Modulift® Vertebral Body Replacement System – Medium and Large

Surgical Technique

Aesculap Spine

AESCULAP®
Implant Systems

Modulift® Vertebral Body Replacement System – Medium and Large

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I. Product Overview

The Modulift® Medium and Large Vertebral Body Replacement (VBR) devices are packaged sterile and encompass an expansion body with one or two modular footplates. The devices expand in both directions by turning the expansion driver clockwise. This engineering breakthrough optimizes tactile feedback during biomechanical restoration and helps accentuate conditions for osseointegration.

Features of our advanced technology:

- Aesculap's state-of-the–art bevel gear mechanism and patented dual geometry drive handle provides variability in mechanical advantage and accommodates visualization of both endplates during the critical distraction phase of corpectomy surgery.
- A modular design with built-in set screws and state-of-the-art instrumentation simplifies the Modulift VBR insertion, distraction and locking process.
- Initial stability is optimized with spikes and an aggressive waffle pattern. Remodeling occurs into the central hole and fenestrations of the footplate. The correct sagittal balance and positive bone modeling response optimize conditions for a stable fusion.
- These modular devices offer 0 to 30 degrees of curvature correction and are individually sterile packaged for uncompromised patient safety.

II. Indications and Contraindications

Indications for Use

The Aesculap Modulift VBR System is indicated for use in the thoracolumbar spine (T1 to L5) for partial or total replacement of a collapsed, damaged or unstable vertebral body due to tumor or trauma (i.e. fracture). The Modulift VBR System is intended for use with supplemental spinal fixation systems such as the Aesculap MACS TL® or S4® Systems. The system may be used with bone graft.

Contraindications

Do not apply in the presence of:

- Fever
- Infection
  - Systemic
  - In the spine
  - Local
- Pregnancy
- Acute osteopenia
- Medical or surgical conditions that could negatively affect the success of the implantation
- Foreign body sensitivity to the implant materials
- Inadequate patient compliance
- Severe Osteoporosis or similar loss of bone density
- Severe damage to bone structures that would prevent the stable implantation of system components
- Bone tumor in the region of implant fixation
- Anticipated excessive load on the implant
- Dependency on pharmaceutical drugs, drug abuse or alcoholism
- System or metabolic diseases
- General poor condition of patient
- Wound healing disorders
- Neuromuscular diseases or disorders
- Mental illness
- Cases not listed under indications

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III. Precautions and Warnings

Precautions

- The Aesculap Modulift VBR System has not been evaluated for safety and compatibility in the MR environment, nor has it been tested for heating or migration in the MR environment.
- Based on the fatigue testing results, the physician/surgeon should consider the levels of implantation, patient weight, patient activity level, other patient conditions, etc. which may impact on the performance of the system.
- Mixing of stainless steel implants with unalloyed titanium, titanium alloy and other cobalt alloy implants should be avoided for implants that are in contact with each other.

Warnings

- The potential for success is increased by the proper selection of implant size, shape and design. The VBR should not be expected to withstand the unsupported full load bearing adjunct stabilization as indicated.
- Ensure that all necessary implants and instruments are on hand and inspected prior to use.
- For instruments that are supplied non-sterile, they must be sterilized prior to use. The Modulift VBR implants are wrapped sterile.
- For implants provided in sterile packaging, the sterile barrier must be visually assured.
- The Aesculap Modulift VBR should not be re-used under any circumstances.
- Patients should be advised of the possible limitations of their implant(s), including postoperative mobility and load bearing stress.
- Patient behavior can greatly affect surgical outcomes. Smokers and non-compliant patients should be advised of this fact and warned of the increased risk of potential complications.
- The Aesculap Modulift VBR is not to be used for interbody fusion.
- Bone grafting material that has been compromised (disease, infection or use prior to implantation) may not provide adequate support and/or fixation to the device.
- A malpositioned footplate or implant can lead to dislodgement from the disc space, leading to severe patient injury.
- The regulatory approval of the Aesculap Modulift VBR implants is predicated upon test results using system implants together with system instruments. Aesculap Implant Systems cannot be held liable for problems encountered where implants or instruments from other manufacturers are used in combination with Aesculap products.
- To prevent the risk of collapse, the Aesculap Modulift VBR must be tightened using both cranial and caudal axial clamping set screws to the specified tightening torque with instrumentation provided.

Side Effects and Adverse Interactions

Implant failure caused by excessive load:

- Warping or bending
- Loosening
- Breakage
- Inadequate fixation
- Dislocation and migration
- Failed or delayed fusion
- Infection
- Vertebral body fracture

Injuries to:

- Nerve roots
- Spinal cord
- Blood vessels
- Organs

IV. Component Overview

VBR Components and Terminology

The Modulift® VBR represents the next generation in expandable cage technology. The simple design with dual expansion capability and modular footplates accommodates all surgical approach vectors.

Fig. 1

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V. Surgical Technique

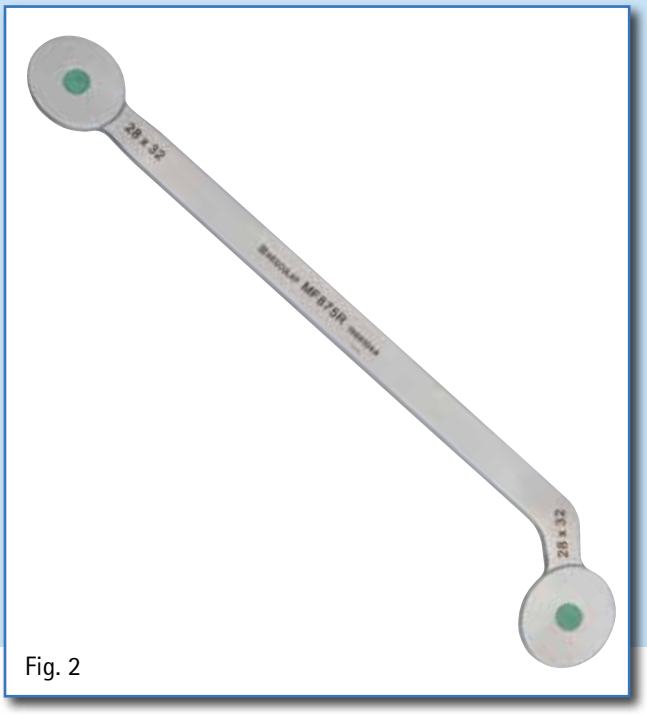

Fig. 2

1. Preoperative Planning

Use the appropriate imaging techniques to determine the patient's osseous anatomy, proper size and type of instrumentation to be used.

