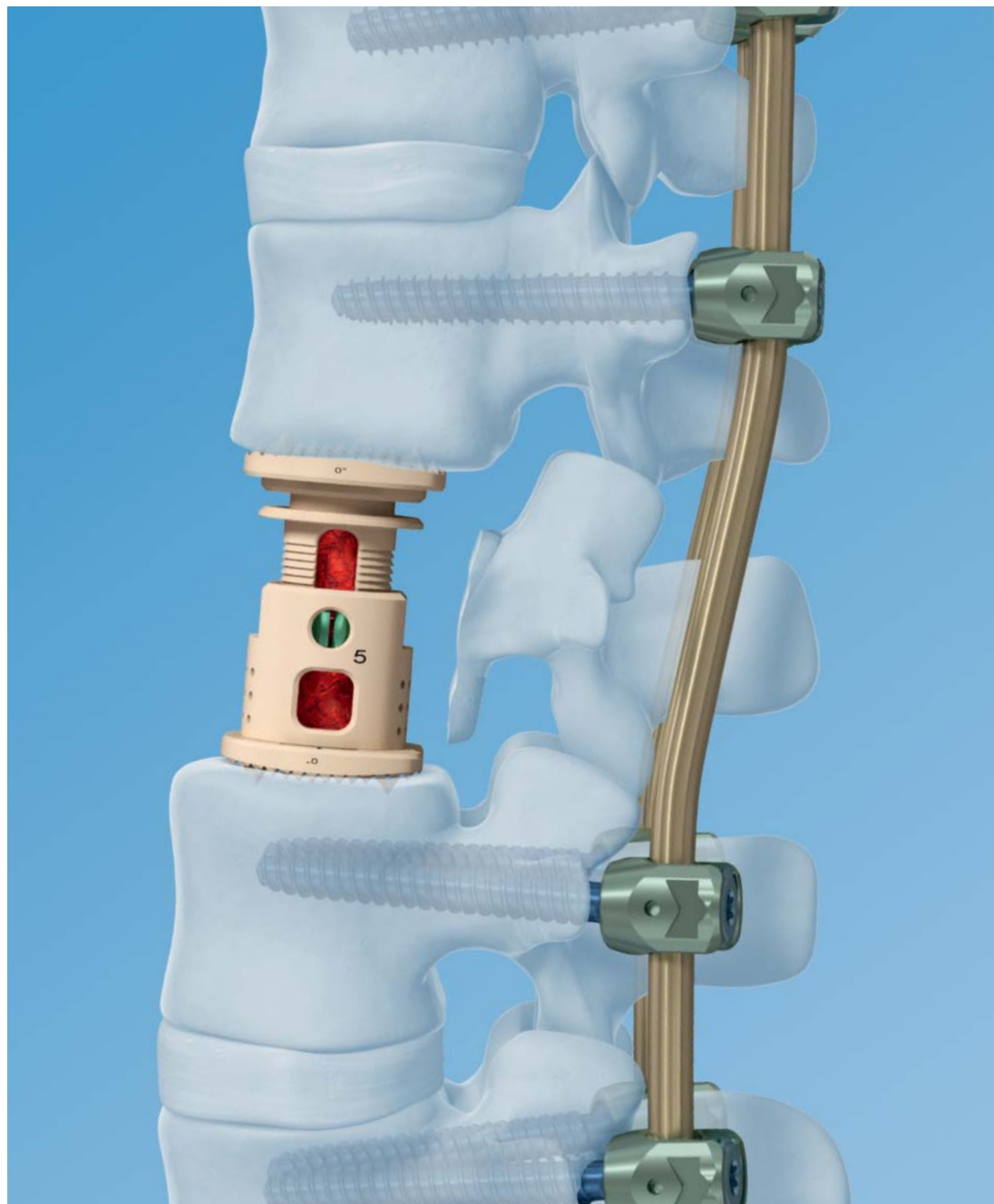


**XRL System.** A modular expandable radiolucent vertebral body replacement system.

Technique Guide





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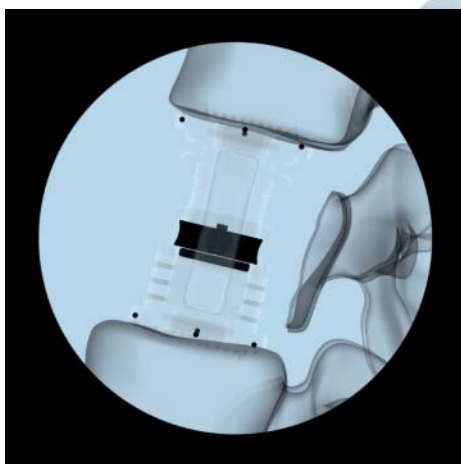
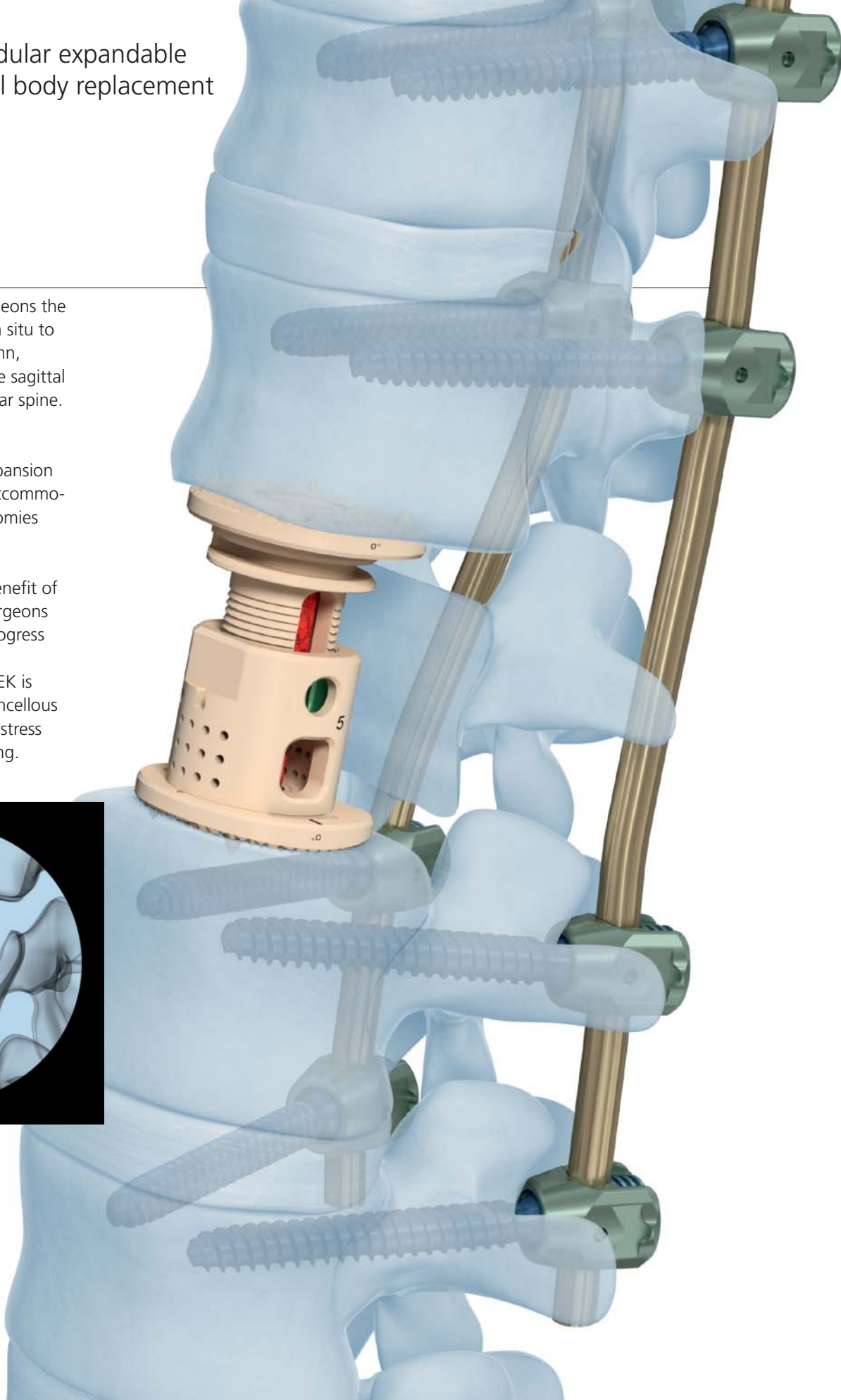
**XRL System.** A modular expandable radiolucent vertebral body replacement system.

The XRL System provides surgeons the ability to expand the device in situ to reconstruct the anterior column, restore height, and correct the sagittal curvature of the thoracolumbar spine.

- Modular construction
- 360° implantation
- Tactile feedback during expansion
- Most implant options to accommodate a wide range of anatomies

#### **Material**

- PEEK material offers the benefit of radiolucent imaging, so surgeons can better assess fusion progress and/or tumor recurrence.
- Modulus of elasticity of PEEK is approximately between cancellous and cortical bone to aid in stress distribution and load sharing.



## Implant Options

### Modular—Flexible use

The Modular implant consists of a central body on which two endplates are attached.

- Central body  
The octagonal shape permits various approach options
- Endplates  
Numerous footprints and angles allow the implant to conform to a wide range of patient anatomies
- Endplate screws  
Rigidly secures the endplate to the central body

### Integrated (no assembly required)

Optimal for procedures where low profile constructs are needed.

