



SAMSON®

Expandable Vertebral Body Replacement



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About us

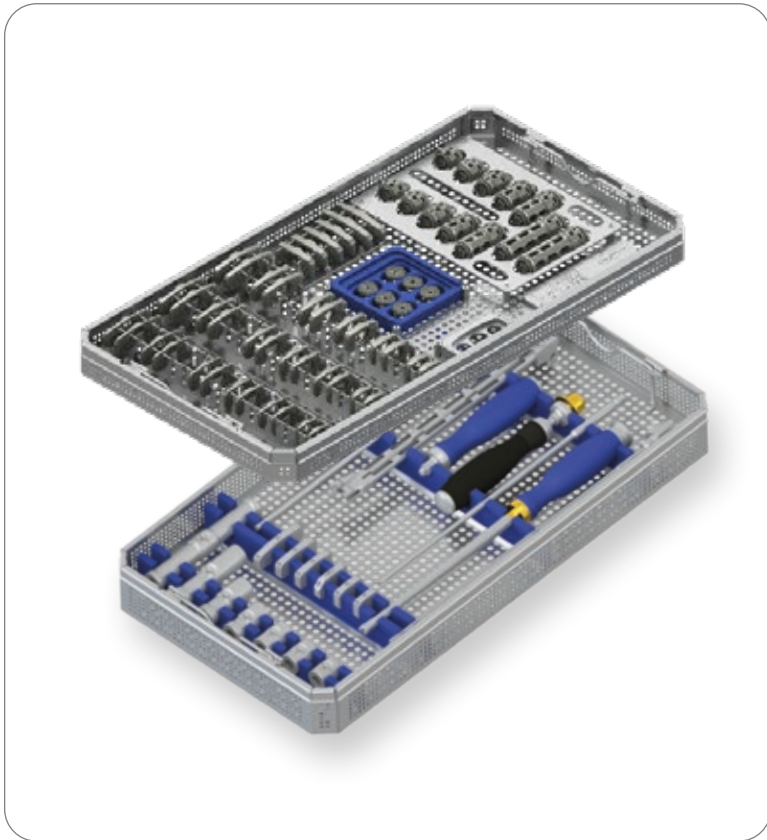
For a better life

The German family business HumanTech Spine with headquarter in Baden-Württemberg develops and manufactures all products inhouse and sells high-quality innovative spinal implant systems worldwide.

Our traditional company group, founded in 1948, is a reliable employer for around 500 employees and has a manufacturing area of approx. 15.000 m², in which our complete range of products is produced. Our high-tech manufacturing facilities as well as state-of-the-art, sustainable production and logistics processes guarantee high-quality and in-time-production and delivery processes.

The independent medical business segment with a focus on spine and dental was founded in 2010 and is now well-known and well represented in the national and international market. Together with renowned spinal surgeons, our development team breaks new ground every day to ensure that every patient receives uncompromisingly high-quality care.

The design of our systems follows the aim of maximum user-friendliness, safety and completeness. That's why HumanTech Spine counts as a reliable partner in the field of spine - in the area of research, development, production and marketing as well as in continuing education and training through our HumanTech Academy. Everything from a single source. This is how we ensure our quality promise 100% Made in Germany.



System

The SAMSON® Vertebral Body Replacement is an implant system for long-term use in anterior stabilisation of the upper thoracic to lower lumbar spine as a replacement for one or more vertebral bodies in patients whose general skeletal growth has ended.

The system is used for tumorous, inflammatory and traumatic diseases that lead to instabilities in the area of the anterior support or compression of neural structures or diseases that necessitate the repair of infections.

The SAMSON® system is designed for use with an additional dorsal (e.g. VENUS®), as well as a ventral fixation system (e.g. VENUSnano).

The system consists of implant base units and implant endplates in various sizes. The implant base units are available in different heights and expansion lengths for different defect heights. The implant endplates are available in various widths and angulations for adaptation to different vertebral body structures and for imaging the existing or achievable lordotic or kyphotic curvature of the spine. The unique anatomy of the individual patient can be taken into account by the possibility of connecting the various implant components with each other via Plate Screws.

All components of the SAMSON® Vertebral Body Replacement System are made of the titanium alloy Ti6Al4V, which has proven itself over many years in implantology.

The clear instrumentation was deliberately adapted to the needs of the surgeon.

SAMSON® offers special features to provide outstanding product-specific benefits:

anatomically:

- generous contact surface of the endplates
- stepless expansion
- all common access methods possible

stability:

- Pyramid-shaped tooth profile for primary fixation of the endplates
- Rotation-proof connection of the endplates on the implant base unit
- Stable expansion mechanism – no skipping

flexibility:

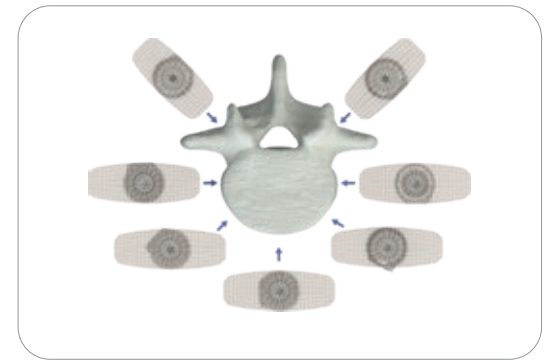
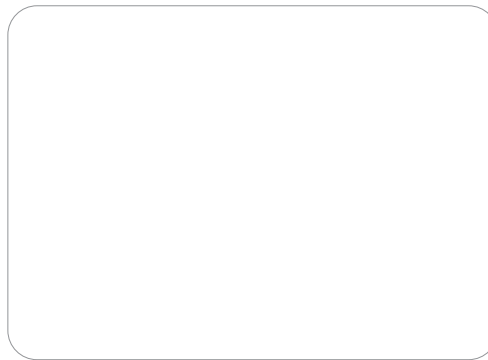
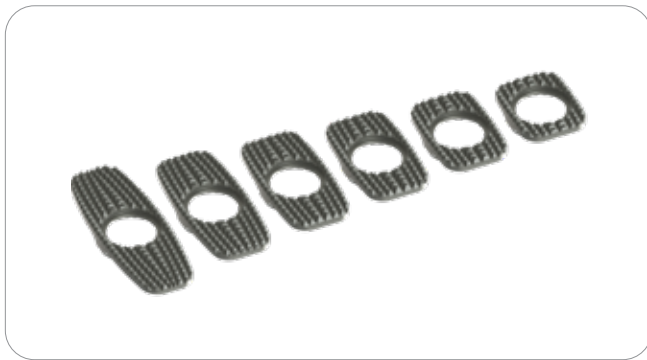
- Optimal adaptability to patient anatomy
- A range of different base unit heights
- Various freely combinable endplate widths and angulations



SAMSON®

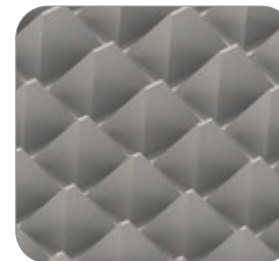
Expandable Vertebral Body Replacement

Product-specific benefits



Five outstanding product features

- 1 position-stable expansion mechanism, no skipping
- 2 stepless expansion
- 3 all common access methods possible
- 4 generous contact surface of the endplates
- 5 fully reversible



Access directions for SAMSON®

System

Thanks to the flexible connection geometry between implant base unit and endplate, all common access directions can be covered using the Samson® Vertebral Body Replacement.

Where a dorsolateral access is chosen, care should be taken to use 0° endplates if the implant remains in the access direction and the implant endplates are not rotated mediolaterally.

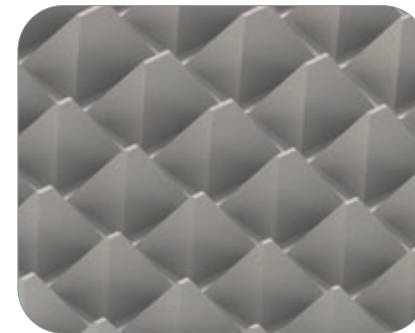
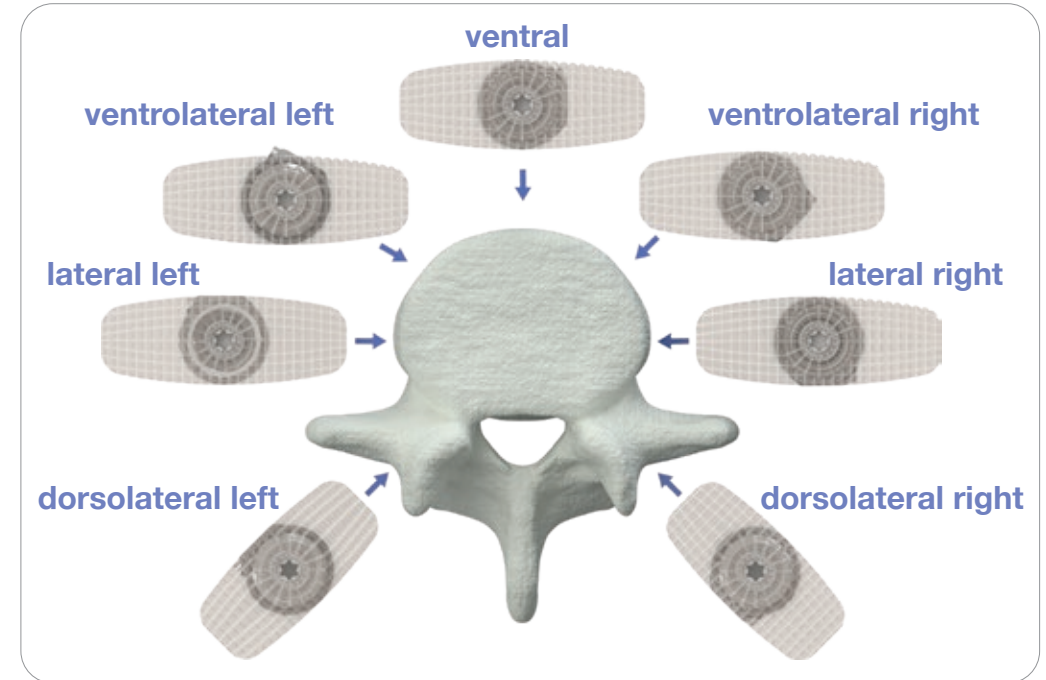
The endplates can be attached individually to the base unit every 15°. The Assembling Aid included in the set can be used to ensure that the desired assembly position of the endplates is achieved.