Assess your needs with preoperative planning to identify the implant components to be used for the assembly (implant expansion range, footplates). Changes in implant configuration may become necessary based on intraoperative findings and conditions.

2. Patient Positioning and Exposure

For levels T1 to T3, L5 – Anterior Supine Position

For levels T4 to L4 – Lateral Decubitus Position or Posterior Approach

2a. Perform Corpectomy

To perform the partial corpectomy, mark the edges of the implant bed with a long osteotome. Then remove the bone using a rongeur or rasp.

The endplate of both adjacent vertebral bodies should be cleaned with a curette to ensure a secure boney connection to the implant.

3. Footplate Sizing

Utilize the trial endplate sizer to determine the appropriate implant endplate size, cranially and caudally. Ensure adequate coverage of the vertebral body endplate.

Each trial endplate sizer is color coded to match the dimensions of the modular footplate component.

Medium Endplate Sizers	
MF715R	Modulift, VBR Footplate Sizer, 18
MF870R	Modulift, VBR Footplate Sizer, 21
MF872R	Modulift, VBR Footplate Sizer, 25

Large Endplate Sizers	
MF870R	Modulift, Footplate Sizer,21
MF872R	Modulift, Footplate Sizer, 25
MF873R	Modulift, Footplate Sizer, 28
MF875R	Modulift, Footplate Sizer, 28 x 32mm

Fig. 3

Note: *Orientation of the footplates to the VBR is provided by matching alignment lines on the endplate and VBR trials.*

4. Expansion Range Sizing

The trial sizer replicates the collapsed height of the VBR with footplates. Curvature correction can be determined by using the modular trial footplate attachments.

Assemble the footplates to the body trial sizer by lightly squeezing the body spring mechanism. Use of imaging is recommended at this time to evaluate the anatomy.

The Modulift® VBR size range incorporates overlap in expansion range capability. It is recommended to avoid selecting a VBR at the end of its expansion range. Markers are located on each trial body and trial endplate to assist in correct orientation of each component relative to the surgical approach and sagittal balance requirement.

Medium Expansion Trials	
MF694T	Modulift VBR Size M Footplate Trial 0°
MF695T	Modulift VBR Size M Footplate Trial 3°
MF696T	Modulift VBR Size M Footplate Trial 6°
MF697T	Modulift VBR Size M Footplate Trial 9°
MF700T	Modulift VBR, M Trial Implant 18.5-23.5 mm 0°
MF792T	Modulift VBR, M Trial Implant 18.5-23.5 mm 6°
MF793T	Modulift VBR, M Trial Implant 18.5-23.5 mm 9°
MF701T	Modulift VBR Size M Trial Implant 22-27 mm
MF702T	Modulift VBR Size M Trial Implant 24-31 mm
MF703T	Modulift VBR Size M Trial Implant 30-40 mm
MF704T	Modulift VBR Size M Trial Implant 38-53 mm
MF705T	Modulift VBR Size M Trial Implant 50-74 mm
MF699R	Modulift, M/L, Trial Handle

Large Expansion Trials	
MF869T	Modulift, Large, Footplate Trial, 0°
MF876T	Modulift, Large, Footplate Trial, 3°
MF877T	Modulift, Large, Footplate Trial, 6°
MF878T	Modulift, Large, Footplate Trial, 9°
MF879T	Modulift, Large, Footplate Trial, 15°
MF880T	Modulift, Large, Trial, 23.5-30.5 mm
MF804T	Modulift, Large, Trial, 23.5-30.5 mm 6°
MF805T	Modulift, Large, Trial, 23.5-30.5 mm 9°
MF882T	Modulift, Large, Trial, 28.5-35.5 mm
MF883T	Modulift, Large, Trial, 30-38 mm
MF885T	Modulift, Large,Trial,36-50 mm
MF886T	Modulift, Large, Trial, 48-73 mm
MF887T	Modulift, Large, Trial, 70-96 mm
MF699R	Modulift, M/L, Trial Handle

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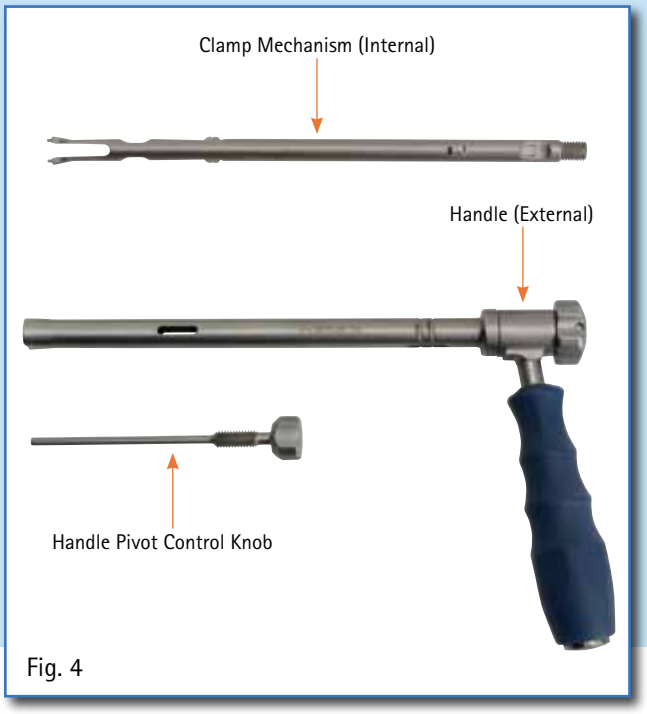

Fig. 4

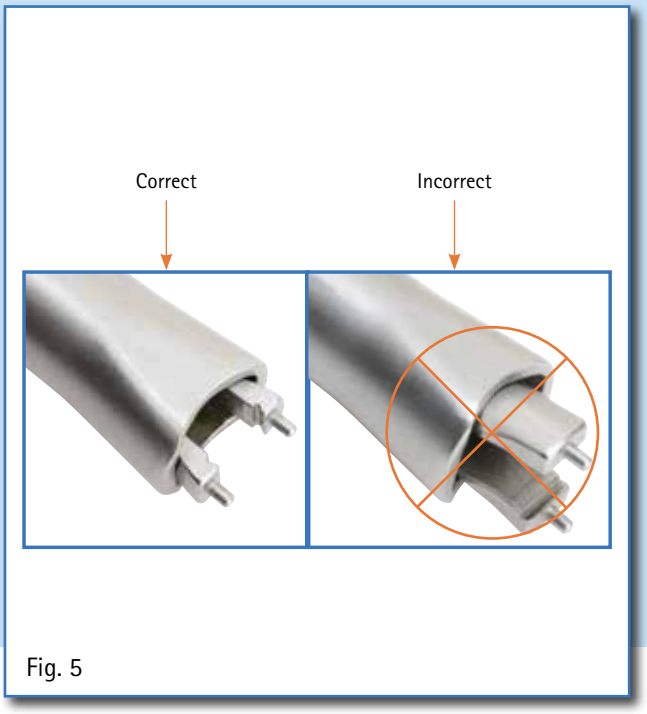

Fig. 5

5. Inserter Assembly

Assemble the three inserter components by inserting the clamp mechanism through the barrel of the handle. Engage the threads of the clamp by turning the thumb knob clockwise one to two turns.