### Self-locking expansion mechanism

Distracts and locks at 1 mm increments.

### Open architecture

The open central body and endplate design allow generous placement of bone graft.

- Medium implant cannulation  
8.4 mm diameter
- Large implant cannulation  
13.5 mm diameter



## Instrumentation

Slim instrumentation (22 mm maximum width)

One instrument provides:

- Holding and insertion
- Distraction/locking
- Repositioning of implant, if needed

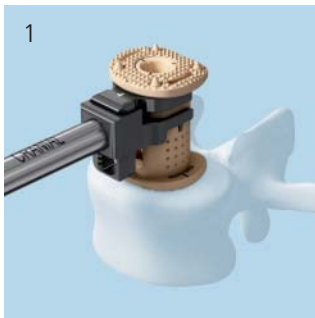
Ratchet and continuous expansion options for tactile feedback

- Precision control of implant loading
- Scale indicates the amount of distraction achieved

Handle repositioning for intraoperative visualization

### Approach Options

- Anterior (Figure 1)
- Anterolateral (Figure 2)
- Lateral (Figure 3)
- Posterolateral (Figure 4)



# AO Principles

---

In 1958, the AO formulated four basic principles, which have become the guidelines for internal fixation.<sup>1</sup> They are:

- Anatomic reduction
- Stable fixation
- Preservation of blood supply
- Early, active mobilization

The fundamental aims of fracture treatment in the limbs and fusion of the spine are the same. A specific goal in the spine is returning as much function as possible to the injured neural elements.<sup>2,3</sup>

1 Müller ME, M Allgöwer, R Schneider, H Willenegger. Manual of Internal Fixation. 3rd ed. Berlin Heidelberg New York: Springer. 1991.

2 Ibid.

3 M Aebi, JS Thalgott, and JK Webb. AO ASIF Principles in Spine Surgery. Berlin; Springer-Verlag, 1998.

# Indications and Contraindications

---

## Indications

The Synthes XRL device is a vertebral body replacement device intended for use in the thoracolumbar spine (T1–L5) to replace a collapsed, damaged or unstable vertebral body due to tumor or trauma (i.e., fracture). The Synthes XRL device is intended to be used with Synthes supplemental internal fixation systems (e.g., USS, including MATRIX, Pangea, and TSLP). The interior of Synthes XRL can be packed with bone (i.e., autograft or allograft).

The Synthes XRL device is designed to provide anterior spinal column support even in the absence of fusion for a prolonged period.

## Contraindications

1. Use of the Synthes XRL device is contraindicated when there is active systemic infection, infection localized to the site of the proposed implantation, or when the patient has demonstrated allergy or foreign body sensitivity to any of the implant materials.
2. Severe osteoporosis may prevent adequate fixation and thus preclude the use of this or any other orthopaedic implant.
3. Conditions that may place excessive stresses on bone and implants, such as severe obesity or degenerative diseases, are relative contraindications. The decision whether to use these devices in patients with such conditions must be made by the physician, taking into account the risks versus the benefits to the patient.
4. Use of these implants is relatively contraindicated in patients whose activity, mental capacity, mental illness, alcoholism, drug abuse, occupation or lifestyle may interfere with their ability to follow postoperative restrictions, thereby placing undue stresses on the implant during bony healing. This could result in a higher risk of implant failure.

**Please refer to package insert for the full list of indications, contraindications, warnings and/or precautions.**



# Preparation

---

## 1

### Access

Various approaches are suitable depending on the affected spinal level involved.

The following surgical technique is described using a lateral approach from the left at L1.

---

## 2

### Perform corpectomy

Perform a partial or complete corpectomy as required.

---

**Note:** Remove the superficial layers of the entire cartilaginous endplates and expose bleeding bone. Excessive removal of subchondral bone may weaken the vertebral endplate. If the entire endplate is removed, subsidence and a loss of segmental stability may occur.

---

# Insert Trial Implant

The XRL Vertebral Body Replacement contains a complete line of central body and endplate trial implants that correspond to each central body and endplate implant. Trials are placed into the corpectomy site intraoperatively to determine the appropriate endplate footprint, angle, and central body height.

## 1

### Determine defect

#### Instruments

03.661.010	Metal Tape Gauge
------------	------------------

324.092*	Measuring Forceps
----------	-------------------

The metal tape gauge or measuring forceps can be used to measure overall defect.

**Note:** If final distracted corpectomy height is less than 32 mm, then skip to Step 4 and use the integrated trials.



\*Also available

## 2

### Select endplate footprint size and angle

#### Instruments

	XRL Medium Endplate Footprint Trials
03.807.364	21 mm round
03.807.365	21 mm x 24 mm
03.807.366	26 mm x 30 mm
	XRL Large Endplate Footprint Trials
03.807.367	27 mm round
03.807.368	28 mm x 33 mm
03.807.369	30 mm x 40 mm

The endplate footprint trial can be adjusted to accommodate the desired approach. Pull the sleeve (1) and turn the endplate trial to the desired position (2). Release the sleeve to lock the position of the trial.

- 1 Determine the footprint using the endplate footprint trial. The handles of the endplate footprint trials are color-coded green and blue to match the medium and large sets, respectively. Determine the angle using lateral x-ray imaging.



### 3

#### Determine central body size

The optimal central body height is calculated using endplate trial height which is found on the back of the module lid for reference. The trials do not account for the implant spikes; therefore, 2 mm clearance on each end of the trial is required.

Optimal Central Body Height (CBH) = Overall defect – Cranial trial endplate height – Caudal trial endplate height – Clearance for spikes

Example for 70 mm defect with a 5° cranial endplate and 0° caudal endplate:

$$\text{CBH} = 70 \text{ mm} - 6.5 \text{ mm} - 5 \text{ mm} - 4 \text{ mm}$$

$$\text{CBH} = 55 \text{ mm}$$

Insert the selected trial endplates onto the trial central body. Align the etch lines before pressing the components together. Ensure there is no gap between the endplate and central body trial.



**Note:** The endplate height is independent of the footprint.

**Warning:** The trials are not for implantation and must be removed before insertion of the XRL implant. Total construct angle must not exceed 30° lordosis/kyphosis.

Medium Endplate Trial		Large Endplate Trial	
Angle	Height (mm)	Angle	Height (mm)
0°	5	0°	5.5
5°	6.5	5°	7
10°	8.5	10°	9.5
15°	10.5	15°	12
-5°	6.5	20°	14.5
-10°	8.5		

## 4

### Insert trial

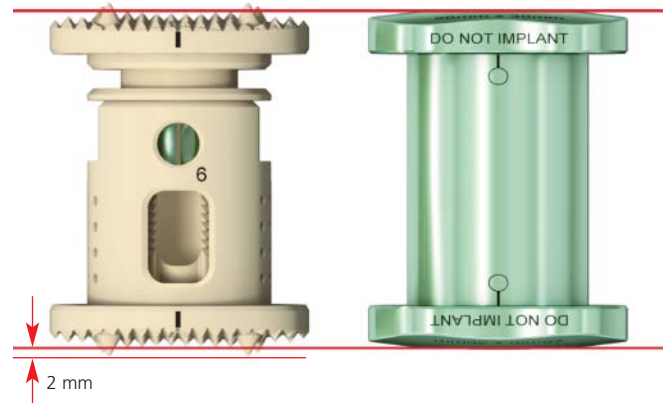
#### Instruments

03.807.382	XRL Medium Implant Holder
03.807.384	XRL Large Implant Holder

Using the implant holder, insert the trial into the corpectomy site. Be sure the appropriate endplate is oriented in the cranial/caudal position. The optimal position for the trial is centered on the vertebral bodies with clearance to account for the implant spikes. Trials must always be securely held while in the wound.

Note: Integrated implants do not have tall spikes and therefore the integrated trials are the same height as the corresponding collapsed implant.

Change trial central body and endplates as necessary to achieve the optimal height, angle, and footprint.



# Implant Insertion

## 1

### Assemble implant

Select implant based on corresponding trial (see pages 25–26 for cross reference list).

If an integrated assembly is selected, skip to Step 4.