The slim construction of the base unit ensures that it does not protrude over the endplates or only protrudes slightly in selected assembly positions.



The endplate is connected to the base unit via a multi-profile form, which is identical for the cranial and caudal endplates. This rotation-proof connection is secured using a threaded connection between the Plate Screw and the implant base unit.

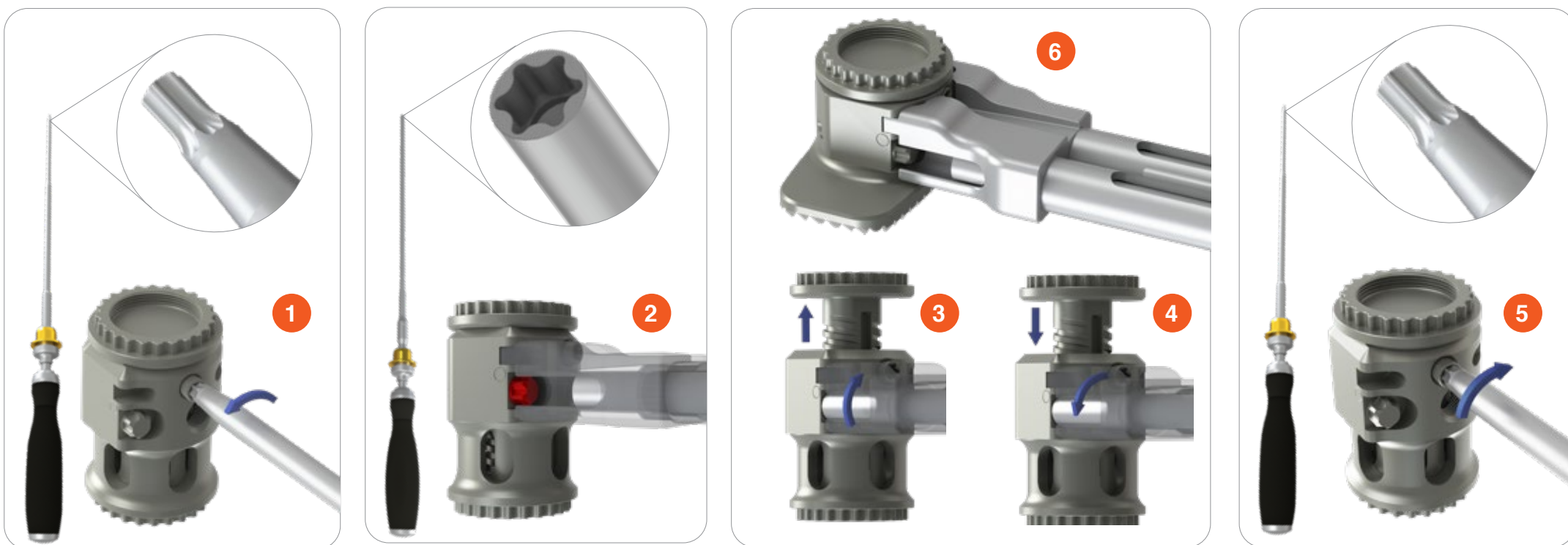
Primary fixation is assured by the pyramid-shaped tooting on the endplates.



Blasting of the endplate surface using blasting media such as ceramic and aluminium oxide produces a surface structure which promotes optimal osseointegration.

Functional test before use

To guarantee the function of the implant, a functional test must be performed. First, the locking screw located in the implant base unit should be loosened with the SAMSON Locking Screw Driver T10 by turning it 1 (maximum 2) rotation(s) anticlockwise (1). Then the SAMSON Inserter should be fitted to the implant base unit and fixed with the SAMSON Inserter Holder, as subsequently described in the surgical steps. The SAMSON Expander is then introduced into the SAMSON Inserter, as subsequently described, until it engages with the torx geometry of the gear mechanism on the implant base unit (marked in red) (2). The implant is expanded by turning the SAMSON Expander clockwise (3). Once functioning is ensured, the implant is turned back until it stops by turning the SAMSON Expander anticlockwise (4). When turning back, the torque wrench must not trigger, as this can damage the implant. After the test, the implant is locked again hand-tight (5). When turning back, the Torque Driver must not trigger, as this can damage the implant. If the implant is not used immediately after the functional test, the implant must be locked by hand-tightening the Locking Screw. In the process the Torque Driver must not trigger. The SAMSON Inserter can then be completely removed.



CAUTION:

When testing the function of VBR Size 1, an endplate must be fitted on the caudal side of the implant (the side facing away from the locking screw) before the test is carried out, as subsequently described (6).

Surgical technique



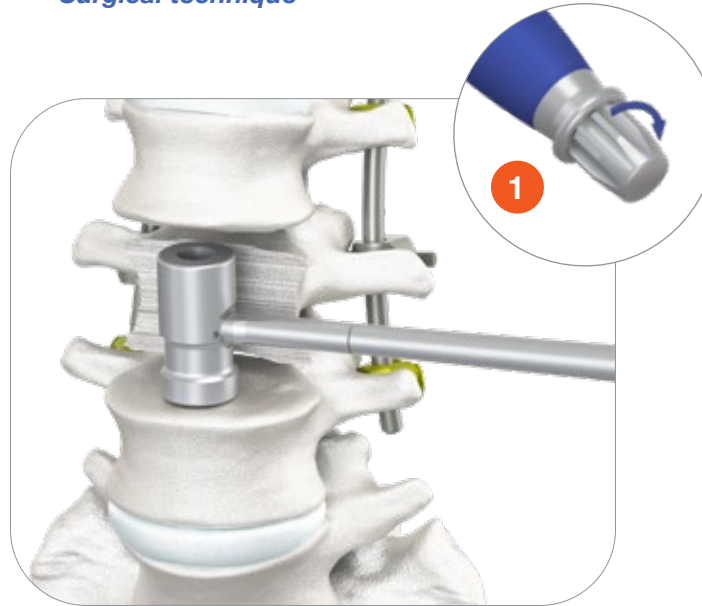
Opening the access and removing the vertebral body

The patient is positioned and the access is selected in line with the surgical area and disease profile (also see page 6).

After preparation of the access, a partial or full corpectomy is performed, depending on the anatomy, using appropriate surgical instruments. Careful preparation is required in order to ensure insertion and correct positioning of the implant. The adjacent intervertebral discs are also removed and the endplate surfaces prepared.

Caution:

Care should be taken not to damage the endplates. Damage to the endplates or excessive partial wearing of the endplates can lead to sintering of the implant and loss of segmental stability.



Determining the implant size

The correct implant size can be determined under X-ray control with the help of the SAMSON Trials. To connect the SAMSON Trial to the insertion instrument (PLIF Inserter A with ALIF/PLIF Inserter), the bar of the outer part of the insertion instrument (PLIF Inserter A) must be positioned in the groove of the SAMSON Trial. By screwing the inner part (ALIF/PLIF Inserter B) of the insertion instrument into the SAMSON Trial, the insertion instrument is fixed to the SAMSON Trial (1).

Note:

The SAMSON Trials should not be driven in with high force. The SAMSON Trial to be selected must be smaller than the space allowed by the defect, to allow subsequent expansion of the implant. The exact dimensional comparison between the SAMSON Trial the final implant is explained in greater detail on pages 16-17. If the corresponding SAMSON Trial is too large for the defect, the next size down must be selected.

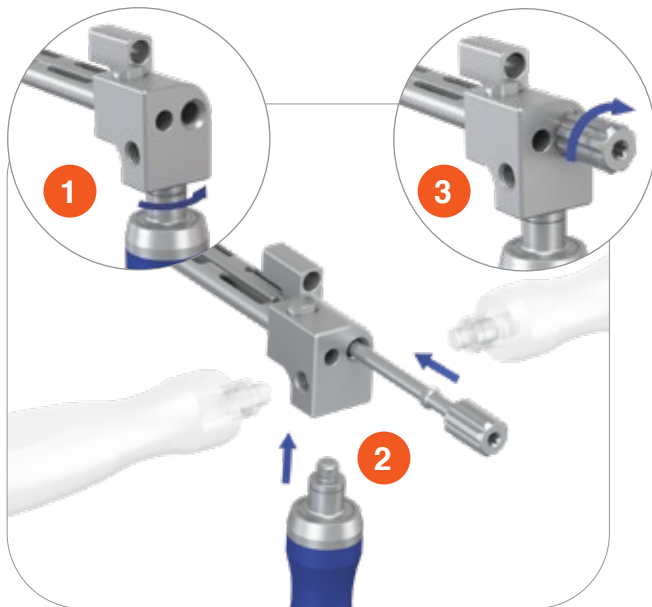


Determining the endplate size

The correct endplate size can be determined under X-ray control with the help of the SAMSON trials for the endplates (SAMSON Plate Trials). The insertion instrument (ALIF/PLIF Inserter B) is screwed into the chosen SAMSON Plate Trial and inserted into the space created. The required sagittal angle for the endplates is determined under X-ray control.

