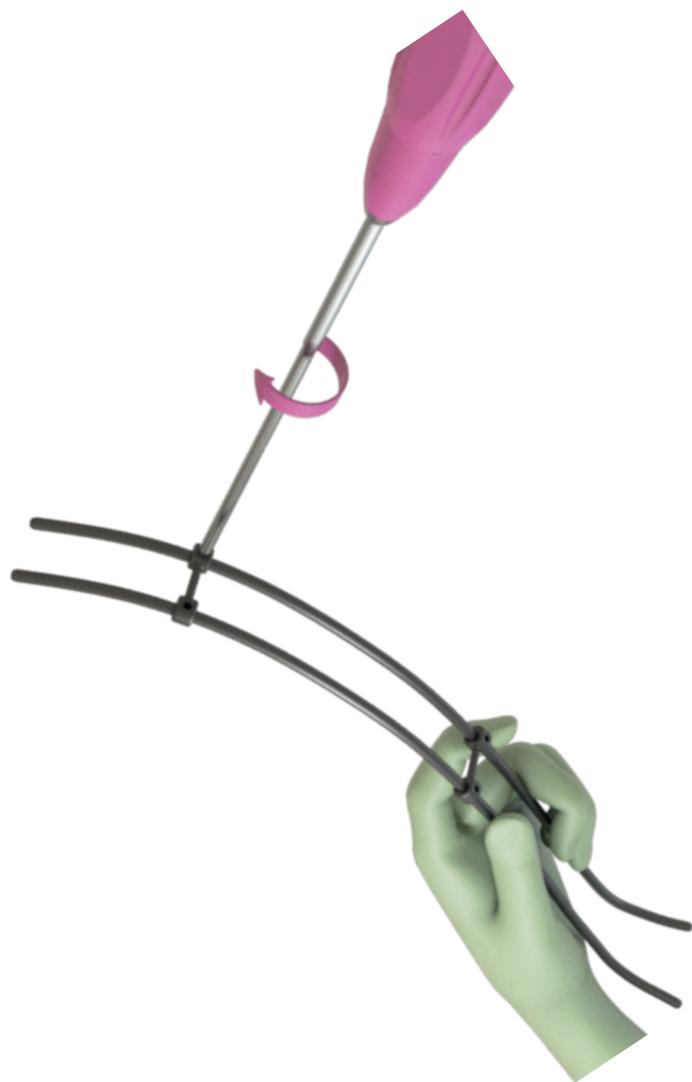
The union Rods are selected and bent according to the length and the correction to be achieved.

Jazz™ Frame assembly

To build the frame two Jazz™ Frame T-Bar are positioned one after the other at the middle and at the top of the union Rods.

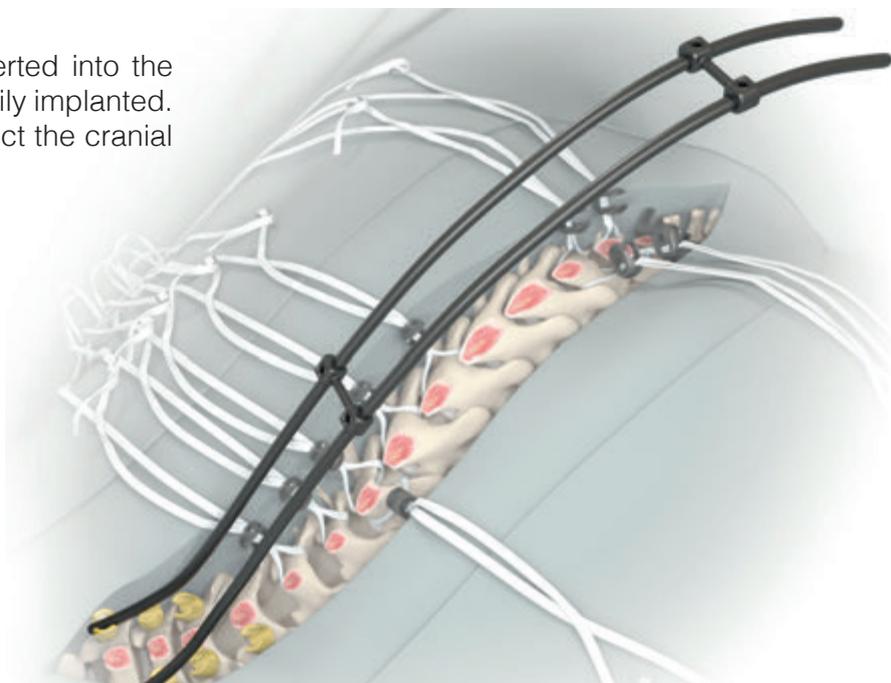


When the two Jazz™ Frame T-Bar are correctly positioned their screws are primary tightened using the Hexagonal 3.5 Evo Screwdriver.