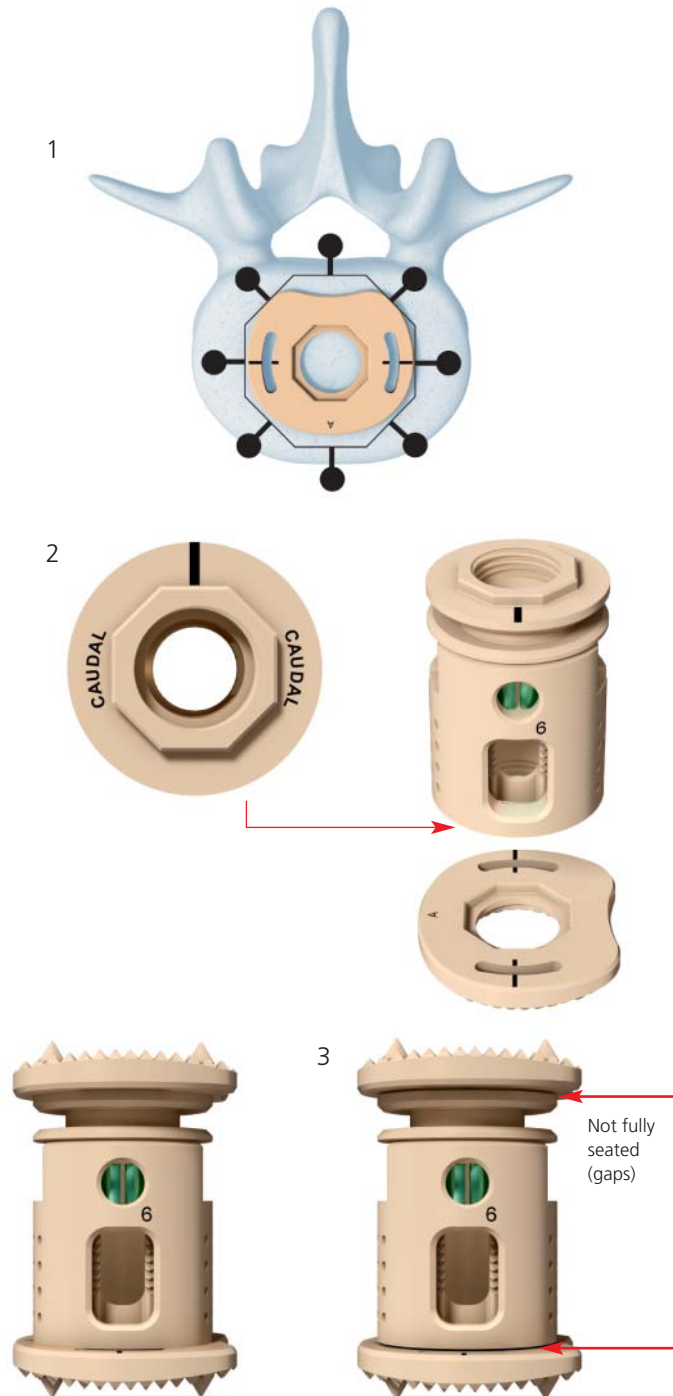
When assembling the implant, orient the caudal endplate with the “A” pointing anterior, and position the central body with the locking ring facing the direction of the desired approach.

**Note:** The etch line on the ends of the central body, the graft window, and the locking ring may all be used to indicate the direction of approach. Figure 1 shows the orientation of the locking ring with respect to the caudal endplate for each approach option.

Attach the caudal endplate first by pressing the endplate onto the octagon until fully seated (Figure 2). Repeat with the cranial endplate. Ensure that both endplates are in the same direction (lateral left shown).

**Warning:** When pressing on the endplates, ensure the endplate properly seats on the central body. This can be checked visually (Figure 3). If the endplate is not properly seated, there is a risk that it could detach from the central body.

**Warning:** The XRL central body should never be implanted without cranial and caudal endplates properly secured with endplate screws.



---

## 2

### Reposition endplates (optional)

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#### Instrument

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03.807.354      XRL Endplate Removal Tool

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If necessary, the endplates can be repositioned by manually removing them from the central body, except for the round endplates which are removed using the XRL endplate removal tool. Be sure to perform endplate removal over a sterile table.

---

**Warning:** Endplates release from central body abruptly. Make sure to have a firm grip on both the central body and the endplate during removal.

---

To remove round endplates, align the tip of the XRL endplate removal tool with the slot in the endplate. Apply a slight, constant pressure and rotate the tool to release the endplate.



### 3

#### Attach endplate screws

##### Instruments

03.807.351	XRL Medium Endplate Screwdriver Tip
03.807.352	XRL Large Endplate Screwdriver Tip
03.807.357	XRL Medium Torque Limiting Handle
03.807.358	XRL Large Torque Limiting Handle

Align the endplate screwdriver tip into the open end of the torque limiting handle.

Press until an audible “click” is heard.

Align the tri-lobal feature of the tip and the etchings on the endplate screw. Lightly press the screw onto the screwdriver tip. The screwdriver tip will retain the screw.

Align the screw with the caudal endplate to prevent cross threading. While gripping the large end of the torque limiting handle, rotate the torque limiting handle clockwise to advance the screw through the caudal endplate and into the central body. Tighten until an audible “click” in the torque handle is heard. Repeat this step to fixate the cranial endplate.

**Warning:** The torque limiting handles are color-coded green and blue to match the medium and large sets, respectively and may only be used with its corresponding set.

**Note:** Please follow torque limiting handle calibration instructions to ensure proper functionality.





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## 4

### Prepare implant

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#### Instruments

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03.807.371	XRL Medium Graft Packing Tamp
03.807.372	XRL Large Graft Packing Tamp
03.807.374	XRL Medium Graft Packing Preparation Tamp
03.807.375	XRL Large Graft Packing Preparation Tamp

---

Prior to implanting, use graft packing tamps to facilitate packing of bone graft into the XRL implant. Graft can be packed through the cannulation in the endplate and graft windows.

---

**Warning:** Do NOT pack graft into the locking ring. DO NOT use excessive force while packing graft.

---

**Note:** Graft packing tamp will not fit inside the window of integrated implant #1.

---



## 5

### Assemble spreader instrument

#### Instruments

03.807.300	XRL Spreader
03.807.310	XRL Medium Shaft
03.807.311– 03.807.315	XRL Medium Spreader Tops, with 3, 5, 8, 10, or 15 mm distraction
03.807.330	XRL Large Shaft
03.807.331– 03.807.335	XRL Large Spreader Tops, with 3, 5, 8, 10, or 15 mm distraction
03.807.348	XRL Release Tool
03.807.355	XRL Medium Spreader Top, with 5 mm distraction (Integrated)
03.807.356	XRL Large Spreader Top, with 5 mm distraction (Integrated)

Assemble the appropriate size spreader top to the XRL spreader according to the implant central body size selected. The spreader tops are designed to prevent over-distracting the implant.

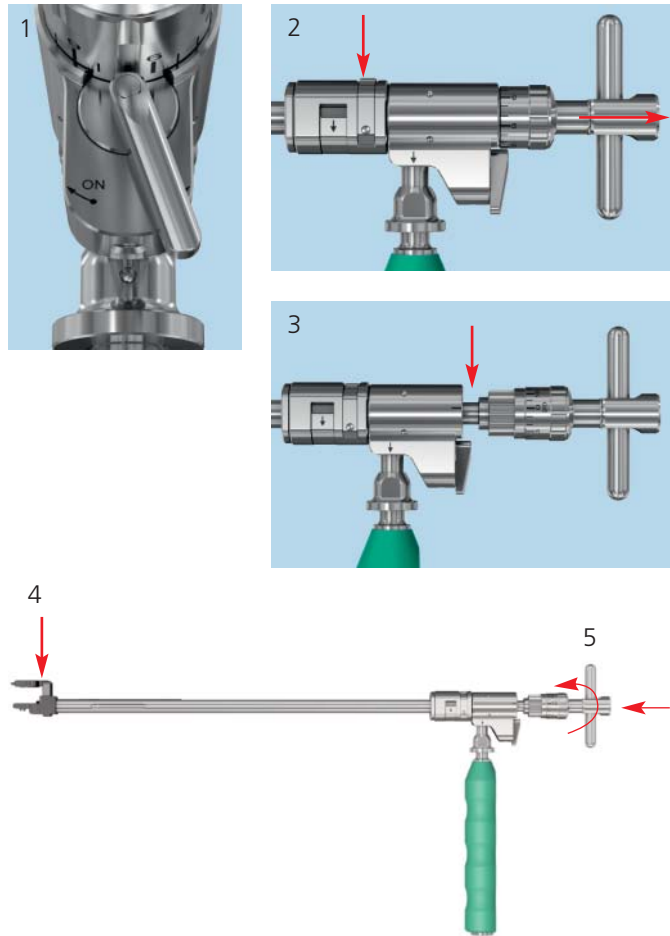
**Note:** The underside of the built-in lid of the graphic case shows Spreader Top and its corresponding implant selection.

While holding the spreader with the shaft in the horizontal position, set ratchet lever to the “OFF” position (Figure 1).

Press T-driver release button and pull back on the T-driver (Figure 2). Release the button to set T-driver in the open position (Figure 3). T-driver should not be fully removed during this operation.

Insert the selected spreader top into the spreader shaft (4) and insert the T-driver (5) by gently pushing and turning the T-driver into the outer shaft assembly.

Check functionality of spreader top by rotating T-driver. If properly assembled, spreader top should translate during T-driver rotation.