Note:

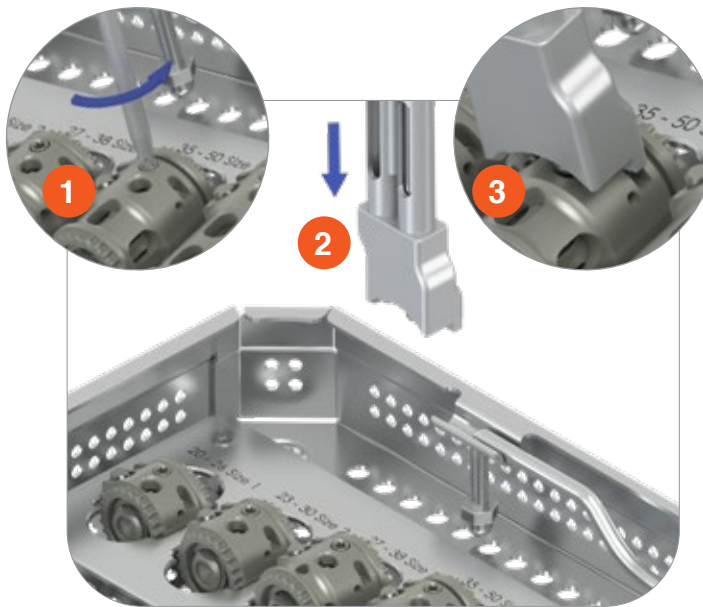
The endplates selected should be sufficiently large to make use of the maximum contact surface of the vertebral body. This will ensure the greatest possible stability and counteract implant sintering. However, to avoid injury to the adjacent structures, the endplates should not protrude beyond the vertebral body. The SAMSON trials for the endplates feature 3 threads, positioned at different angles (0°, 45°, 90°), to which the insertion instrument can be attached. This allows the SAMSON Plate Trial to be positioned in the space created, in line with the selected access.



Insertion of the SAMSON Inserter Holder

The SAMSON Inserter Handle can be secured to the SAMSON Inserter in different positions, depending on the specific application, via a threaded connection (1). The SAMSON Inserter Holder can then be introduced into the right-hand channel (when viewed from the rear) of the SAMSON Inserter (2). To bring the SAMSON Inserter Holder into its final position, turn it clockwise using the safety thread (3).

The safety thread protects against accidental loss of the SAMSON Inserter Holder.



Connecting the implant with the SAMSON Inserter I

The base unit that corresponds to the SAMSON Trial is selected. The locking screw located in the implant base unit should first be loosened with SAMSON Locking Screw Driver T10 by turning it 1 (maximum 2) rotation(s) anticlockwise (1). To do this, connect SAMSON Locking Screw Driver T10 to Torque Driver-2.3. The preassembled SAMSON Inserter can then be connected directly to the implant base unit (2). To do so, the lugs on the SAMSON Inserter must latch into the cut-outs on the implant base unit provided for this purpose (3).

Care should be taken to ensure exact axial alignment between the SAMSON Inserter and the implant base unit.

Caution:

Care should be taken to ensure that the locking screw is not loosened too far, as this may negatively impact the mobility of the expansion mechanism.

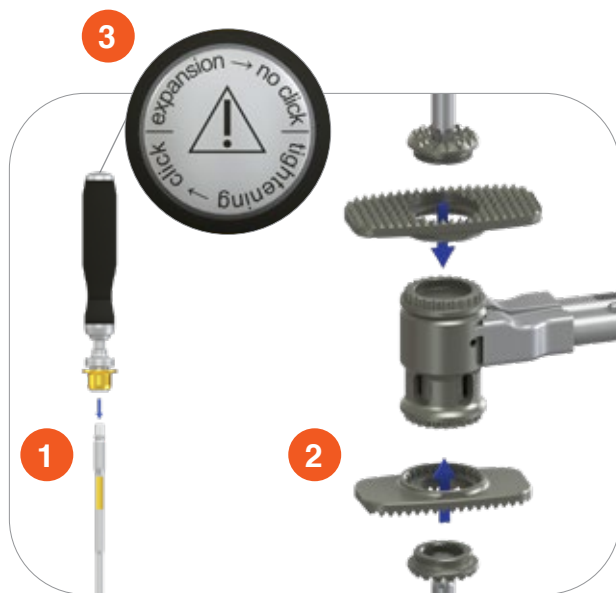


Connecting the implant with the SAMSON Inserter II

After the SAMSON Inserter has been attached to the implant base unit, this is connected securely to the implant base unit via a threaded connection by a turning movement on the handle of the SAMSON Inserter Holder.

Note:

To prevent damage to the implant or instruments, it is important to check that the implant sits correctly on the SAMSON Inserter. It must be possible to tighten the SAMSON Inserter Holder without any resistance. The implant can be pulled to check it is attached correctly. If the connection is stiff when attaching the implant, or is not connected correctly, the SAMSON Inserter must be attached to the implant again. In doing so, care should be taken to ensure exact alignment between the SAMSON Inserter and the implant.



Assembling the endplates I

The Torque Driver is connected to the LP Setscrew Driver (1).

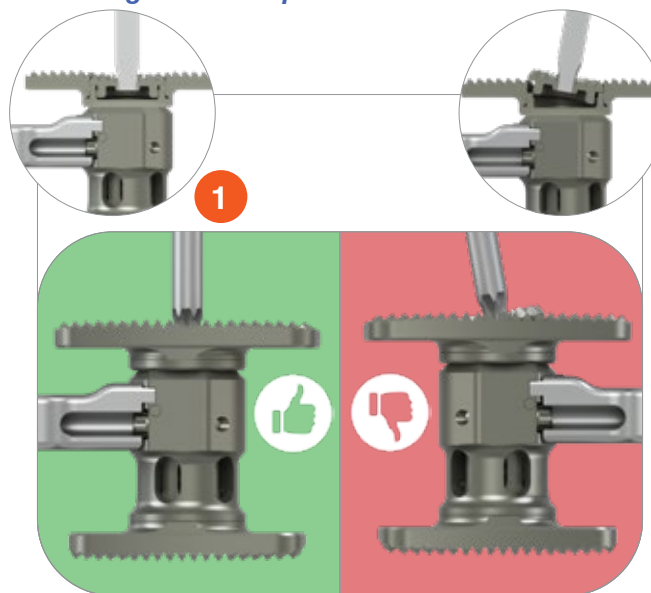
The selected endplates are placed on the multi-profile form of the base unit (2). Care should be taken to ensure that the endplates are correctly positioned for the cranial and caudal ends of the implant base unit.

The endplate is fixed to the implant base unit using the Plate Screw. The Plate Screw is inserted using the mounted LP Setscrew Driver and turned clockwise until the Torque Driver (2.3Nm) mechanism engages (clicks); see the note on the cap of the Torque Driver (3).

Note:

The endplates can be mounted individually on the implant base unit. Care should be taken to ensure that both endplates are mounted at the same angularity. The connection between the endplates and the base unit must be without clearance.

Surgical technique



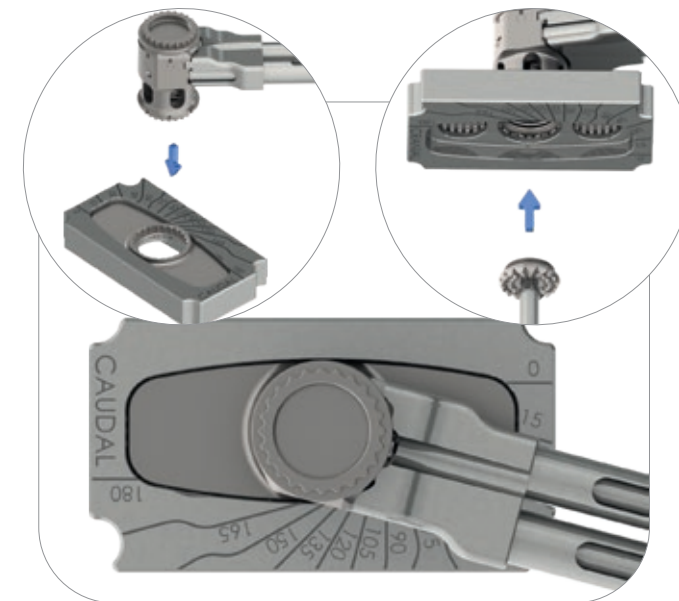
Assembling the endplates II

Where angled endplates are mounted, care should be taken to ensure that the Plate Screw is not inserted parallel to the surface of the endplate but on the same axis as the base unit (1). To prevent cross-threading while screwing in the Plate Screw, first turn the screw anticlockwise ca. half a rotation until you feel the thread “click” in the base unit. Then continue to screw in the Plate Screw.

If a stable connection between the endplates and the implant base unit is not achieved, the Plate Screw should be removed and repositioned.

The Plate Screw is fully fixed (2.3Nm) when a click signals the release of the Torque Driver, see also note on the cap of the Torque Driver.

When using 12° angled plates, additional anterior support is strongly recommended.