The flat surfaces shown (Fig. 5) will be on the same plane, i.e. flat surface circled above facing up.

Based on the preoperative plan and/or endplate size, curvature correction and expansion range needed, select the appropriately sized expansion body and footplate configuration.

Note: *The expansion ranges for the medium and large VBR trials include unitized, unimodular and modular (both endplates) with the appropriate curvature options. For dimensional information when using curvature correction, see pages 18-19.*

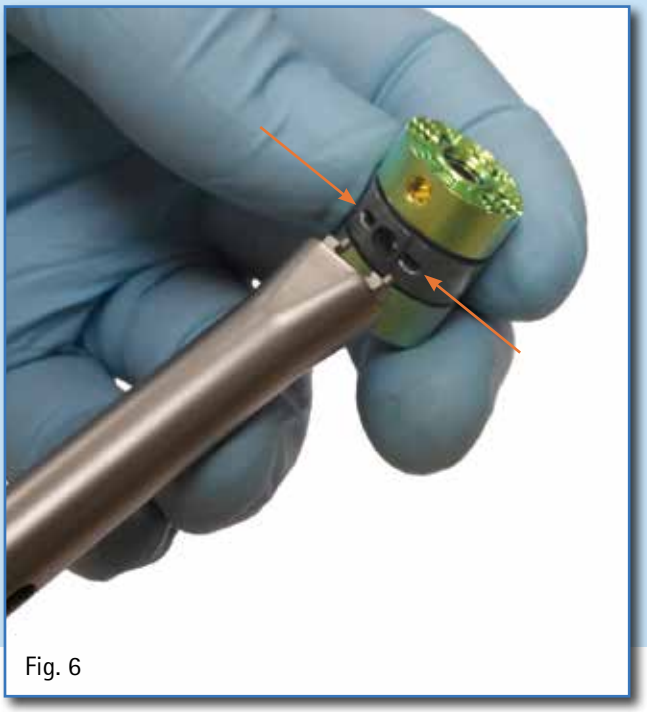

Fig. 6

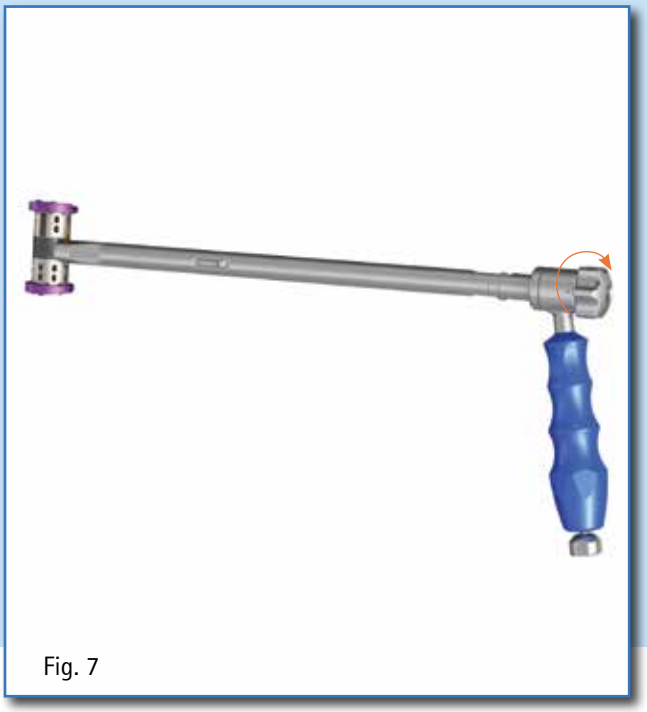

Fig. 7

Attach the insertion handle to the VBR

For proper alignment and expansion function, ensure that the two male ends on the inserter match the female VBR alignment holes.

The clamp mechanism on the inserter should be open enough to grasp the dovetail attachment of the VBR. This will ensure the VBR is in the correct position relative to the clamp and expansion driver function.

Rotate the thumb knob clockwise to close the jaws. Check the security of the attachment. Use the thumb screw and rotate counterclockwise to loosen the jaws.

Caution: *Do not overtighten the clamp mechanism. Finger tighten thumb knob by turning in clockwise direction to secure the Modulift® VBR implant to the insertion handle.*

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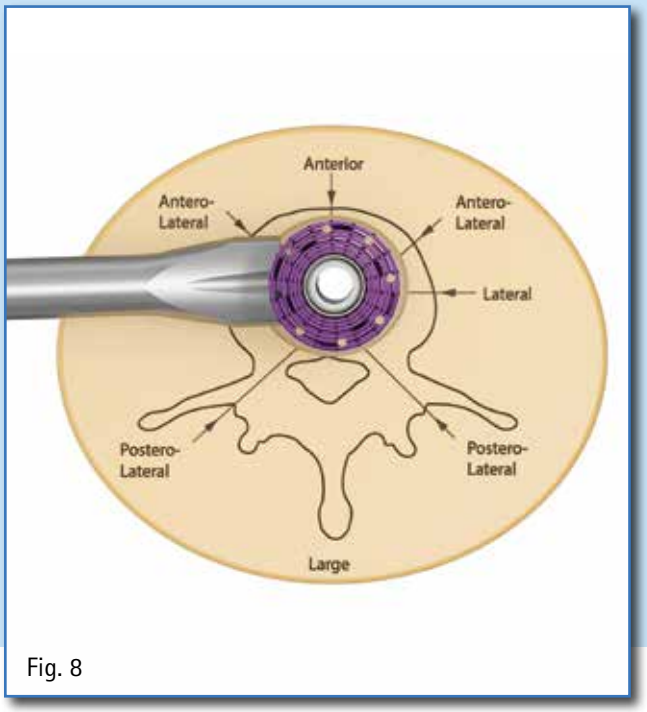