## 6

### Secure Implant to Spreader

#### Instruments

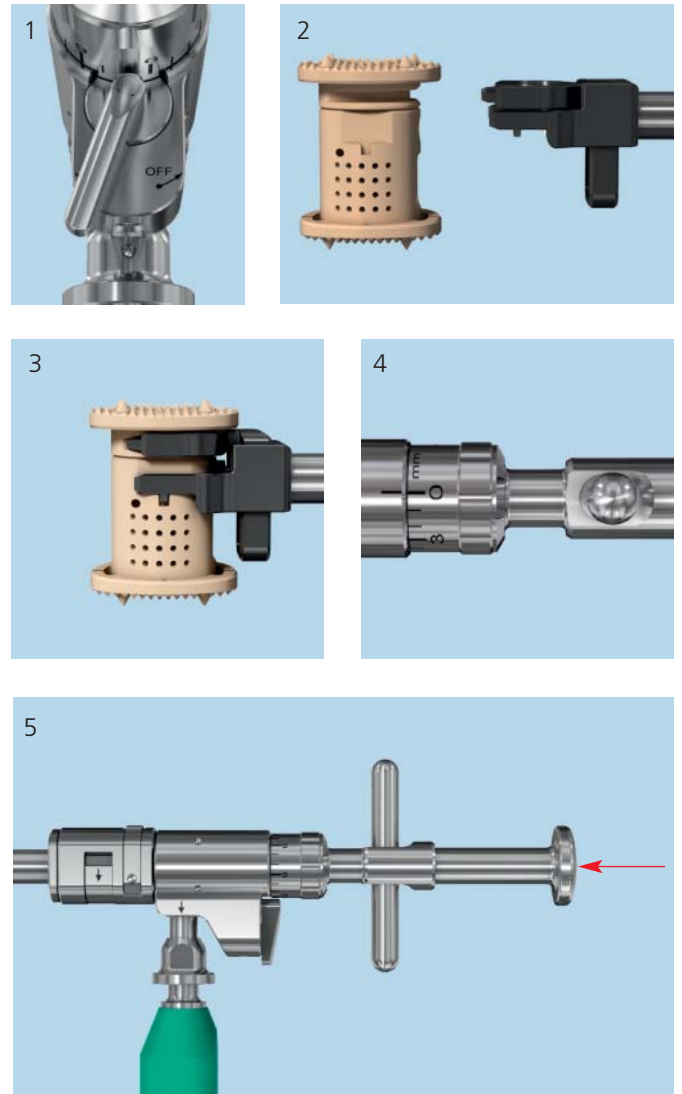
03.807.300	XRL Spreader
03.807.310	XRL Medium Shaft
03.807.311– 03.807.315	XRL Medium Spreader Tops, with 3, 5, 8, 10, or 15 mm distraction
03.807.330	XRL Large Shaft
03.807.331– 03.807.335	XRL Large Spreader Tops, with 3, 5, 8, 10, or 15 mm distraction
03.807.348	XRL Release Tool
03.807.355/ 03.807.356	XRL Spreader Top, Integrated (medium or large)

To load the implant, fully collapse the spreader top and set the ratchet lever to the “ON” position (Figure 1).

With the locking ring facing the instrument, slide the spreader top into the slots below the cranial endplate (Figure 2). Do not force spreader top onto implant. Slightly turn the T-driver clockwise until the notch on the fork of the spreader shaft engages the implant for a secure hold (Figure 3).

Set the scale to zero (Figure 4).

Completely insert the release tool through the XRL spreader and into the locking ring. An audible “click” will be heard (Figure 5).



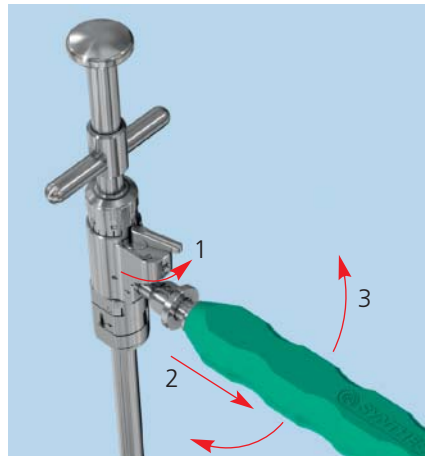
## 7

### Insert implant

#### Instrument

03.807.300 XRL Spreader

The spreader handle can be rotated at 90° increments to aid in visualization. Set ratchet lever to "OFF" position (1). With one hand gripping the spreader shaft, pull back on retaining collar and rotate the spreader handle to the desired position (2,3). Release retaining collar. Verify that the spreader handle is locked into position. Reset scale to zero.



**Warning:** Do not adjust spreader handle when ratchet lever is set to "ON." This will result in premature distraction of the implant. Do not begin distraction until spreader handle is locked into desired position.

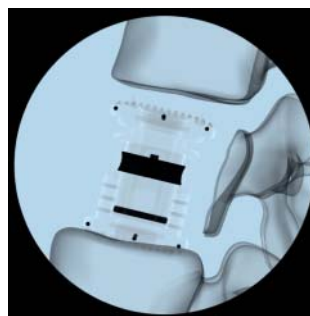
Guide and position the implant with the spreader. Slight distraction of the vertebral bodies may be necessary to ease insertion.

The optimal position for the implant is in the center of the vertebral body endplate. Maintain space around the endplate of the implant to allow peripheral bony fusion.

**Warning:** Do not impact on spreader. Do not manipulate implant unless both the slot and notch are engaged.



- ① Verify the position of the implant using the image intensifier.
  - A titanium locking ring is used to determine orientation of the implant
  - The 1 mm diameter tantalum markers are embedded into the PEEK endplates to provide radiographic markers for intraoperative or postoperative imaging
  - The anterior and medial/lateral markers are located approximately 1 mm from the edges of the implant. The posterior marker is located 1 mm from the edge of the round implant, and 2 mm from the edge of the anatomically shaped endplates. The cranial/caudal locations of the markers are 2 mm from the end of the pyramidal teeth.



## 8

### Distract and check position

#### Instrument

03.807.300 XRL Spreader

The spreader allows for expansion in both a ratchet mode and continuous mode.

#### Option A: Ratchet Mode

For ratchet mode, ensure the ratchet lever is set to the "ON" position and the release tool is engaged, then turn the spreader T-driver clockwise (Figure 1) and expand the implant until the desired amount of distraction is achieved.

#### Option B: Continuous Mode

For continuous mode, ensure the ratchet lever is set to the "OFF" position and the release tool is engaged, then turn the spreader T-driver clockwise and expand the implant until the desired amount of distraction is achieved. With constant clockwise torque on the T-driver, set the ratchet lever to the "ON" position.

Once the implant has been distracted, disengage the release tool, set the release tool to the resting position (Figure 2) and with constant clockwise torque on the T-driver, place the ratchet lever in the "OFF" position.

Close the spreader by turning the T-driver counterclockwise. Remove the spreader from the implant.

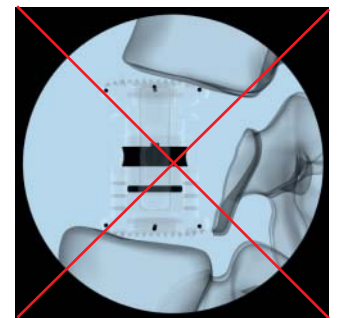
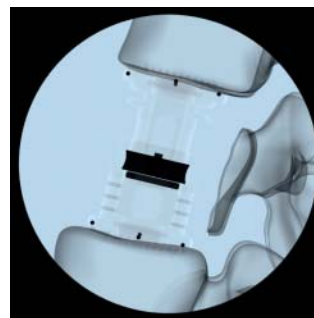
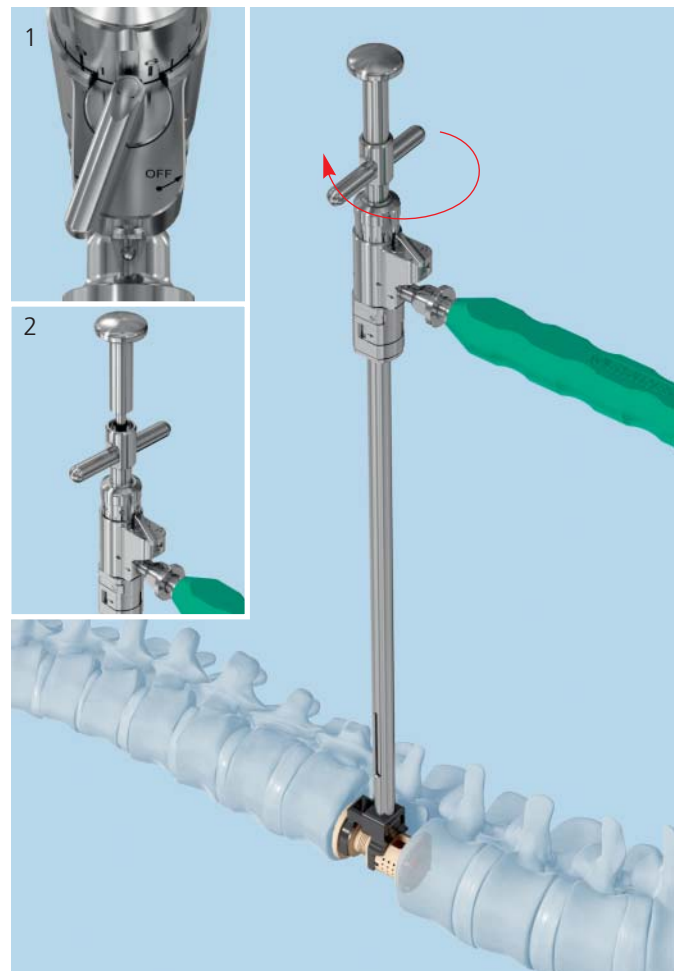
Visually inspect implant/vertebral body interface for gaps to prevent point loading. If a gap is found, repositioning is necessary to ensure full endplate surface contact.

- Verify the position of the implant using the image intensifier.

Do not reuse XRL implants once they have been implanted or explanted.

**Warning:** Do not reposition spreader handle during or after distraction.

Distraction of the implant is only permitted with the XRL instrument set.



## 9 Reposition implant (optional)

### Instrument

03.807.300 XRL Spreader

To reposition the implant, fully collapse the spreader top and set the ratchet lever to the "ON" position (Figure 1).