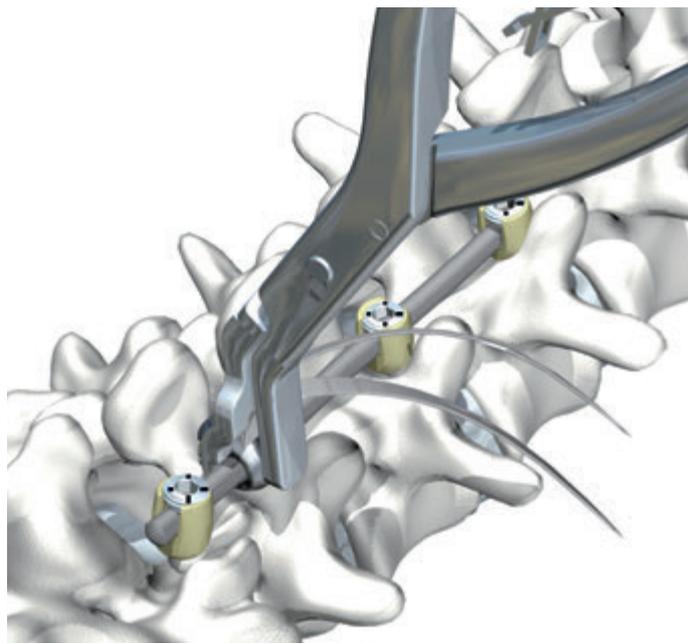
Once assembled the frame is approached onto the patient spine in order to adjust the Jazz™ Frame T-Bar position if necessary.

The caudal parts of the rods are inserted into the heads of the Pedicle Screws preliminarily implanted. In some cases the surgeon can connect the cranial parts of the Rods first.



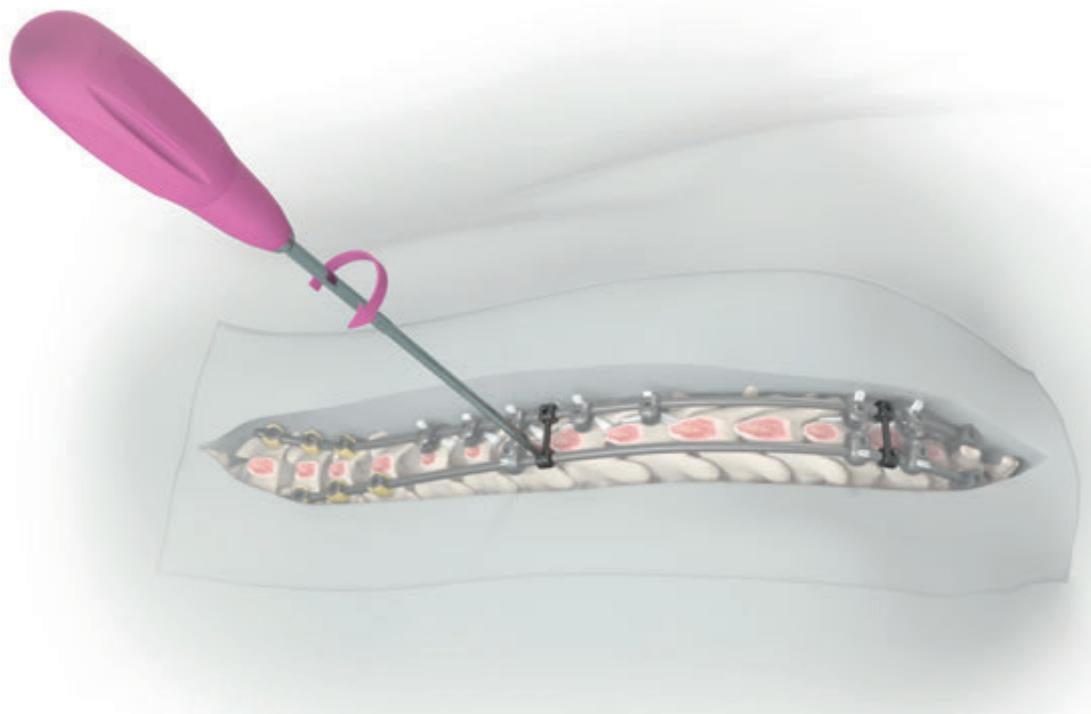
Connection of the Jazz™ Frame implants to the rods