Fig. 8

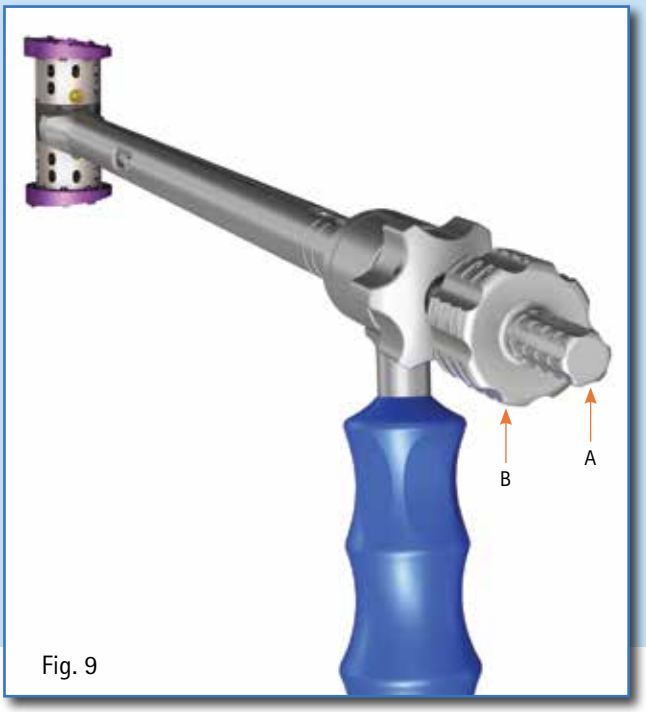


Fig. 9

6. Modular VBR Assembly

Alignment guides are located on the bench block to assist in orienting the footplates to the surgical approach vector and desired curvature correction.

Select the correct orientation, angle and size of the footplates.

Place one footplate into the bench block, waffle pattern facing down, and prepare to assemble the VBR/inserter while paying attention to the surgical approach. The footplates snap into the VBR and are secured with a lock ring mechanism.

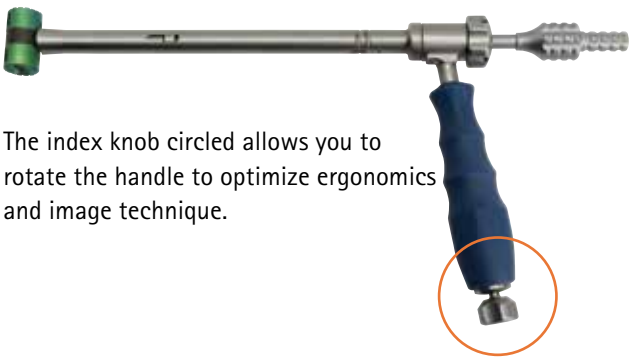
Ensure the insertion handle is aligned and juxtaposed to the correct surgical approach vector by using the bench block as a reference while taking into account the curvature correction and its relationship to the inserter arm.

Your choices for the Modulift VBR are:

- Anterior
- Anterior Lateral
- Lateral
- Posterior

Next, attach the opposing footplate again, ensuring the footplate is positioned correctly relative to the insertion handle and the curvature correction needed.

The dual geometry expansion driver provides a smaller handle (a) for quicker expansion and a larger handle (b) for greater mechanical advantage. Both options provide optional tactile feedback of the spinal anatomy.



The index knob circled allows you to rotate the handle to optimize ergonomics and image technique.

Caution: *Please ensure that the footplate curvature correction and insertion handle are positioned consistently with the appropriate surgical approach vector.*

Fig. 10

7. Bone Packing

Use the graft funnel and graft tamp (MF708R, MF709R) to add bone substitute to the VBR prior to expansion.

8. Insertion and Expansion

Carefully slide the expansion driver instrument into the inserter to engage the expansion gear drive located on the internal assembly of the VBR. Slowly spin the gear drive clockwise.

There will be an audible click and the drive will slide slightly further into the inserter when the expansion driver is properly engaged.

Once the expansion driver is properly engaged with the VBR, rotate the expansion knob **clockwise** to ensure a properly functioning VBR expands as desired. Return the VBR to the collapsed height prior to insertion.

> **Note:** *One full rotation of the expansion driver yields a change in vertical height of 0.5 mm.*

Insert the VBR and ensure your position is appropriate relative to the patient's anatomic situation, overall stability, bone quality and optimal position for load transfer.

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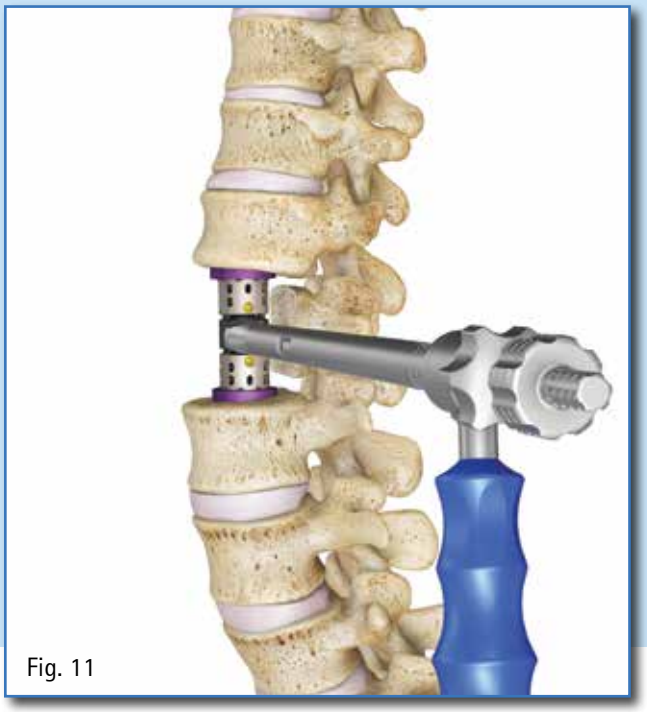