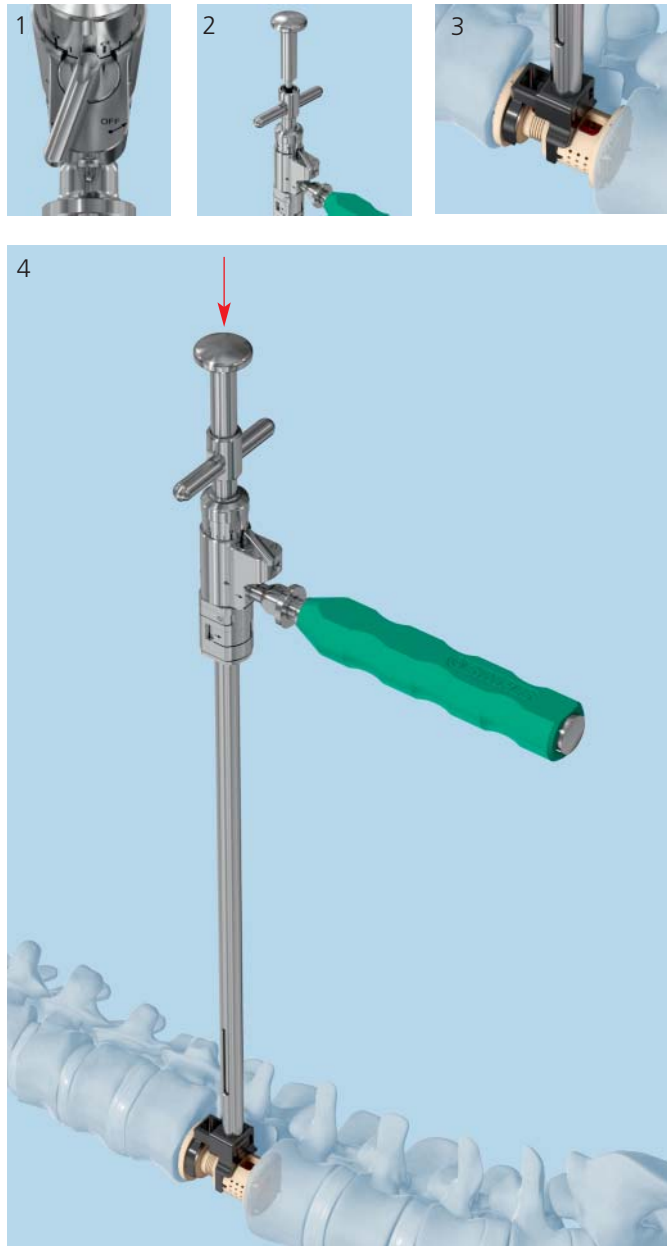
Be sure the release tool is disengaged and set to the resting position (Figure 2).

Slide the spreader top into the slots below the cranial endplate. Turn the T-driver clockwise until the notch on the bottom fork engages the implant for a secure hold (Figure 3). Re-engage the release tool until an audible "click" is heard (Figure 4).

Set the ratchet lever to "OFF" position and compress the implant by turning the T-driver counterclockwise. Reposition the implant to the desired location and follow previous step to re-distract implant.

**Warning:** Do not impact on the XRL endplates when repositioning the implant.

Repositioning of the implant is only permitted with the XRL Instrument Set.



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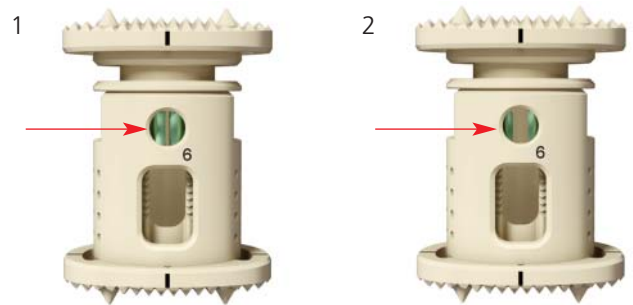
## 10

### Verify lock

When the implant is in its final position, verify the locking ring on the central body is closed. When the slot is approximately 1 mm (Figure 1), the implant is locked and secured. If the slot is larger (Figure 2), re-engage the implant with the spreader, and with the release tool in the resting position, distract the implant slightly to close the locking ring.

**Warning:** Locking ring must be properly closed to ensure final implant height is maintained.

---



# Supplemental Fixation

## 1

### Apply bone material

#### Instruments

03.807.371	XRL Medium Graft Packing Tamp
03.807.372	XRL Large Graft Packing Tamp
03.807.374	XRL Medium Graft Packing Preparation Tamp
03.807.375	XRL Large Graft Packing Preparation Tamp

In situ graft packing must not occur until final implant position is achieved, as additional bone graft may obstruct repositioning of the implant.

Before packing additional bone graft in or around the cage, use AP and lateral radiographs to verify the position of the implant in relation to the vertebral bodies using the tantalum beads and locking ring for references.

The graft packing tamp has 2 different ends to fit the corresponding window of the expanded central body. The preparation tamp has an angled end that can be used to gain compression on graft that is not accessible with the graft packing tamp.

**Note:** Graft packing tamp will not fit inside the window of integrated implant #1, however can still be used to tamp graft material.

**Warning:** Do not use excessive force while packing graft.



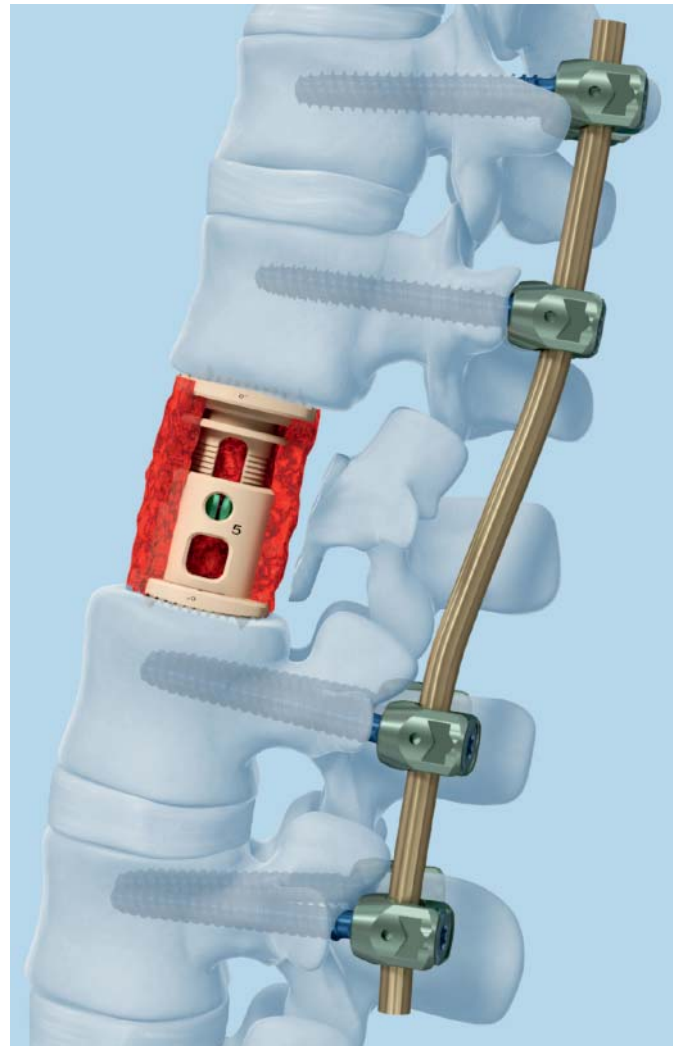


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## 2

### Apply supplemental fixation

For spinal stability and to maintain adequate compression on the construct, the XRL system is indicated for use with supplemental fixation.



# Implants

## Modular XRL Implants

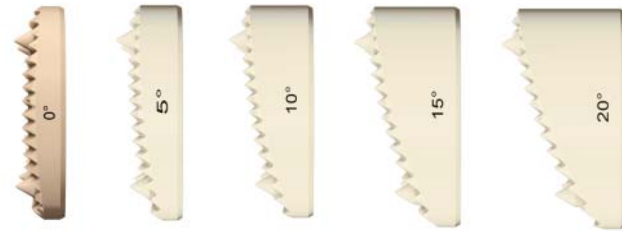
### XRL Medium

- 21 mm central body diameter
- Endplate footprint options:
  - 21 mm round
  - 21 mm x 24 mm
  - 26 mm x 30 mm
- Construct heights range from 32 mm (fully compressed) to 142 mm (fully expanded)
- Various lordotic/kyphotic angulation options



### XRL Large

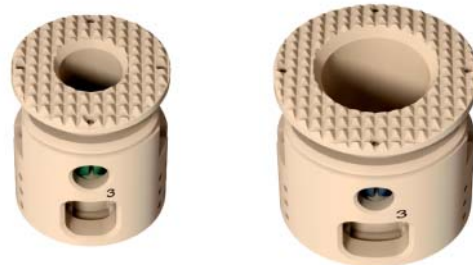
- 27 mm body diameter
- Endplate footprint options:
  - 27 mm round
  - 28 mm x 33 mm
  - 30 mm x 40 mm
- Construct heights range from 34 mm (fully compressed) to 145 mm (fully expanded)
- Various lordotic angulation options



## Integrated XRL Implants

### XRL Medium

- 21 mm central body diameter
- 21 mm endplate footprint
- Heights range from 22 mm (fully compressed) to 36 mm (fully expanded)
- 0° parallel endplates



### XRL Large

- 27 mm body diameter
- 28 mm endplate footprint
- Heights range from 23 mm (fully compressed) to 37 mm (fully expanded)
- 0° parallel endplates



Note: All XRL implants are supplied sterile

# Instruments

## XRL Trial Implants

The XRL vertebral body replacement contains a complete line of central body and endplate trials that correspond to each central body and endplate implant. Trials are placed into the corpectomy site intraoperatively to determine the appropriate implant footprint, lordotic angle and central body height.

largest implant size (integrated or modular) that will fit the measured corpectomy site. Trials may be secured and lowered into corpectomy defect using the implant holder. Allow 2 mm clearance on each end for the tall spikes on the endplates (modular only).