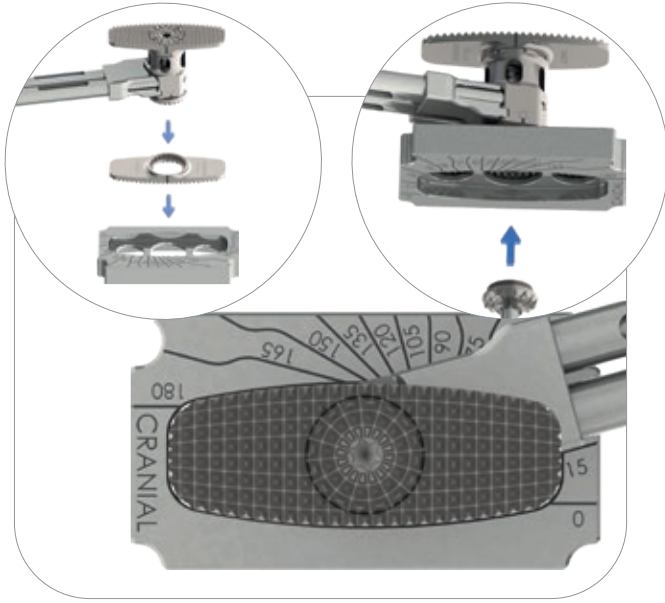


Assembling the caudal endplate using the Assembling Aid (optional)

The endplates can also be optionally attached to the implant base unit using the Assembling Aid. The endplate of the size previously determined for the caudal end is inserted into the Assembling Aid (marked CAUDAL). The unmarked end of the implant base unit is then placed in the desired position on the endplate. The endplate is then also screwed in from below using the Plate Screw. The Plate Screw is inserted using the mounted LP Setscrew Driver and turned clockwise until the Torque Driver (2.3Nm) engages (clicks).

Note:

The possible angulations for mounting the endplates on the implant base units are marked on the Assembling Aid.

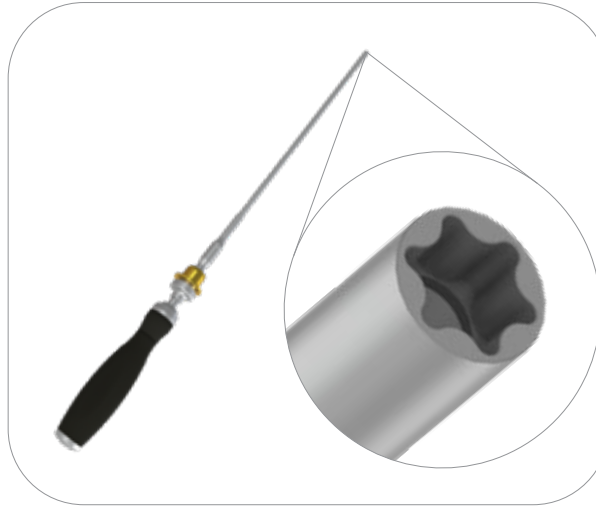


Assembling the cranial endplate using the Assembling Aid (optional)

The endplate intended for the cranial end is inserted into the Assembling Aid (marked CRANIAL). The preassembled implant base unit is attached to the cranial endplate with the end marked “CRANIAL” in the same position as the previously assembled caudal endplate. This endplate is then also screwed in from below using the Plate Screw. The Plate Screw is inserted using the mounted LP Setscrew Driver and turned clockwise until the Torque Driver (2.3Nm) engages (clicks).

Caution:

Care should be taken to ensure that both endplates are mounted at the same angle. This can be checked using the marking on the Assembling Aid.



Assembling the SAMSON Expander

The Torque Driver-2.3 must be separated from the LP Setscrew Driver and connected to the SAMSON Expander.



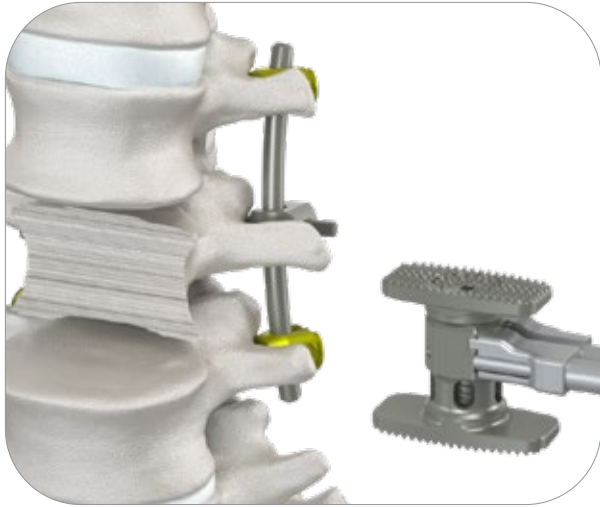
Inserting the SAMSON Expander

After the implant base unit has been secured and the corresponding endplates have been attached, the SAMSON Expander can then be introduced into the left-hand channel (when viewed from the rear) of the SAMSON Inserter. Press the button on the SAMSON Inserter to move the SAMSON Expander into its final position on the SAMSON Inserter. The torx geometry of the SAMSON Expander must be connected to the torx of the drive mechanism on the implant base unit.

Note:

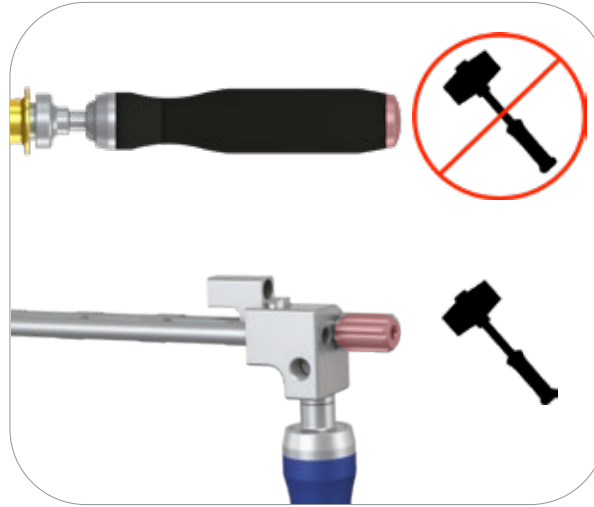
The SAMSON Expander is protected from accidental loss via the button mechanism located on the SAMSON Inserter.

Surgical technique



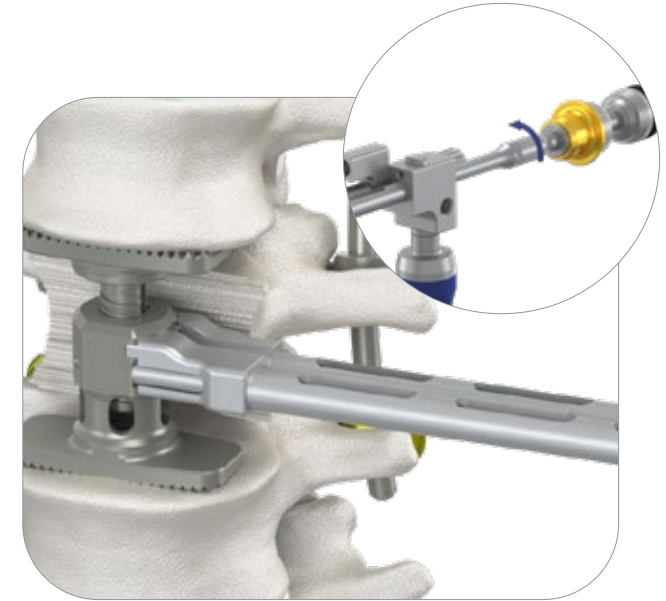
Insertion of the implant I

The preassembled implant secured on the SAMSON Inserter is inserted and the implant position is checked by X-ray. It is important to ensure that the endplates lie as flat as possible against the vertebral body endplates.



Insertion of the implant II

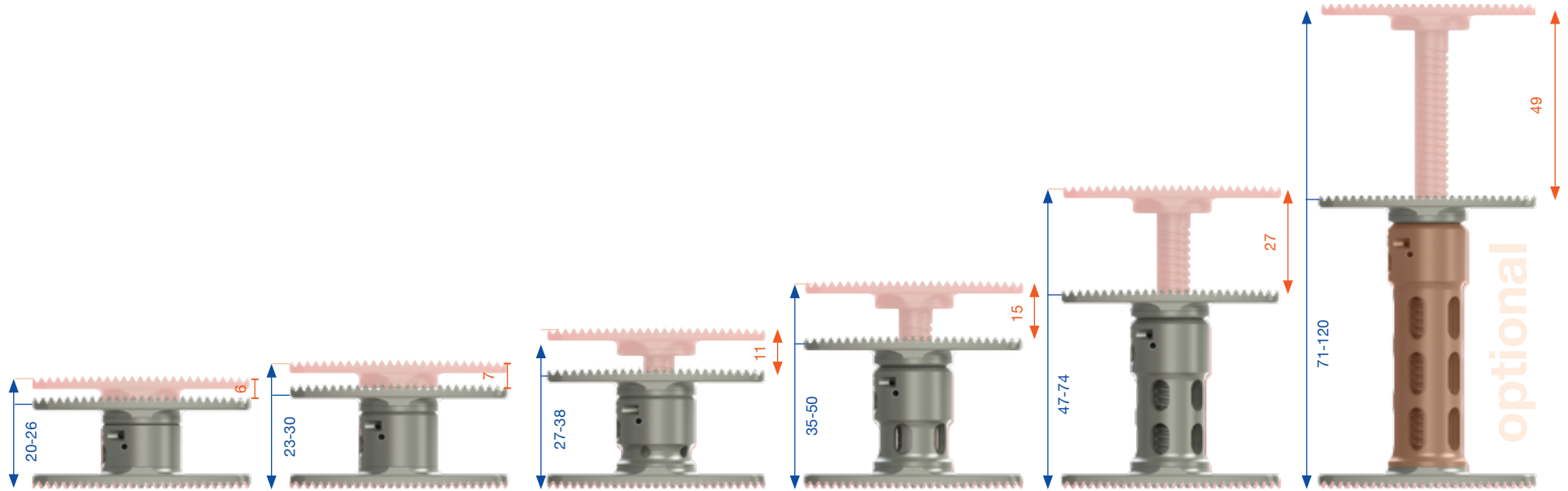
The Torque Driver-2.3 located on the SAMSON Expander must not be hit directly with a hammer as this may have a negative impact on the Torque Driver-2.3 mechanism. If it is necessary to use a hammer when inserting the implant, the SAMSON Expander may be removed from the SAMSON Inserter by pressing the button. The handle of the SAMSON Inserter Holder can be used as a striking cap.