The Jazz™ Evo Connectors are clipped onto the Rods as described in pages 7 – 10.



Final tightening

After reduction the final tightening of the Jazz™ Frame T-Bar screws is achieved using the Hexagonal 3.5 Evo Screwdriver as well as all other implant connections.



Adolescent Idiopathic Scoliosis (AIS)

PRE-OP



POST-OP (AT 3 MONTHS)



- Hypokyphotic Lenke I AIS
- Rib hump correction
- Restoration of normal kyphosis
- Average overall frontal correction of 70%

Adult Deformity

PRE-OP



POST-OP (AT 8 MONTHS)



- 72 years old female
- Osteoporosis
- Very stiff spine with serious progressive scoliosis in frontal and sagittal plus limiting osteotomy and reduction capabilities
- ODI 32%
- T5 - S1 Arthrodesis
- 85% Cobb angle improvement

Adult Degenerative

PRE-OP



POST-OP (AT 12 MONTHS)



- 78 years old male
- Obese
- Severe canal narrowing with back pain
- Progressing kyphosis
- ODI 62%
- L3-L4 Laminectomy
- Kyphosis correction

Notes



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References - Implants

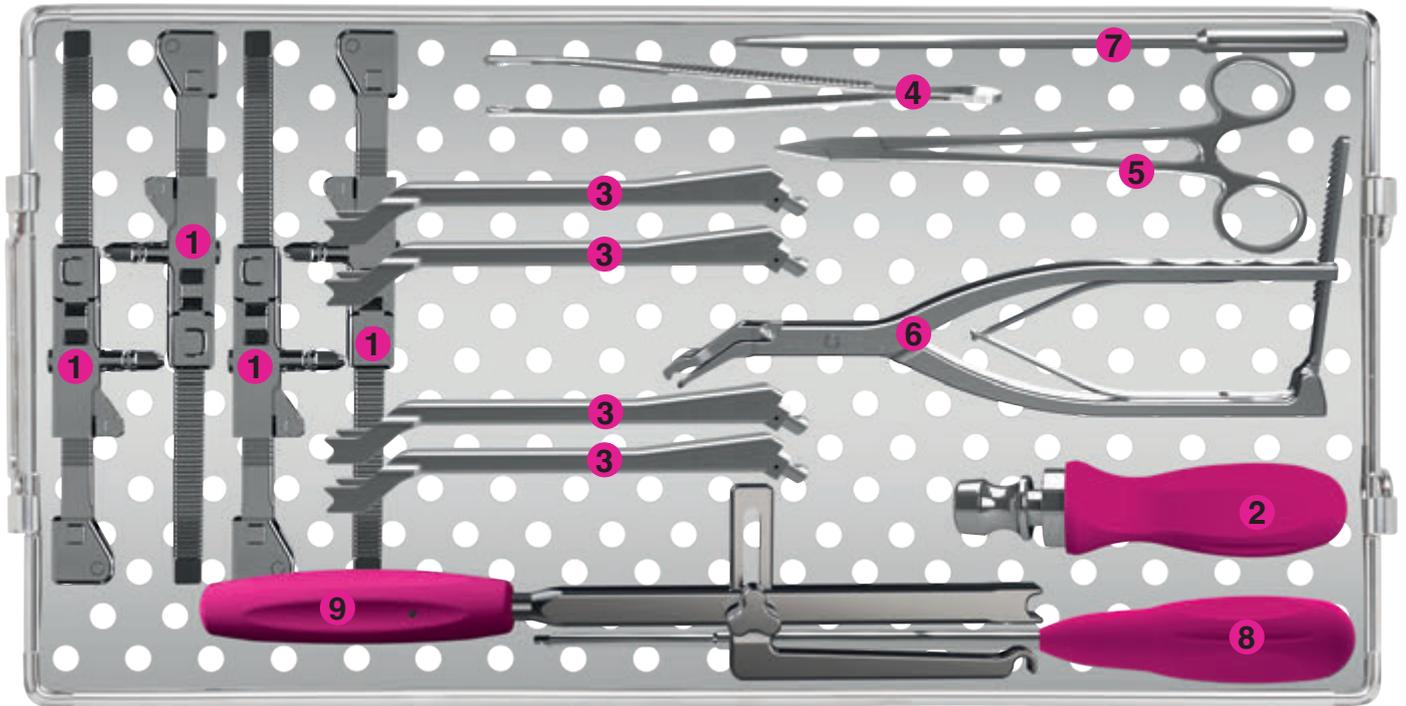
Jazz™	Reference	Designation
		150200 Jazz - Ø 3.5 Connector Kit (connector + screw)
		150202 Jazz - Ø 4 Connector Kit (connector + screw)
		150204 Jazz - Ø 4.5 Connector Kit (connector + screw)
		150206 Jazz - Ø 4.75 Connector Kit (connector + screw)
		150256 Jazz Evo - Ø 5 Connector Kit (connector + screw)
		150258 Jazz Evo - Ø 5.5 Connector Kit (connector + screw)
		150260 Jazz Evo - Ø 6 Connector Kit (connector + screw)
		150156 Jazz Band
		150157 Jazz Passer Band