Use the central body and endplate trials to determine the

### Medium Trials (green)



Integrated



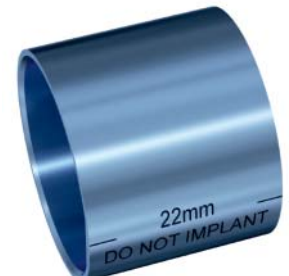
Standard

Part Number	Description	Size	Part Number
Trial Implants	Central Bodies (mm)		Corresponding Implants
03.807.501	Integrated 22–25 height, 0°	1	08.807.201S
03.807.502	Integrated 24–29 height, 0°	2	08.807.202S
03.807.503	Integrated 28–36 height, 0°	3	08.807.203S
03.807.504	22–27 height	4	08.807.204S
03.807.505	25–33 height	5	08.807.205S
03.807.506	29–39 height	6	08.807.206S
03.807.507	33–43 height	7	08.807.207S
03.807.508	37–52 height	8	08.807.208S
03.807.509	44–59 height	9	08.807.209S
03.807.510	51–66 height	10	08.807.210S
03.807.511	62–77 height	11	08.807.211S
03.807.512	73–88 height	12	08.807.212S
03.807.513	84–99 height	13	08.807.213S
03.807.514	95–110 height	14	08.807.214S
03.807.515	106–121 height	15	08.807.215S

### Large Trials (blue)



Integrated



Standard

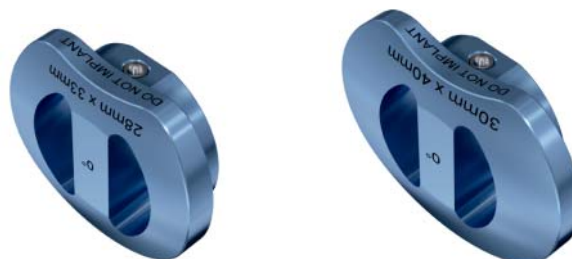
Part Number	Description	Size	Part Number
Trial Implants	Central Bodies (mm)		Corresponding Implants
03.807.601	Integrated 23–26 height, 0°	1	08.807.301S
03.807.602	Integrated 25–30 height, 0°	2	08.807.302S
03.807.503	Integrated 29–37 height, 0°	3	08.807.303S
03.807.604	22–27 height	4	08.807.304S
03.807.605	25–33 height	5	08.807.305S
03.807.606	29–39 height	6	08.807.306S
03.807.607	33–43 height	7	08.807.307S
03.807.608	37–52 height	8	08.807.308S
03.807.609	44–59 height	9	08.807.309S
03.807.610	51–66 height	10	08.807.310S
03.807.611	62–77 height	11	08.807.311S
03.807.612	73–88 height	12	08.807.312S
03.807.613	84–99 height	13	08.807.313S
03.807.614	95–110 height	14	08.807.314S
03.807.615	106–121 height	15	08.807.315S

**Medium Trial Endplates (green)**



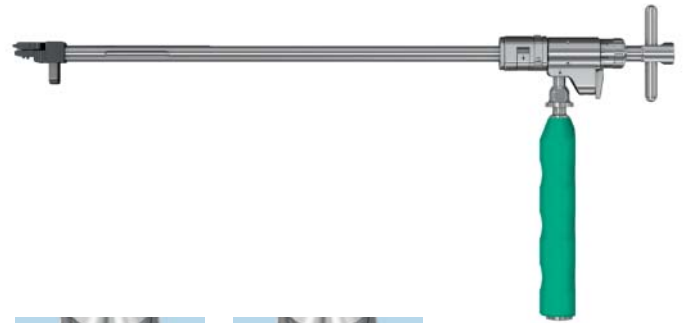
Part Number	Description (mm)	Corresponding Implants
03.807.521	21 Round, 0°	08.807.221S
03.807.522	21 Round, 5°	08.807.222S
03.807.523	21 Round, 10°	08.807.223S
03.807.524	21 Round, 15°	08.807.224S
03.807.531	21 x 24, -10°	08.807.231S
03.807.532	21 x 24, -5°	08.807.232S
03.807.533	21 x 24, 0°	08.807.233S
03.807.534	21 x 24, 5°	08.807.234S
03.807.535	21 x 24, 10°	08.807.235S
03.807.536	21 x 24, 15°	08.807.236S
03.807.541	26 x 30, -10°	08.807.241S
03.807.542	26 x 30, -5°	08.807.242S
03.807.543	26 x 30, 0°	08.807.243S
03.807.544	26 x 30, 5°	08.807.244S
03.807.545	26 x 30, 10°	08.807.245S
03.807.546	26 x 30, 15°	08.807.246S

**Large Trial Endplates (blue)**



Part Number	Description (mm)	Corresponding Implants
03.807.621	27 round, 0°	08.807.321S
03.807.622	27 round, 5°	08.807.322S
03.807.623	27 round, 10°	08.807.323S
03.807.624	27 round, 15°	08.807.324S
03.807.625	27 round, 20°	08.807.325S
03.807.631	28 x 33, 0°	08.807.331S
03.807.632	28 x 33, 5°	08.807.332S
03.807.633	28 x 33, 10°	08.807.333S
03.807.634	28 x 33, 15°	08.807.334S
03.807.635	28 x 33, 20°	08.807.335S
03.807.641	30 x 40, 0°	08.807.341S
03.807.642	30 x 40, 5°	08.807.342S
03.807.643	30 x 40, 10°	08.807.343S
03.807.644	30 x 40, 15°	08.807.344S
03.807.645	30 x 40, 20°	08.807.345S

03.807.300 XRL Spreader  
For implanting, distracting, and  
compressing (repositioning the implant)



**Ratchet Lever**

A ratchet lever on the instrument handle allows for the manipulations of the XRL implant.

**Note:** Release tool must be engaged with locking ring for implant manipulation.



Ratchet Mode "ON" allows expansion of the implant



Continuous Mode "OFF" allows tactile expansion or compression of the implant

**T-driver Release**

Allows the T-driver to be disengaged/removed from the spreader

**Shaft Release**

Allows the spreader shaft to be removed from the from the spreader

**Retaining Collar**

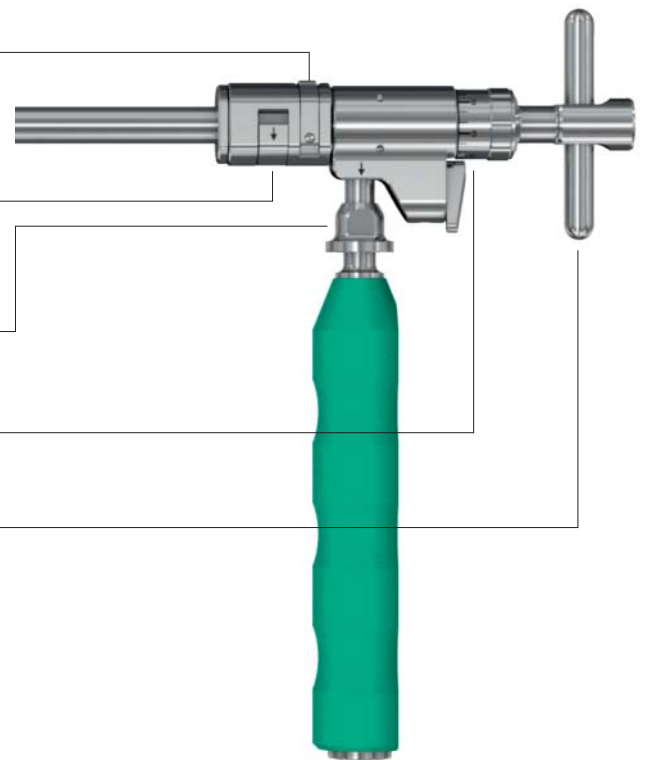
Allows 90° rotation of the spreader handle

**Scale**

Used to determine the achieved amount of expansion

**T-driver**

Allows expansion or compression of the implant  
Clockwise = expansion  
Counterclockwise = compression



03.661.010 Metal Tape Gauge



03.807.310 XRL Medium Shaft  
03.807.330 XRL Large Shaft (shown)



03.807.348 Release Tool  
Enables implant repositioning



Spreader tops  
Medium

Available in six distraction ranges, dependent on the central body implant.