Fig. 11

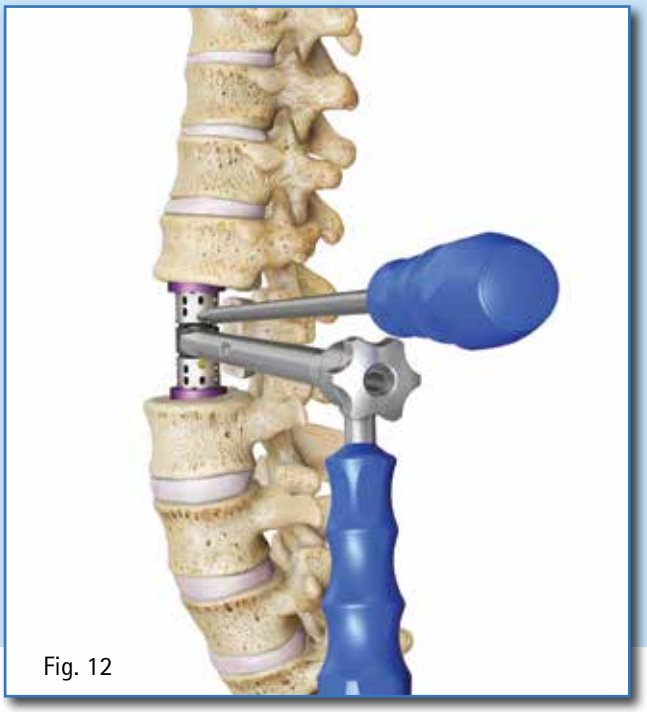

Fig. 12

Once the desired position has been found, commence expansion under fluoroscopic conditions yielding the optimal curvature correction and expansion height.

Expand the VBR to fit the prepared space by turning the gear drive clockwise.

If a less than satisfactory result is achieved, rotate the expansion knob counterclockwise to collapse the VBR in a controlled manner, and repeat the expansion step after a fluoroscopic evaluation of the spine and VBR position is attained.

Note: *Lines are located on the center body of the VBR which indicate half and full expansion*

9. Final Implant Verification

Once final seating and positioning is confirmed, remove the expansion driver only. The inserter will function as your counter torque.

Lock both set screws utilizing the appropriate torque limited driver. The patented dual expansion mechanism allows two locking screws for added security. The pre-positioned locking screws are already integrated within the VBR construct. Use the set screw torque driver to lock the set screws by turning clockwise until the torque limit is reached and the handle clicks. Use the insertion handle for maintaining stability and providing counter torque.

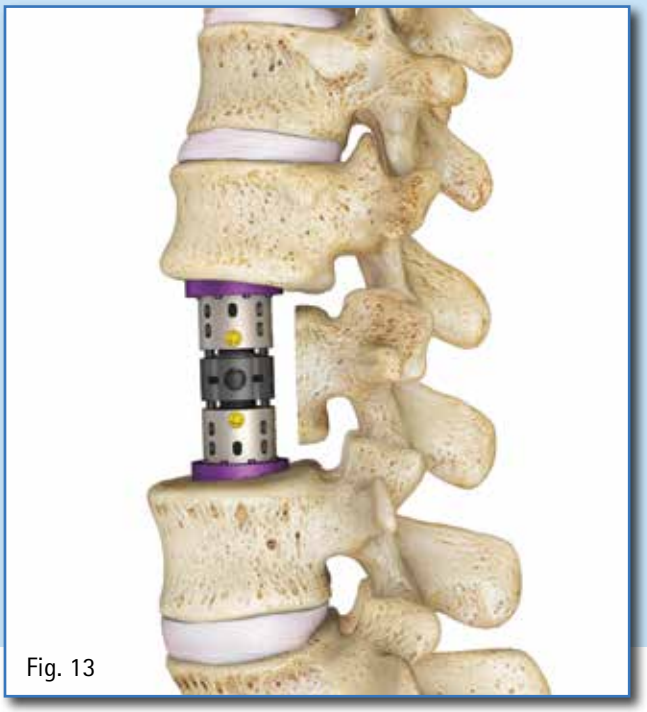

Fig. 13

Fig. 14

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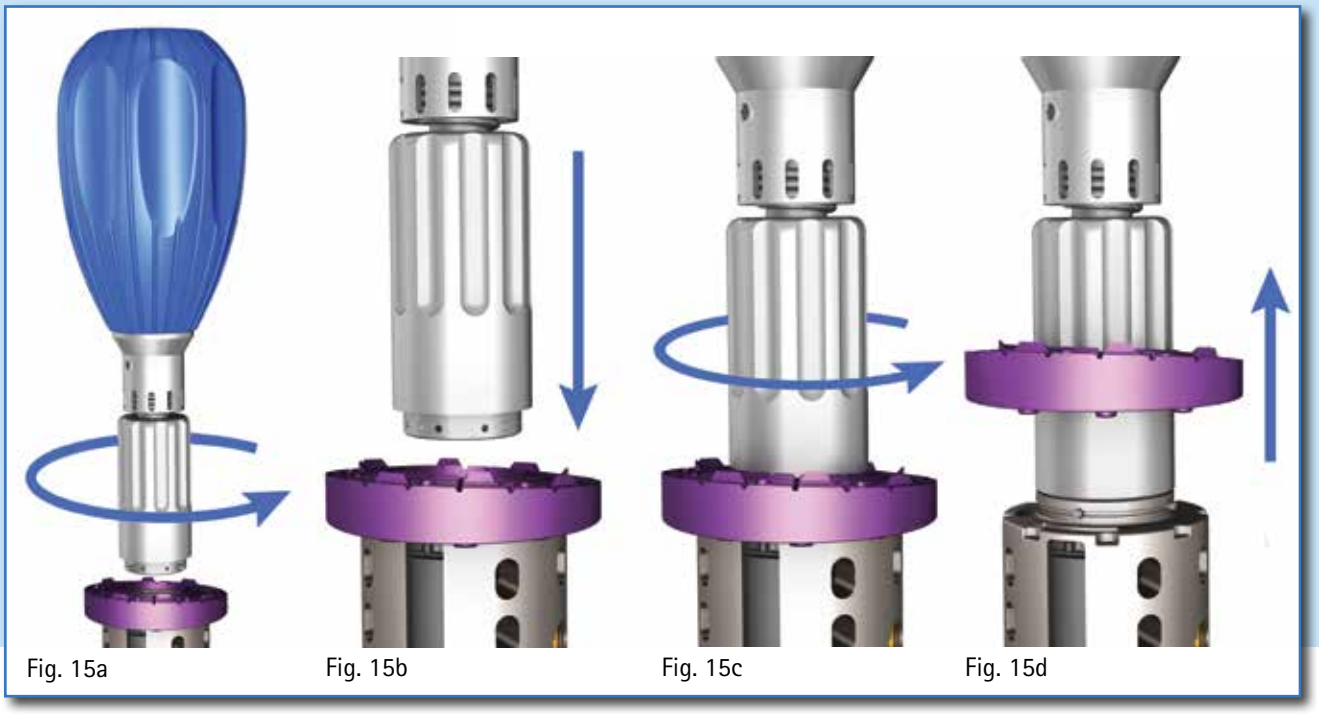


Fig. 15a Fig. 15b Fig. 15c Fig. 15d

10. Footplate Removal

The footplates can be removed by inserting the footplate removal tool (MF712R or MF859R).