References - Implants

	Reference	Designation
Jazz™ Claw		150710 Jazz Claw - Connector
		150711 Jazz Claw - Hook right
		150712 Jazz Claw - Hook left
		150713 Jazz Claw - Hook right large
		150714 Jazz Claw - Hook left large
		150715 Jazz Claw - Straight rod Dia. 4/5.5 L70
		150716 Jazz Claw - Straight rod Dia. 4/5.5 L70 - CoCr
		150717 Jazz Claw - Pre-bent rod Dia. 4/5.5 L70
		150718 Jazz Claw - Pre-bent rod Dia. 4/5.5 - L 70 - CoCr

	Reference	Designation
Jazz™ Frame		150721 Jazz Frame - T-Bar Ø 5.5/6.0 - L25
		150722 Jazz Frame - T-Bar - Ø 5.5/6.0 - L30
		150723 Jazz Frame - T-Bar - Ø 5.5/6.0 - L35
		150750 Jazz Frame - Straight rod L500
		150754 Jazz Frame - Straight rod Ø 6.0 L500

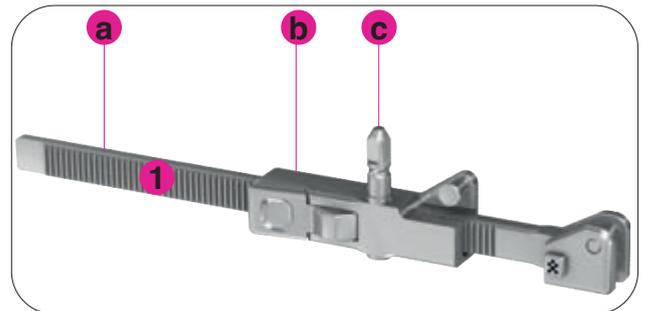
References - Instruments



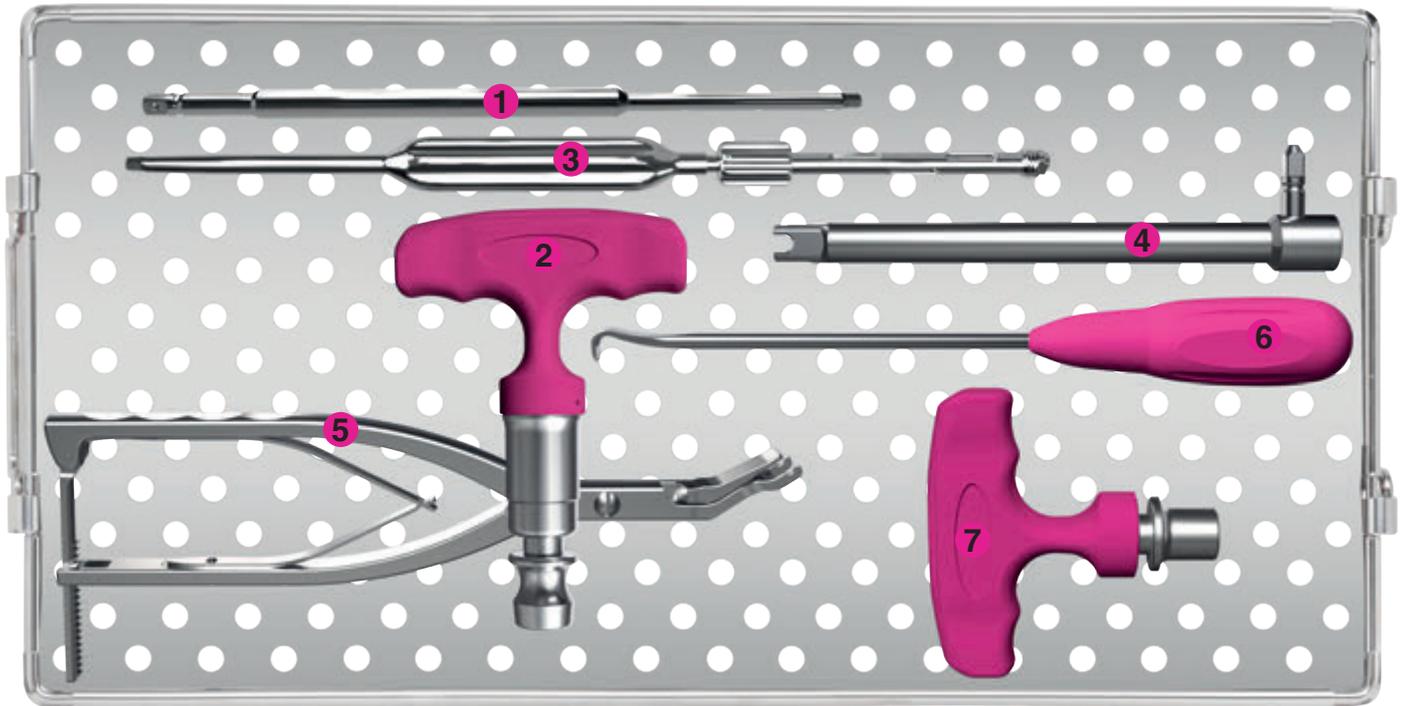
Reference Designation

Components

1	550295	Tensioner Gen. II	a	551295	Tensioner Gen. II - Ratchet
			b	551296	Tensioner Gen. II - Mobile Capstan Rack
			c	551297	Tensioner Gen. II - Winch