03.807.311 with 3 mm distraction  
03.807.312 with 5 mm distraction  
03.807.313 with 8 mm distraction  
03.807.314 with 10 mm distraction  
03.807.315 with 15 mm distraction  
03.807.355 with 5 mm distraction (integrated)



Large

03.807.331 with 3 mm distraction  
03.807.332 with 5 mm distraction  
03.807.333 with 8 mm distraction  
03.807.334 with 10 mm distraction  
03.807.335 with 15 mm distraction  
03.807.356 with 5 mm distraction (integrated)

03.807.351 XRL Endplate Screwdriver Tips  
Medium  
03.807.352 Large



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03.807.354 XRL Endplate Removal Tool  
Allows removal of round endplates from  
the central body



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03.807.357 XRL Torque Limiting Handles  
Medium  
03.807.358 Large



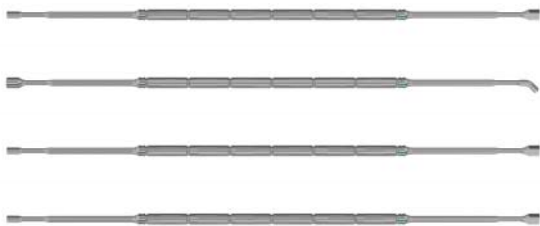
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03.807.364 Endplate Footprint Trials  
Medium 21 mm round  
03.807.365 Medium 21 mm X 24 mm  
03.807.366 Medium 26 mm X 30 mm  
03.807.367 Large 27 mm Round  
03.807.368 Large 28 mm X 33 mm  
03.807.369 Large 30 mm X 40 mm



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03.807.371 Graft Packing Tamps  
Medium Tamp  
03.807.374 Medium Preparation Tamp  
03.807.372 Large Tamp  
03.807.375 Large Preparation Tamp

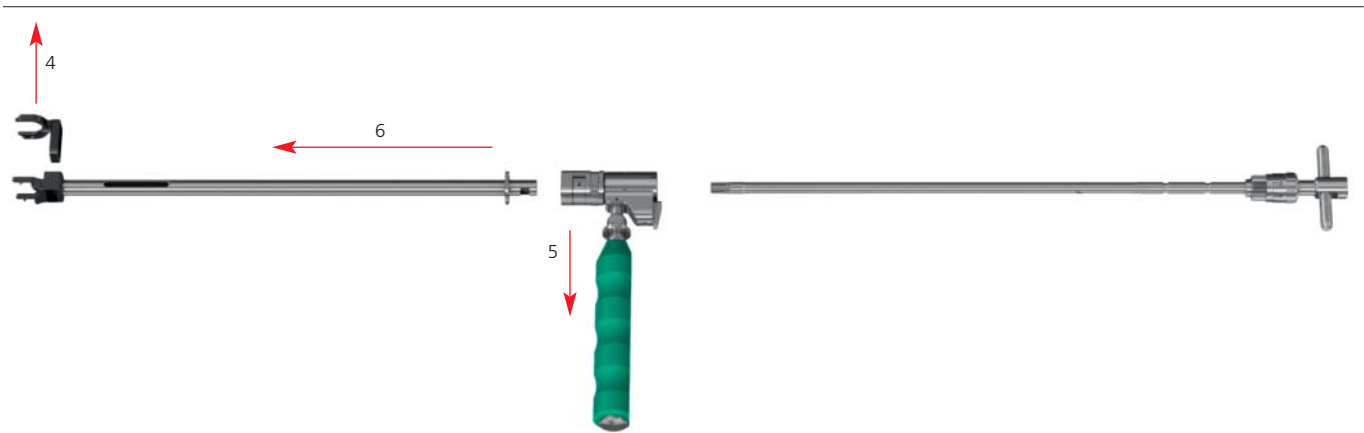
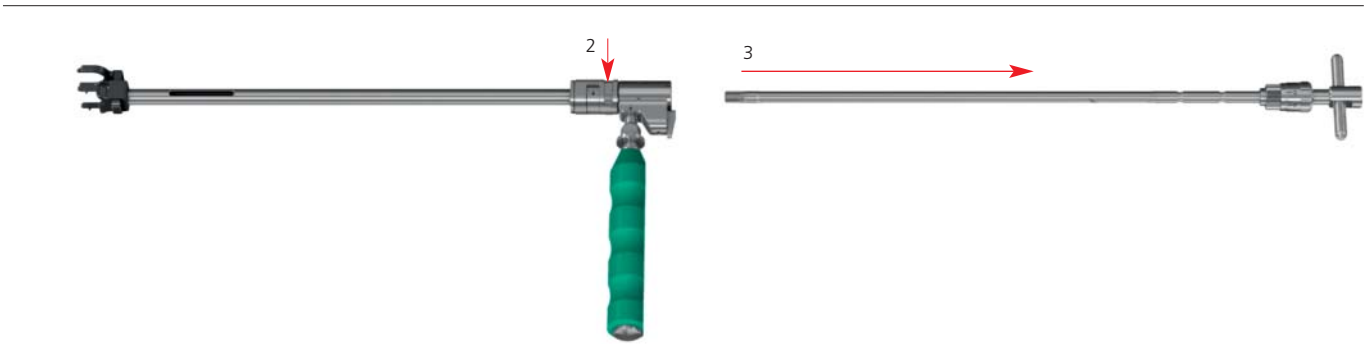
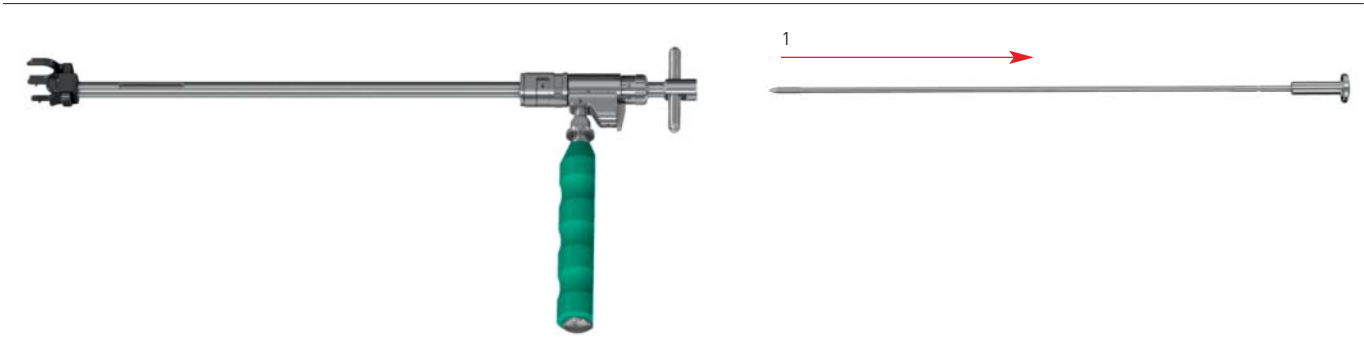


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03.807.382 Implant Holder  
Medium Implant Holder (shown)  
03.807.384 Large Implant Holder  
For inserting the implant trials



# Spreader Disassembly





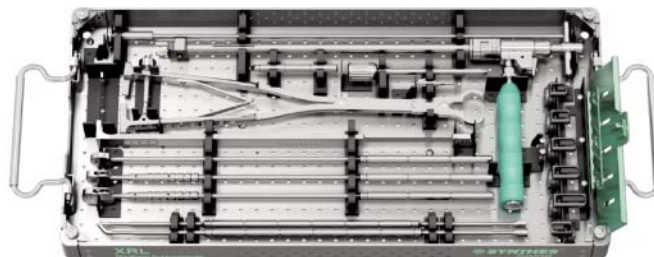
# XRL Medium Implant and Instrument Set (01.807.029)

## Carry Case and Graphic Case

- 60.807.026 Carry Case, for XRL Medium Implants
- 60.807.029 Graphic Case, for XRL Medium Instruments

## Instruments

- 03.661.010 Metal Tape Gauge
- 03.807.300 XRL Spreader
- 03.807.310 XRL Medium Shaft
- 03.807.311 XRL Medium Spreader Top with 3 mm distraction
- 03.807.312 XRL Medium Spreader Top with 5 mm distraction
- 03.807.313 XRL Medium Spreader Top with 8 mm distraction
- 03.807.314 XRL Medium Spreader Top with 10 mm distraction
- 03.807.315 XRL Medium Spreader Top with 15 mm distraction
- 03.807.355 XRL Medium Spreader Top with 5 mm distraction (Integrated)
- 03.807.351 XRL Medium Endplate Screwdriver Tip
- 03.807.354 XRL Endplate Removal Tool
- 03.807.364 XRL Medium Endplate Footprint Trial, 21 mm round
- 03.807.365 XRL Medium Endplate Footprint Trial, 21 mm x 24 mm
- 03.807.366 XRL Medium Endplate Footprint Trial, 26 mm x 30 mm
- 03.807.371 XRL Medium Graft Packing Tamp
- 03.807.374 XRL Medium Graft Packing Preparation Tamp
- 03.807.382 XRL Medium Implant Holder



Note: For additional information, please refer to package insert.  
For detailed cleaning and sterilization instructions, please refer to [http://www.synthes.com/sites/NA/MedicalCommunity/Pages/Cleaning\\_and\\_Sterilization.aspx](http://www.synthes.com/sites/NA/MedicalCommunity/Pages/Cleaning_and_Sterilization.aspx) or to the below listed inserts, which will be included in the shipping container:

- Processing Synthes Reusable Medical Devices - Instruments, Instrument Trays and Graphic Cases—DJ1305
- Processing Non-sterile Synthes Implants—DJ1304