Expansion of the implant

The implant can be expanded by turning the SAMSON Expander located on the SAMSON Inserter clockwise, and retracted again by turning the SAMSON Expander anticlockwise. 7 rotations of the SAMSON Expander correspond to a 2mm change in the height of the implant.

Expansion should continue until the defect is fully bridged, the desired profile has been achieved and the pre-tensioned implant is placed between the adjacent vertebral bodies.



Notes:

The torque-limited SAMSON Expander protects the implant components from being overloaded and therefore the triggering of the torque limitation is not to strive for the expansion of the implant. See also the note on the cap of Torque Driver-2.3.



If the Torque Driver-2.3 mechanism engages, further distraction is not possible. This may be caused by the following:

- The implant is fully expanded. The maximum possible expansion of the implant is determined by an integrated, fixed mechanical expansion stopping point. The maximum distraction can be determined by comparing the implant visible under X-ray, and

the corresponding expansion height, with the implant heights shown on page 17. If the selected implant height is not sufficient to bridge the defect to the desired extent, the base unit should be exchanged for the next size up.

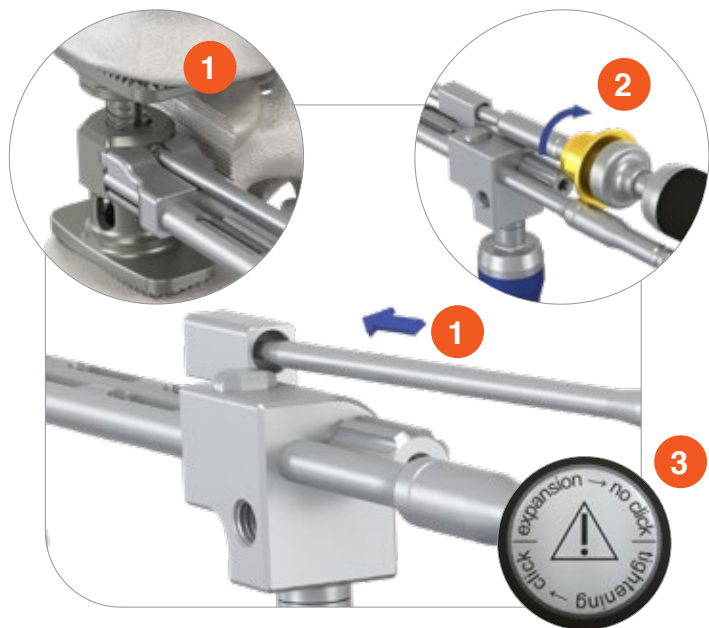
- The defect has not been sufficiently freed up. If a further distraction is required, the defect must be freed up further.
- If a stiffness occurs or increased force is required, the locking screw should be checked to ensure it has been sufficiently loosened. To do this, insert SAMSON Locking Screw Driver T10 with the attached Torque Driver into the locking screw, using the guide on the SAMSON Inserter, tighten the screw by turning it clockwise and then open it by turning 1 or 2 rotations.

The implant can be compressed at any time without using force. If the required force increases, the implant's minimum size has been reached and further attempts to compress it may result in damage to the implant.

Caution:

The implant must be implanted under pre-tension in order to avoid dislocation.

Expansion of the implant must be performed under continuous X-ray control in order to avoid over-distraction or damage to the vertebral body endplates or other implant components, such as the posterior fixation.



Locking the expansion mechanism

Once the implant is expanded, the mechanism must be locked. To do this, SAMSON Locking Screw Driver T10 is inserted into Torque Driver-2.3. The assembled instruments are then inserted into the torx on the locking screw using the guide (1) on the SAMSON Inserter.

The locking screw is then tightened clockwise until the Torque Driver-2.3 mechanism engages (2). After the final fixation, the SAMSON Locking Screw Driver T10 can be removed again.

Note:

The locking screw is fully fixed (2.3Nm) when the Torque Driver-2.3 mechanism engages (indicated by a click). See also the note on the cap of Torque Driver-2.3.

Surgical technique

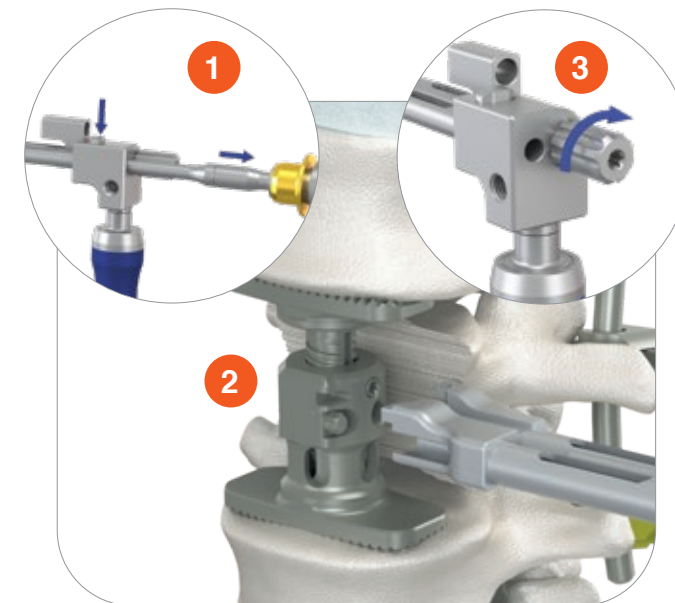


Loosening the SAMSON Inserter

If the implant is expanded to its anticipated final position and fixed in place, the screw connection with the implant can be loosened by turning the handle located on the SAMSON Inserter Holder anticlockwise. The SAMSON Inserter can then be removed. If it is difficult to loosen the SAMSON Inserter Holder, the LP Setscrew Driver can be used.

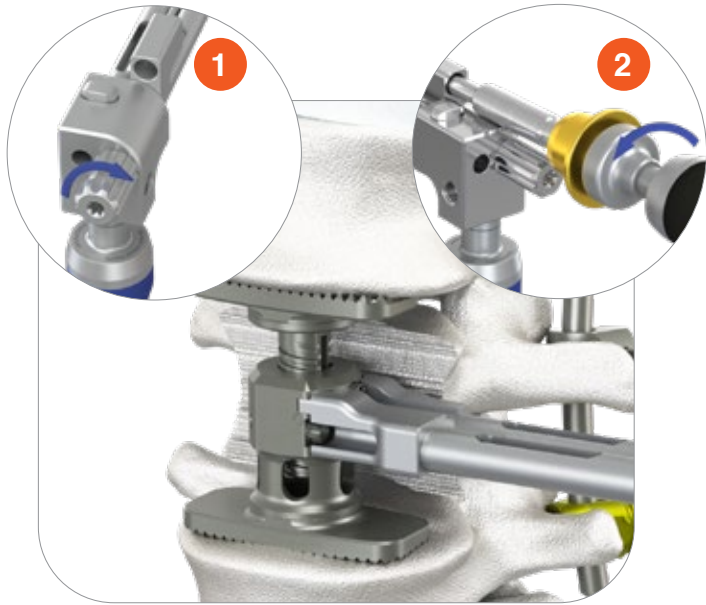
Note:

The screw connection on the SAMSON Inserter Holder must be fully loosened before the SAMSON Inserter can be removed.



Subsequent placement of the SAMSON Inserter

The SAMSON Inserter can be attached to the implant again if the position needs to be corrected. To do this, the SAMSON Expander must be removed from the SAMSON Inserter (1). Care should be taken to ensure exact alignment of the SAMSON Inserter with the implant. The lugs on the SAMSON Inserter must latch into the cut-outs on the implant base unit provided for this purpose (2). It must be possible to tighten the SAMSON Inserter Holder without any resistance (3). If the connection is stiff when attaching the implant, or is not connected correctly, the SAMSON Inserter must be attached to the implant again. The instrument can be pulled to check it is attached correctly.



Subsequent correction of position

Correction of the position using a hammer may only be carried out with a fully fixed SAMSON Inserter Holder (1), in order to avoid possible damage to the implant or instruments.

If the implant needs to be subsequently compressed in order to correct the position, the locking screw must be loosened before compression. To do this, insert SAMSON Locking Screw Driver T10 into the locking screw again using the guide, and loosen the locking screw by turning it anticlockwise 1 (maximum 2) rotations (2).

Note:

Avoid striking the endplates of the implant, as this may have a negative impact on the mobility of the expansion mechanism.

Final construction

The SAMSON® Vertebral Body Replacement is finally placed in the corpectomy space.

An additional dorsal fixation (e.g. with the VENUS® screw-rod system) including cross-connector elements is necessary.

When using a SAMSON implant base bodies Size 5 or Size 6, or when using 12 ° angled endplates mounted at the caudal and cranial position on the implant base body, ventral support (such as the VENUSnano®-Screw Rod System) is strongly advised.