Expand the VBR.

Rotate the metallic grooved handle aspect of the removal tool counterclockwise to **retract** the four spikes that engage and depress the footplate lock ring. (Fig. 15a)

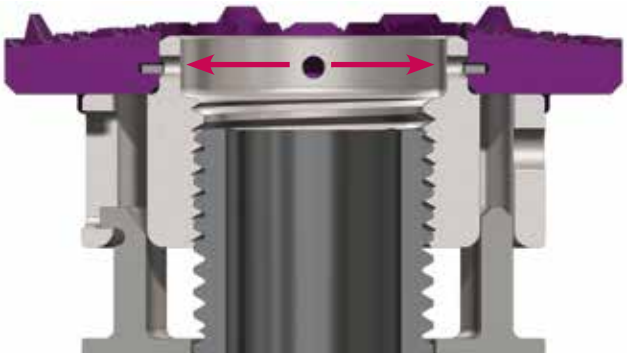
While maintaining the retracted spikes, insert the removal tool into the central cavity until you contact the positive stop. Maintain an axial orientation. (Fig. 15b)

Slowly release the tension on the removal tool, and slowly rotate the handle to engage the four access holes in the superior aspect of the VBR. (Fig. 15c) Allow the removal tool to "find its home".

An audible click will be heard, confirming correct orientation.

Carefully remove the modular footplate with the removal device still attached. Apply light rocking force to remove end plate. (Fig. 15d)

The footplate removal tool can now be removed by rotating the metallic handle counterclockwise. Apply light force to loosen. Do not grasp or rotate the VBR.



11. Implant Removal

Clear all soft tissue and bony in-growth around the VBR.

Unscrew both lock mechanisms with the appropriate set screw removal driver (MF827R, MF891R or MF852R).

Attach the inserter, if possible. Then, insert the expansion driver.

Rotate the driver counterclockwise to retract the VBR.

Continue removal of all soft tissue and boney in-growth until the VBR is loose and able to be removed with minimal force.

Caution: *Do not remove the VBR by force. Patient injury will occur.*

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VI. Appendix: Modulift Special Handling Instructions

Medium

- **Unitized** – One piece - short expansion ranges
- **Unimodular** – One footplate attachment point - medium expansion ranges
- **Modular** – Two footplate attachment points

Large

- **Unitized** – One piece - short expansion ranges
- **Unimodular** – One footplate attachment point - medium expansion ranges
- **Modular** – Two footplate attachment points

Medium Modulift VBR

Medium Unitized VBR (MF775T-MF779T) is designed for small expansion ranges through the posterior and lateral approach of the upper thoracic spine. Assembly and handling are no different than the illustrated surgical technique.

Use MF790R, ball-ended set screwdriver to lock the expansion height.

Medium Unimodular VBR (MF653T- MF654T) is designed for small to mid expansion ranges. The unimodular concept allows modularity at a shorter expansion range. One footplate (one end) is modular and will require assembly. See Step 6: Modular VBR Assembly.

Medium Modular VBR (MF656T- MF657T) expands in both directions and has two modular footplates to optimize curvature correction flexibility. The Medium Modular VBR accommodates modular footplate attachments on each end and is used for the taller expansion ranges.

Large Modulift® VBR

Large Unitized VBR (MF785T - MF789T) is designed to accommodate short expansion ranges of the lumbar spine. Surgical approach options are direct lateral, posterior approach and anterior approach.

Large Modular VBR (MF728T - MF733T) accommodates modular footplate attachments on each end and is used for taller expansion ranges.

The superior and inferior locking screws are secured by a separate instrument (MF848R).

Note: *Use of bone graft can be used to supplement the positive bone modeling response of the VBR construct post expansion.*

Additional Anterior Stabilization is indicated. Please refer to the MACS TL®/ S4® Element ADR surgical technique for the proper surgical protocol.

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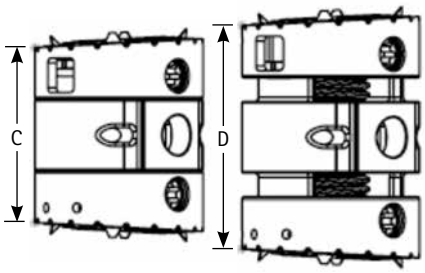
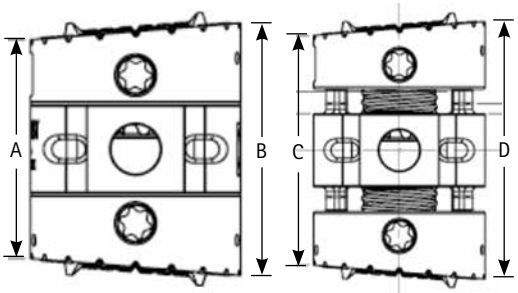
VII. Implant Overview

Medium Unitized VBR



Medium **Posterior** VBR



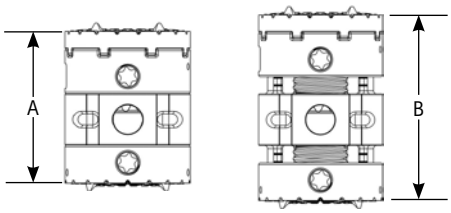
Medium **Lateral** VBR

Medium VBR Critical Dimensions

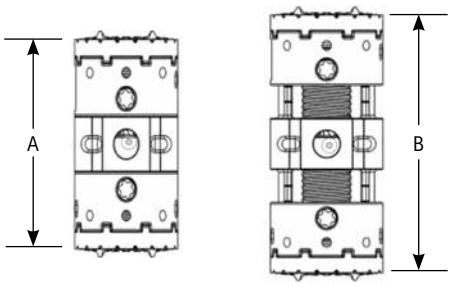
Medium Unitized VBRs		Collapsed		Expanded		Surgical
Item No.	**Description**	**A (mm)**	**B (mm)**	**C (mm)**	**D (mm)**	**Approach**
MF775T	Modulift VBR, M, 18.5-23.5 mm, 0°	18.5	18.5	23.5	23.5	ALL
MF776T	Modulift VBR, M, 18.5-23.5 mm, Lat / 6°	18.5	20.5	23.5	25.5	Lateral
MF777T	Modulift VBR, M, 18.5-23.5 mm, Pos / 6° Kyph	18.5	20.5	23.5	25.5	Posterior L / R
MF778T	Modulift VBR, M, 18.5-23.5 mm, Lat / 9°	18.5	21.5	23.5	26.5	Lateral
MF779T	Modulift VBR, M, 18.5-23.5 mm, Pos / 9° Kyph	18.5	21.5	23.5	26.5	Posterior L / R