2	550026	Jazz - Straight Handle			
3	550317	Tensioner Gen. II - Universal 120° Stem			
4	550057	Jazz - Braid Forceps			
5	550058	Jazz - Braid Puller Forceps			
6	550061	Jazz - Universal Snapping Forceps			
7	550060	Jazz - Screw Holder			
8	550403	Hexagonal 3.5 Evo Screwdriver			
Optional					
3	550298	Tensioner Gen. II - Stem 90°			
3	550299	Tensioner Gen. II - Stem 120°			
3	550300	Tensioner Gen. II - Stem 135°			
3	550316	Tensioner Gen. II - Universal Stem 90°			
3	550318	Tensioner Gen. II - Universal Stem 135°			
3	550407	Tensioner Gen. II - Stem 3.5 - 4 mm			
6	550400	Jazz Snapping Forceps 3.5 - 4 mm			
9	550405	Jazz Apex Derotator			



References - Instruments



Reference Designation

1	550018	Blocker Screwdriver
2	550315	T-handle with Torque Limiter 12 N.m
3	550335	Jazz Claw - Implant Holder Hook / Blocker
4	550336	Jazz Claw - Anti-torque Wrench
5	550404	Jazz Claw - Snapping Forceps
6	550051	Laminar Elevator

Optional

7	550025	T-Handle
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