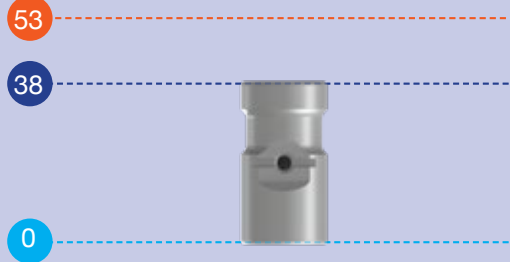
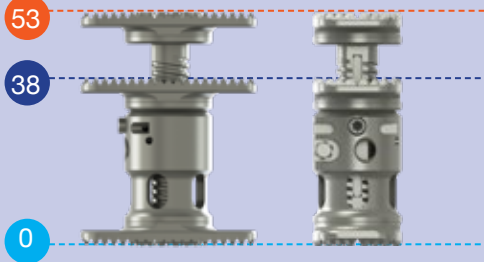
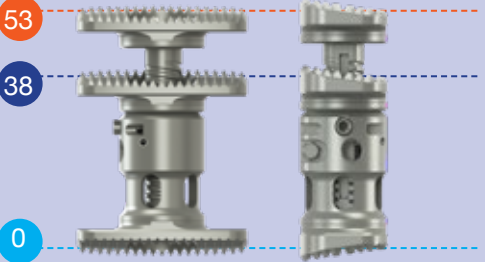
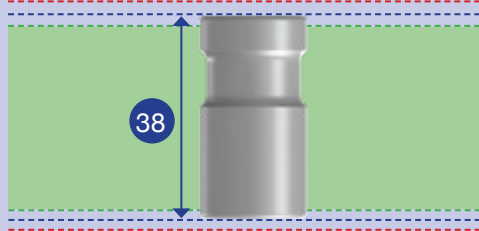
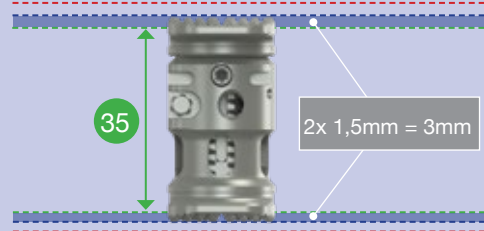
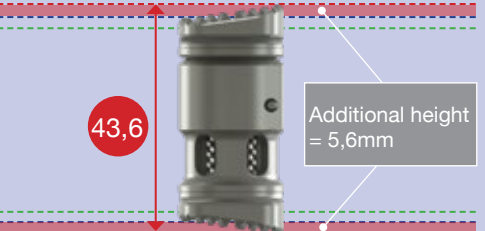
SAMSON®- expansion mechanism

The expansion mechanism used by the SAMSON Vertebral Body Replacement is based on a worm drive

The following advantages result from this:

- Stepless, extremely fine height adjustment possible
- No undesired reversal of the expansion mechanism
- No “springing back” of the expansion mechanism and thus no loss of height
- Extremely low force needed for expansion
- fully reversible

Demonstration of the correlation between SAMSON Trial and implant (SAMSON VBR Size 4 (35-50 mm) used as an example)

<p>Diagram:</p>	<p>SAMSON Trial</p> <p>Height of SAMSON Trial/ total height:</p> 	<p>Implant with 0° endplates</p> <p>--- compressed state --- --- max. expanded state ---</p> 	<p>Implant with angled endplates</p> 														
<p>Notes:</p>	<p>The SAMSON Trials demonstrate the assembled implants in the compressed state with 0° endplates, including tothing.</p>	<p>Because of the attached endplates, the height of the SAMSON Trial or the assembled implant is 3 mm larger than the base unit size indicated.</p>	<p>Angled endplates result in additional height at the highest position:</p> <table border="1" data-bbox="1608 774 2094 981"> <thead> <tr> <th>Angulation</th> <th>Additional height</th> </tr> </thead> <tbody> <tr> <td>0°/4°</td> <td>1,4mm</td> </tr> <tr> <td>0°/8° bzw. 4°/4°</td> <td>2,8mm</td> </tr> <tr> <td>4°/8° bzw. 0°/12°</td> <td>2,8mm</td> </tr> <tr> <td>8°/8° bzw. 4°/12°</td> <td>5,6mm</td> </tr> <tr> <td>8°/12° = 7,0mm</td> <td>7,0mm</td> </tr> <tr> <td>12°/12° = 8,4mm</td> <td>8,4mm</td> </tr> </tbody> </table>	Angulation	Additional height	0°/4°	1,4mm	0°/8° bzw. 4°/4°	2,8mm	4°/8° bzw. 0°/12°	2,8mm	8°/8° bzw. 4°/12°	5,6mm	8°/12° = 7,0mm	7,0mm	12°/12° = 8,4mm	8,4mm
Angulation	Additional height																
0°/4°	1,4mm																
0°/8° bzw. 4°/4°	2,8mm																
4°/8° bzw. 0°/12°	2,8mm																
8°/8° bzw. 4°/12°	5,6mm																
8°/12° = 7,0mm	7,0mm																
12°/12° = 8,4mm	8,4mm																
<p>Visualisation on a SAMSON VBR Size 4 and 2x 8° endplates:</p>																	

--> All figures are in millimetres unless otherwise indicated
 --> Diagrams are not to scale

Endplate combination possibilities with resulting implant heights

Type	state		0°/0°	0°/4° = 4°/0°	0°/8° = 8°/0° = 4°/4°	0°/12° = 12°/0° = 4°/8° = 8°/4°	4°/12° = 12°/4° = 8°/8°	8°/12° = 12°/8°	12°/12°	Associated SAMSON Trial	Height of associated SAMSON Trial
VBR Size 1 (20-26)	Compressed	Including toothings	23mm	24,4mm	25,8mm	27,2mm	28,6mm	30mm	31,4mm	Samson Trial Size 1	23mm
		Excluding toothings	20mm	21,4mm	22,8mm	24,2mm	25,6mm	27mm	28,4mm		
	Max. expansion	Including toothings	26mm	27,4mm	28,8mm	30,2mm	31,6mm	33mm	34,4mm		
		Excluding toothings	23mm	24,4mm	25,8mm	27,2mm	28,6mm	30mm	31,4mm		
VBR Size 2 (23-30)	Compressed	Including toothings	26mm	27,4mm	28,8mm	30,2mm	31,6mm	33mm	34,4mm	Samson Trial Size 2	26mm
		Excluding toothings	23mm	24,4mm	25,8mm	27,2mm	28,6mm	30mm	31,4mm		
	Max. expansion	Including toothings	33mm	34,4mm	35,8mm	37,2mm	38,6mm	40mm	41,4mm		
		Excluding toothings	30mm	31,4mm	32,8mm	34,2mm	35,6mm	37mm	38,4mm		
VBR Size 3 (27-38)	Compressed	Including toothings	30mm	31,4mm	32,8mm	34,2mm	35,6mm	37mm	38,4mm	Samson Trial Size 3	30mm
		Excluding toothings	27mm	28,4mm	29,8mm	31,2mm	32,6mm	34mm	35,4mm		
	Max. expansion	Including toothings	41mm	42,4mm	43,8mm	45,2mm	46,6mm	48mm	49,4mm		
		Excluding toothings	38mm	39,4mm	40,8mm	42,2mm	43,6mm	45mm	46,4mm		
VBR Size 4 (35-50)	Compressed	Including toothings	38mm	39,4mm	40,8mm	42,2mm	43,6mm	45mm	46,4mm	Samson Trial Size 4	38mm
		Excluding toothings	35mm	36,4mm	37,8mm	39,2mm	40,6mm	42mm	43,4mm		
	Max. expansion	Including toothings	53mm	54,4mm	55,8mm	57,2mm	58,6mm	60mm	61,4mm		
		Excluding toothings	50mm	51,4mm	52,8mm	54,2mm	55,6mm	57mm	58,4mm		
VBR Size 5 (47-74)	Compressed	Including toothings	50mm	51,4mm	52,8mm	54,2mm	55,6mm	57mm	58,4mm	Samson Trial Size 5	50mm
		Excluding toothings	47mm	48,4mm	49,8mm	51,2mm	52,6mm	54mm	55,4mm		
	Max. expansion	Including toothings	77mm	78,4mm	79,8mm	81,2mm	82,6mm	84mm	85,4mm		
		Excluding toothings	74mm	75,4mm	76,8mm	79,2mm	79,6mm	81mm	82,4mm		
VBR Size 6 (71-120)	Compressed	Including toothings	74mm	75,4mm	76,8mm	78,2mm	79,6mm	81mm	82,4mm	Samson Trial Size 6	74mm
		Excluding toothings	71mm	72,4mm	73,8mm	75,2mm	76,6mm	78mm	79,4mm		
	Max. expansion	Including toothings	123mm	124,4mm	125,8mm	127,2mm	128,6mm	130mm	131,4mm		
		Excluding toothings	120mm	121,4mm	122,8mm	124,2mm	125,6mm	127mm	128,4mm		

Rule of thumb for determining the necessary base unit height:

- SAMSON Trial has clearance in the prepared implant seat:
--> the base unit to be selected corresponds to the size of the SAMSON Trial
- SAMSON Trial fits press-fit in the prepared implant seat:
--> the base unit to be selected should be one size smaller than the selected SAMSON Trial
- SAMSON Trial does not fit in the prepared implant seat:
--> the base unit to be selected should be at least one size smaller than the selected SAMSON Trial; re-check the height with a smaller SAMSON Trial



SAMSON Trials Base units



Item no.	Description
2000041020	Samson Trial Size 1
2000041023	Samson Trial Size 2
2000041027	Samson Trial Size 3
2000041035	Samson Trials Size 4
2000041047	Samson Trial Size 5
2000041071	Samson Trial Size 6 optional
2000041120	Samson Trial Size Max optional
2000042520	Samson Plate Trial 25x20
2000043020	Samson Plate Trial 30x20
2000043520	Samson Plate Trial 35x20
2000044020	Samson Plate Trial 40x20
2000044520	Samson Plate Trial 45x20
2000045520	Samson Plate Trial 55x20

SAMSON Trials Plates



SAMSON®-Base Units, non-sterile

Item no.	Name	Diameter	Height when compressed	Height at max. expansion	
2000012026	VBR Size 1 (20-26mm)	20mm	20mm	26mm	
2000012330	VBR Size 2 (23-30mm)		23mm	30mm	
2000012738	VBR Size 3 (27-38mm)		27mm	38mm	
2000013550	VBR Size 4 (35-50mm)		35mm	50mm	
2000014774	VBR Size 5 (47-74mm)		47mm	74mm	
20000171120	VBR Size 6 (71-120mm)		71mm	120mm	optional

Note:

The preassembled base units are supplied in the fully compressed position. After washing and preparation, the base units should also be stored in the implant tray in the compressed position.