**Implants**

XRL Medium Implant, Integrated, 0°, sterile  
Height

08.807.201S	22 mm–25 mm
08.807.202S	24 mm–29 mm
08.807.203S	28 mm–36 mm

XRL Medium Central Body, sterile  
Height

08.807.204S	22 mm–27 mm
08.807.205S	25 mm–33 mm
08.807.206S	29 mm–39 mm
08.807.207S	33 mm–43 mm
08.807.208S	37 mm–52 mm
08.807.209S	44 mm–59 mm
08.807.210S	51 mm–66 mm
08.807.211S	62 mm–77 mm

XRL Medium Endplate, 21 mm round, sterile

08.807.221S	0°
08.807.222S	5°
08.807.223S	10°
08.807.224S	15°

XRL Medium Endplate, 21 mm x 24 mm, sterile

08.807.231S	-10°
08.807.232S	-5°
08.807.233S	0°
08.807.234S	5°
08.807.235S	10°
08.807.236S	15°

XRL Medium Endplates, 26 mm x 30 mm, sterile

08.807.241S	-10°
08.807.242S	-5°
08.807.243S	0°
08.807.244S	5°
08.807.245S	10°
08.807.246S	15°

08.807.200.02S XRL Medium Endplate Screws

**Also Available**

8205	XRL Preoperative Planner, medium
08.807.212S	XRL Medium Central Body, 73 mm–88 mm height, sterile
08.807.213S	XRL Medium Central Body, 84 mm–99 mm height, sterile
08.807.214S	XRL Medium Central Body, 95 mm–110 mm height, sterile
08.807.215S	XRL Medium Central Body, 106 mm–121 mm height, sterile

# XRL Medium Trial Instrument Set (01.807.032)

## Graphic Case

60.807.032 Graphic Case, for XRL Medium Trials

## Trials

XRL Medium Trial, Integrated, 0°

Height

03.807.501 22 mm–25 mm

03.807.502 24 mm–29 mm

03.807.503 28 mm–36 mm

XRL Medium Trial, Central Body

Height

03.807.504 22 mm–27 mm

03.807.505 25 mm–33 mm

03.807.506 29 mm–39 mm

03.807.507 33 mm–43 mm

03.807.508 37 mm–52 mm

03.807.509 44 mm–59 mm

03.807.510 51 mm–66 mm

03.807.511 62 mm–77 mm

XRL Medium Trial, Endplate, 21 mm round

03.807.521 0°

03.807.522 5°

03.807.523 10°

03.807.524 15°

XRL Medium Trial Endplate, 21 mm x 24 mm

03.807.531 -10°

03.807.532 -5°

03.807.533 0°

03.807.534 5°

03.807.535 10°

03.807.536 15°

XRL Medium Trial Endplate, 26 mm x 30 mm

03.807.541 -10°

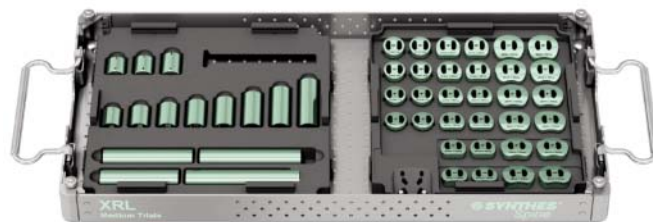
03.807.542 -5°

03.807.543 0°

03.807.544 5°

03.807.545 10°

03.807.546 15°



## Also Available

03.807.512 XRL Medium Trial, Central Body, 73 mm–88 mm height

03.807.513 XRL Medium Trial, Central Body, 84 mm–99 mm height

03.807.514 XRL Medium Trial, Central Body, 95 mm–110 mm height

03.807.515 XRL Medium Trial, Central Body, 106 mm–121 mm height

# XRL Large Implant and Instrument Set (01.807.030)

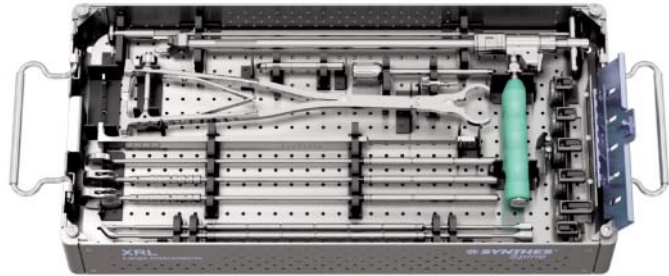
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## Carry Case and Graphic Case

- 60.807.027 Carry Case, for XRL Large Implants
- 60.807.030 Graphic Case, for XRL Large Instrument

## Instruments

- 03.661.010 Metal Tape Gauge
- 03.807.300 XRL Spreader
- 03.807.330 XRL Large Shaft
  
- 03.807.331 XRL Large Spreader Top  
with 3 mm distraction
- 03.807.332 XRL Large Spreader Top  
with 5 mm distraction
- 03.807.333 XRL Large Spreader Top  
with 8 mm distraction
- 03.807.334 XRL Large Spreader Top  
with 10 mm distraction
- 03.807.335 XRL Large Spreader Top  
with 15 mm distraction
- 03.807.356 XRL Large Spreader Top  
with 5 mm distraction (Integrated)
- 03.807.348 XRL Release Tool
- 03.807.352 XRL Large Endplate Screwdriver Tip
- 03.807.354 XRL Endplate Removal Tool
- 03.807.367 XRL Large Endplate Footprint Trial,  
27 mm round
- 03.807.368 XRL Large Endplate Footprint Trial,  
28 mm x 33 mm
- 03.807.369 XRL Large Endplate Footprint Trial,  
30 mm x 40 mm
- 03.807.372 XRL Large Graft Packing Tamp
- 03.807.375 XRL Large Graft Packing Preparation Tamp
- 03.807.384 XRL Large Implant Holder
- 08.807.300.02S XRL Large Endplate Screw (PEEK), sterile



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**Implants**

XRL Large Implant, Integrated, 0°, sterile  
Height

08.807.301S	23 mm–26 mm
08.807.302S	25 mm–30 mm
08.807.303S	29 mm–37 mm

XRL Large Central Body, sterile  
Height

08.807.304S	22 mm–27 mm
08.807.305S	25 mm–33 mm
08.807.306S	29 mm–39 mm
08.807.307S	33 mm–43 mm
08.807.308S	37 mm–52 mm
08.807.309S	44 mm–59 mm
08.807.310S	51 mm–66 mm
08.807.311S	62 mm–77 mm

XRL Large Endplates, 27 mm round, sterile

08.807.321S	0°
08.807.322S	5°
08.807.323S	10°
08.807.324S	15°
08.807.325S	20°

XRL Large Endplates, 28 mm x 33 mm, sterile

08.807.331S	0°
08.807.332S	5°
08.807.333S	10°
08.807.334S	15°
08.807.335S	20°

XRL Large Endplates, 30 mm x 40 mm, sterile

08.807.241S	0°
08.807.242S	5°
08.807.243S	10°
08.807.244S	15°
08.807.245S	20°

**Also Available**

8206	XRL Preoperative Planner, Large
08.807.312S	XRL Large Central Body, 73 mm–88 mm height, sterile
08.807.313S	XRL Large Central Body, 84 mm–99 mm height, sterile
08.807.314S	XRL Large Central Body, 95 mm–110 mm height, sterile
08.807.315S	XRL Large Central Body, 106 mm–121 mm height, sterile

# XRL Large Trial Instrument Set (01.807.033)

60.807.033 Graphic Case, for XRL Large Trials

## **Trials**

XRL Large Trial, Integrated, 0°

Height

- 03.807.601 23 mm–26 mm
- 03.807.602 25 mm–30 mm
- 03.807.603 29 mm–37 mm

XRL Large Trial, Central Body

Height

- 03.807.604 22 mm–27 mm
- 03.807.605 25 mm–33 mm
- 03.807.606 29 mm–39 mm
- 03.807.607 33 mm–43 mm
- 03.807.608 37 mm–52 mm
- 03.807.609 44 mm–59 mm
- 03.807.610 51 mm–66 mm
- 03.807.611 62 mm–77 mm

XRL Large Trial, Endplate, 27 mm round

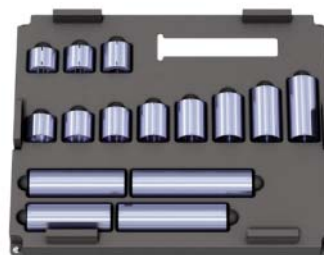
- 03.807.621 0°
- 03.807.622 5°
- 03.807.623 10°
- 03.807.624 15°
- 03.807.625 20°

XRL Large Trial, Endplate, 28 mm x 33 mm

- 03.807.631 0°
- 03.807.632 5°
- 03.807.633 10°
- 03.807.634 15°
- 03.807.635 20°

XRL Large Trial, Endplate, 30 mm x 40 mm

- 03.807.641 0°
- 03.807.642 5°
- 03.807.643 10°
- 03.807.644 15°
- 03.807.645 20°



## **Also Available**

- 03.807.612 XRL Large Trial, Central Body, 73 mm–88 mm height
- 03.807.613 XRL Large Trial, Central Body, 84 mm–99 mm height
- 03.807.614 XRL Large Trial, Central Body, | 95 mm–110 mm height
- 03.807.615 XRL Large Trial, Central Body, 106 mm–121 mm height





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