Medium Modular VBRs		0 Deg Footplate	
Item No.	**Description**	**Collapsed A/B (mm)**	**Expanded A/B (mm)**
MF653T	Modulift® VBR, M, Unimodular, 22-27 mm	22	27
MF654T	Modulift VBR, M, Unimodular, 24-31 mm	24	31
MF655T	Modulift VBR, M, Modular, 30-40 mm	30.5	40.5
MF656T	Modulift VBR, M, Modular, 38-53 mm	38.5	53.5
MF657T	Modulift VBR, M, Modular, 50-74 mm	50.5	74.5

(1) 0° Footplate



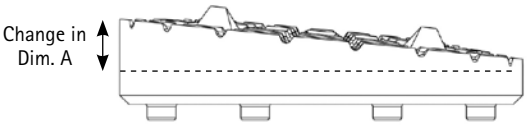
(2) 0° Footplates



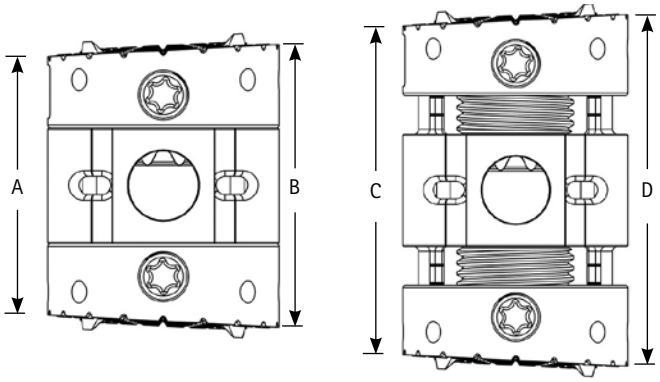
Medium **Modular** VBR

Medium Footplates		Change in Footplate Height
Item No.	**Description**	**mm**
MF690T	Modulift VBR, M, Footplate, 18 mm, 0°	na
MF691T	Modulift VBR, M, Footplate, 18 mm, 3°	1.0
MF692T	Modulift VBR, M, Footplate, 18 mm, 6°	2.0
MF693T*	Modulift VBR, M, Footplate, 18 mm, 9°	3.0
MF649T	Modulift VBR, M, Footplate, 21 mm, 0°	na
MF650T	Modulift VBR, M, Footplate, 21 mm, 3°	1.0
MF651T	Modulift VBR, M, Footplate, 21 mm, 6°	2.0
MF652T*	Modulift VBR, M, Footplate, 21 mm, 9°	3.5
MF755T	Modulift VBR, M, Footplate, 25 mm, 0°	na
MF756T	Modulift VBR, M, Footplate, 25 mm, 3°	1.5
MF757T	Modulift VBR, M, Footplate, 25 mm, 6°	2.5
MF758T*	Modulift VBR, M, Footplate, 25 mm, 9°	4.0
Waffle Pattern		0.5
Spike Height (Superior to Waffle Pattern)		1.0
*Spike Height (Superior to Waffle Pattern)		1.5

All measurements accurate to within 0.5 mm



Large Unitized VBR



Large VBR Critical Dimensions					
Large 21 mm Unitized VBRs		**Collapsed**		**Expanded**	
Item No.	**Description**	**A (mm)**	**B (mm)**	**C (mm)**	**D (mm)**
MF785T	Modulift VBR, L, 23.5-30.5 mm, 0°	23.5	23.5	31	31
MF786T	Modulift VBR, L, 23.5-30.5 mm, Lat, 6°	23.5	26	31	33.0
MF788T	Modulift VBR, L, 23.5-30.5 mm, Lat, 9°	23.5	27	31	34

All measurements accurate to within 0.5 mm

Modulift® Vertebral Body Replacement System - Medium and Large

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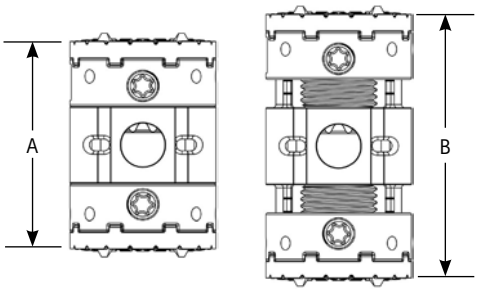
Large 21 mm Modular VBRs		Collapsed	Expanded
Item No.	Description	C (mm)	
MF728T	Modulift VBR, L, Modular, 28.5-35.5 mm	29	36
MF729T	Modulift VBR, L, Modular, 30-38 mm	30.5	38.5
MF730T	Modulift VBR, L, Modular, 36-50 mm	36.5	50.5
MF731T	Modulift VBR, L, Modular, 48-73 mm	48.5	73.5
MF732T	Modulift VBR, L, Modular, 70-96 mm	70.5	96.5
MF733T	Modulift VBR, L, Modular, 93-123 mm	93.5	123.5