SAMSON®-Base Units, sterile



Item no.	Name	Diameter	Height when compressed	Height at max. expansion	
2000012026-S	VBR Size 1 (20-26mm) sterile	20mm	20mm	26mm	
2000012330-S	VBR Size 2 (23-30mm) sterile		23mm	30mm	
2000012738-S	VBR Size 3 (27-38mm) sterile		27mm	38mm	
2000013550-S	VBR Size 4 (35-50mm) sterile		35mm	50mm	
2000014774-S	VBR Size 5 (47-74mm) sterile		47mm	74mm	
20000171120-S	VBR Size 6 (71-120mm) sterile		71mm	120mm	optional

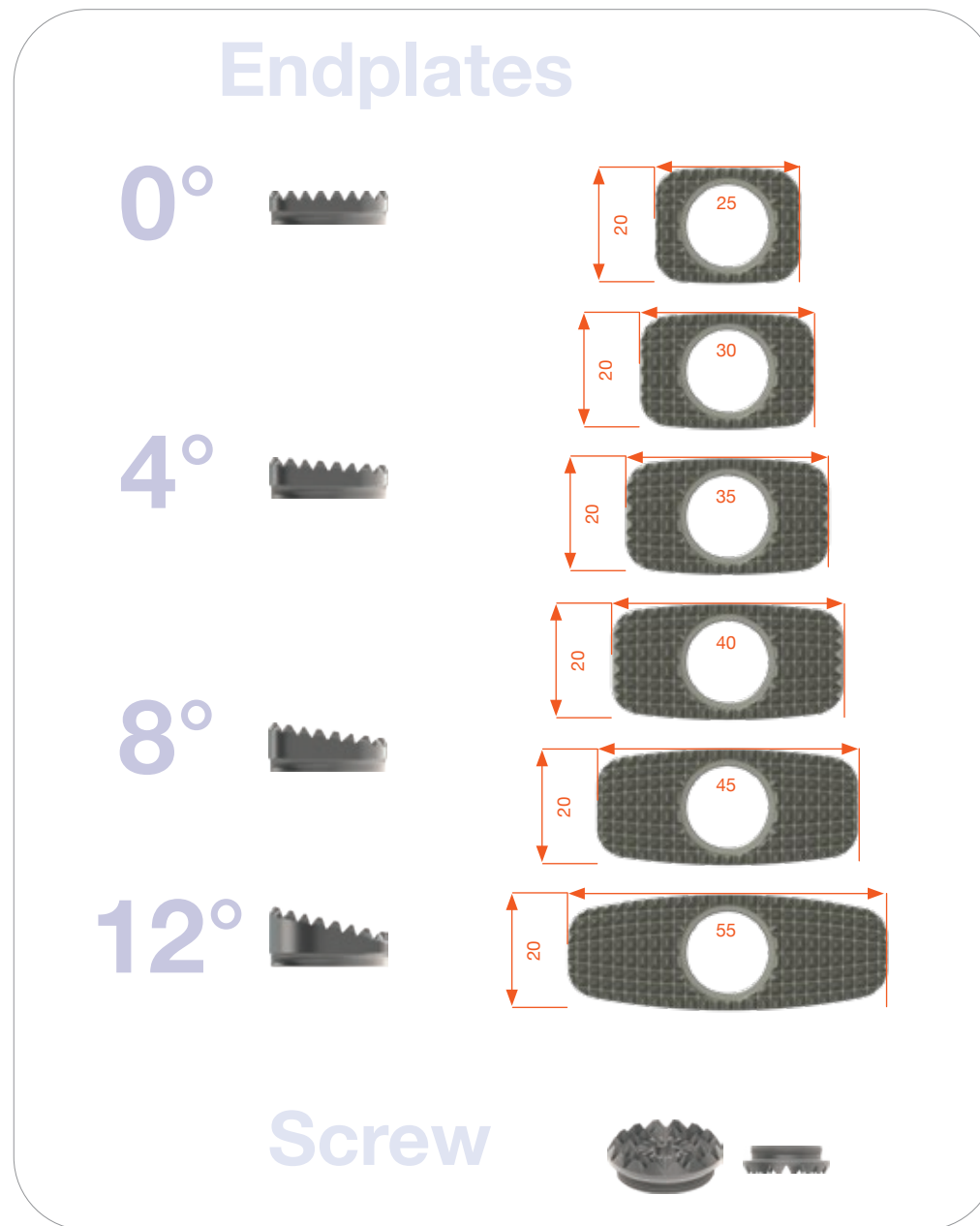
Note:

The preassembled base units are supplied in the fully compressed position.

Base units

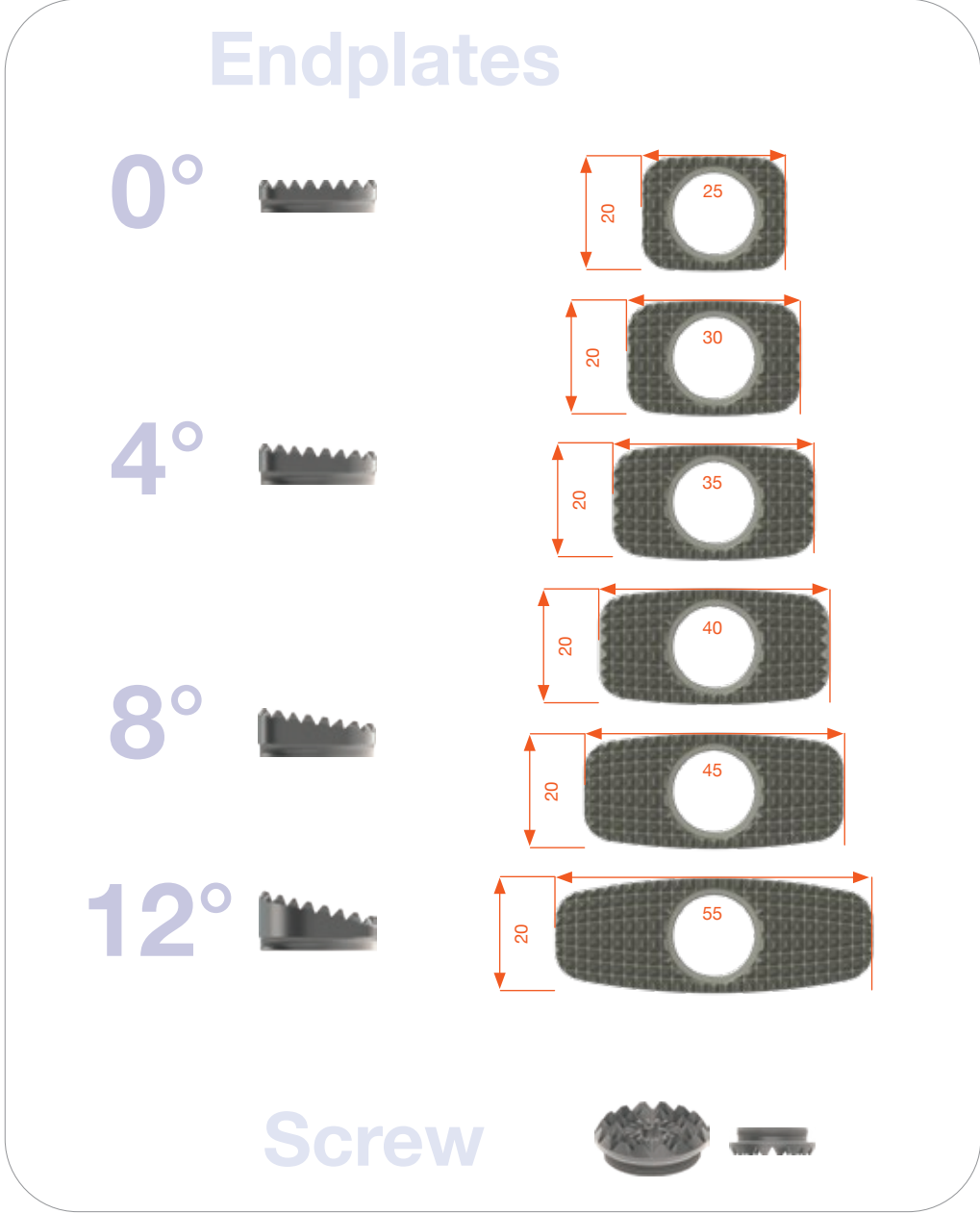


Item no.	Name	Length	Width	Angle
2000022500	Plate 25x20mm 0°	20mm	25 mm	0°
2000023000	Plate 30x20mm 0°		30 mm	
2000023500	Plate 35x20mm 0°		35 mm	
2000024000	Plate 40x20mm 0°		40 mm	
2000024500	Plate 45x20mm 0°		45 mm	
2000025500	Plate 55x20mm 0°	55 mm		
2000022504	Plate 25x20mm 4°	20mm	25 mm	4°
2000023004	Plate 30x20mm 4°		30 mm	
2000023504	Plate 35x20mm 4°		35 mm	
2000024004	Plate 40x20mm 4°		40 mm	
2000024504	Plate 45x20mm 4°		45 mm	
2000025504	Plate 55x20mm 4°	55 mm		
2000022508	Plate 25x20mm 8°	20mm	25 mm	8°
2000023008	Plate 30x20mm 8°		30 mm	
2000023508	Plate 35x20mm 8°		35 mm	
2000024008	Plate 40x20mm 8°		40 mm	
2000024508	Plate 45x20mm 8°		45 mm	
2000025508	Plate 55x20mm 8°	55 mm		
2000024012	Plate 40x20mm 12°	20mm	40 mm	12°
2000024512	Plate 45x20mm 12°		45 mm	
2000025512	Plate 55x20mm 12°		55 mm	
2000010003	Plate Screw			









STERILE

Item no.	Name	Lenght	Width	Angle
2000022500-S	Plate 25x20mm 0° sterile	20mm	25 mm	0°
2000023000-S	Plate 30x20mm 0° sterile		30 mm	
2000023500-S	Plate 35x20mm 0° sterile		35 mm	
2000024000-S	Plate 40x20mm 0° sterile		40 mm	
2000024500-S	Plate 45x20mm 0° sterile		45 mm	
2000025500-S	Plate 55x20mm 0° sterile		55 mm	
2000022504-S	Plate 25x20mm 4° sterile	20mm	25 mm	4°
2000023004-S	Plate 30x20mm 4° sterile		30 mm	
2000023504-S	Plate 35x20mm 4° sterile		35 mm	
2000024004-S	Plate 40x20mm 4° sterile		40 mm	
2000024504-S	Plate 45x20mm 4° sterile		45 mm	
2000025504-S	Plate 55x20mm 4° sterile		55 mm	
2000022508-S	Plate 25x20mm 8° sterile	20mm	25 mm	8°
2000023008-S	Plate 30x20mm 8° sterile		30 mm	
2000023508-S	Plate 35x20mm 8° sterile		35 mm	
2000024008-S	Plate 40x20mm 8° sterile		40 mm	
2000024508-S	Plate 45x20mm 8° sterile		45 mm	
2000025508-S	Plate 55x20mm 8° sterile		55 mm	
2000024012-S	Plate 40x20mm 12° sterile	20mm	40 mm	12°
2000024512-S	Plate 45x20mm 12° sterile		45 mm	
2000025512-S	Plate 55x20mm 12° sterile		55 mm	
2000010003-S	Plate Screw sterile			



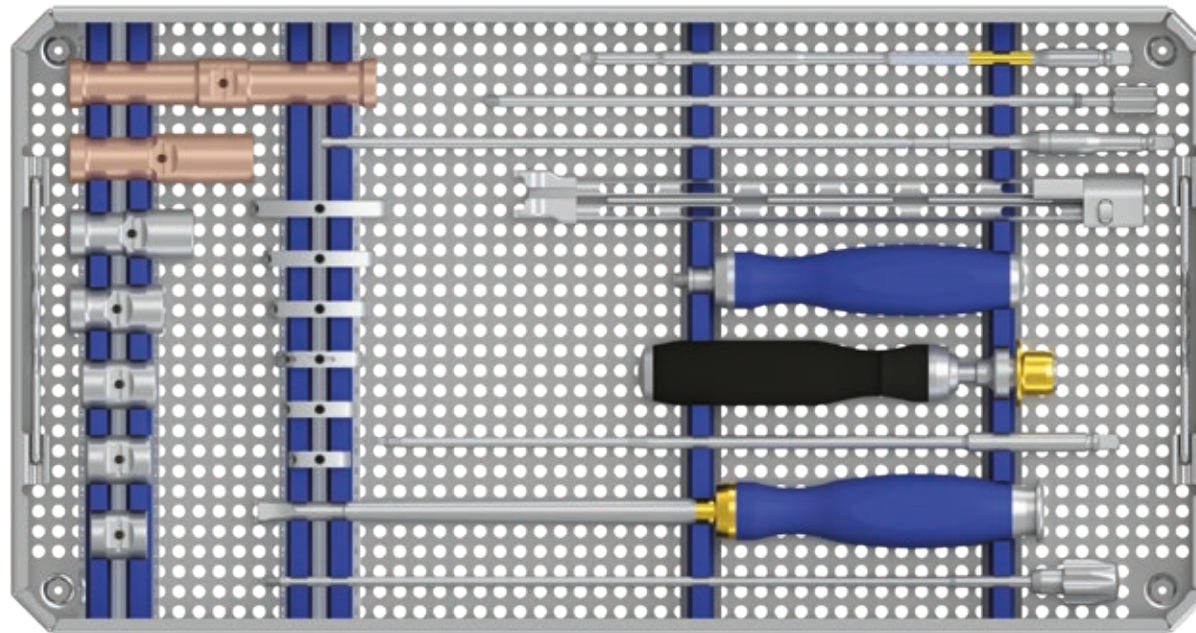
SAMSON®-Instruments

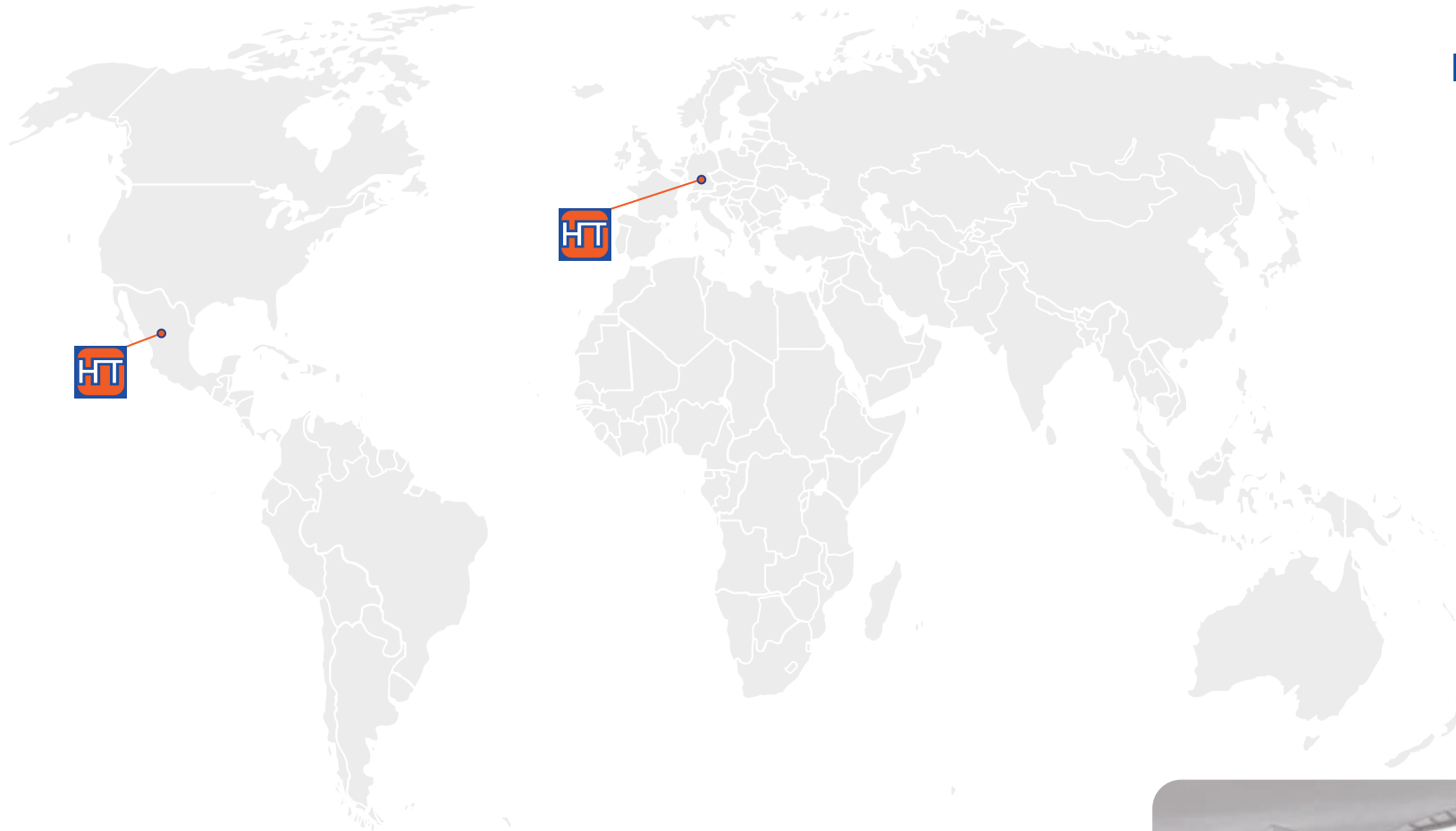
Item no.	Description	
2000040000	SAMSON Inserter	
2000040010	SAMSON Inserter Holder	
2000040001	Samson Locking Screw Driver T 10	
2000040021	SAMSON Expander torque-limited	
2000040000-4	SAMSON Inserter Handle	
1701010000	PLIF Inserter consisting of: <ul style="list-style-type: none"> • PLIF Inserter A • ALIF/PLIF Inserter B 	

SAMSON®-Instruments

Item no.	Description	
2200010008	LP Setscrew Driver	
2000040231	Torque Driver 2,3	

optional





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