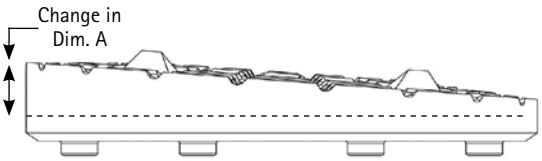
(2) 0° Footplates



Large Footplates		Change in Footplate Height
Item No.	Description	(mm)
MF750T	Modulift VBR, L, Ft. Plate, 21 mm, 0°	na
MF751T	Modulift VBR, L, Ft. Plate, 21 mm, 3°	0
MF752T	Modulift VBR, L, Ft. Plate, 21 mm, 6°	2.0
MF753T*	Modulift VBR, L, Ft. Plate, 21 mm, 9°	3.0
MF760T	Modulift VBR, L, Ft. Plate, 25 mm, 0°	na
MF761T	Modulift VBR, L, Ft. Plate, 25 mm, 3°	1.5
MF762T	Modulift VBR, L, Ft. Plate, 25 mm, 6°	2.5
MF763T*	Modulift VBR, L, Ft. Plate, 25 mm, 9°	4.0
MF766T	Modulift VBR, L, Ft. Plate, 28 mm, 0°	na
MF767T	Modulift VBR, L, Ft. Plate, 28 mm, 3°	1.5
MF768T	Modulift VBR, L, Ft. Plate, 28 mm, 6°	3.0
MF769T	Modulift VBR, L, Ft. Plate, 28 mm, 9°	4.5
MF770T	Modulift VBR, L, Ft. Plate, 28 mm, 15°	7.5
MF772T	Modulift VBR, L, Ft. Plate, 28x32 mm, 0°	na
MF773T	Modulift VBR, L, Ft. Plate, 28x32 mm, 3°	1.5
MF774T	Modulift VBR, L, Ft. Plate, 28x32 mm, 6°	3.0
MF780T*	Modulift VBR, L, Ft. Plate, 28x32 mm, 9°	4.5
MF781T**	Modulift VBR, L, Ft. Plate, 28x32 mm, 15°	7.5
Waffle Pattern		0.5
Spike Height (superior to waffle pattern)		1.0
*Spike Height (superior to waffle pattern)		1.5
**Spike Height (superior to waffle pattern)		1.8

All measurements accurate to within 0.5 mm

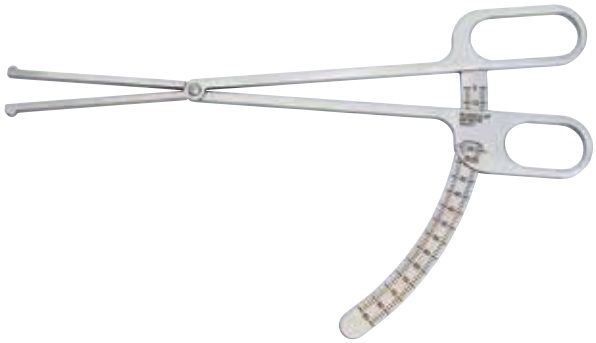
Large **Modular** VBR



Surgical Technique – Set List

VIII. Instrument Overview – Medium

Calipers



Item No.	Description	Qty.
MF807R	Modulift VBR Size Medium Caliper	1

Footplate Sizer

Item No.	Description	Qty.
MF715R	Modulift VBR, 18 mm, Footplate Sizer	1
MF870R	Modulift VBR, 21 mm, Footplate Sizer	1
MF872R	Modulift VBR, 25 mm, Footplate Sizer	1

Trial Implants

Modulift® Size Medium

Item No.	Description	Qty.
MF700T	Modulift VBR Size M Trial Implant 18.5-23.5 mm 0°	1
MF841T	Modulift VBR Size M Trial Implant 18.5-23.5 mm 6°	1
MF842T	Modulift VBR Size M Trial Implant 18.5-23.5 mm 9°	1
MF701T	Modulift VBR Size M Trial Implant 22-27 mm	1
MF702T	Modulift VBR Size M Trial Implant 24-31 mm	1
MF703T	Modulift VBR Size M Trial Implant 30-40 mm	1
MF704T	Modulift VBR Size M Trial Implant 38-53 mm	1
MF705T	Modulift VBR Size M Trial Implant 50-74 mm	1

Modulift® Vertebral Body Replacement System – Medium and Large

Surgical Technique – Set List

VIII. Instrument Overview – Medium *(continued)*

Trial Footplates

Modulift Size Medium

Item No.	Description	Qty.
MF694T	Modulift VBR Size M Footplate Trial 0°	2
MF695T	Modulift VBR Size M Footplate Trial 3°	2
MF696T	Modulift VBR Size M Footplate Trial 6°	2
MF697T	Modulift VBR Size M Footplate Trial 9°	2

Trial Implant Inserter Handle

Item No.	Description	Qty.
MF699R	Modulift, Medium/Large, Trial Handle	2

Implant Inserter

Item No.	Description	Qty.
MF707R	Modulift, VBR Size Medium Implant Inserter	1

Expansion Driver

Item No.	Description	Qty.
MF706R	Modulift, VBR Size M Expansion Driver	2

Bench Block

Item No.	Description	Qty.
MF713P	Modulift VBR Size Medium Orientation Template	1

VIII. Instrument Overview – Medium *(continued)*

Bone Tamp

Item No.	Description	Qty.
MF708R	Modulift® VBR Size Medium Bone Tamp	1

Graft Funnel

Item No.	Description	Qty.
MF709R	Modulift VBR Size Medium Graft Funnel	1

Set Screwdriver

Item No.	Description	Qty.
MF790R	Modulift VBR Size Medium 4 mm Set Screwdriver	2

Set Screw Removal Driver

Item No.	Description	Qty.
MF791R	Modulift VBR Size Medium Set Screw Removal Driver	1

Torque Limiting Handle

Item No.	Description	Qty.
FW129R	2.8 Nm S4® C Torque Limiting T-Handle (Medium/Large)	1
MF712R	Modulift, M, Footplate Removal	1

Modulift® Vertebral Body Replacement System – Medium and Large

Surgical Technique – Set List

IX. Instrument Overview – Large

Calipers

Item No.	Description	Qty.
MF711R	Modulift VBR Size Large Caliper	1

Footplate Sizer

Item No.	Description	Qty.
MF870R	Modulift VBR, 21 mm, Footplate Sizer	1
MF872R	Modulift VBR, 25 mm, Footplate Sizer	1
MF873R	Modulift VBR, 28 mm, Footplate Sizer	1
MF875R	Modulift, VBR Size Large, 28 x 32 mm Footplate Sizer	1

Trial Implants

Modulift Size Large

Item No.	Description	Qty.
MF880T	Modulift VBR Size L Trial Implant, 23.5-30.5 mm	1
MF845T	Modulift VBR Size L Trial Implant, 23.5-30.5 mm 6°	1
MF846T	Modulift VBR Size L Trial Implant, 23.5-30.5 mm 9°	1
MF882T	Modulift VBR Size L Trial Implant, 28.5-35.5 mm	1
MF883T	Modulift VBR Size L Trial Implant, 30-38 mm	1
MF885T	Modulift VBR Size L Trial Implant, 36-50 mm	1
MF886T	Modulift VBR Size L Trial Implant, 48-73 mm	1
MF887T	Modulift VBR Size L Trial Implant, 70-96 mm	1
MF888T	Modulift VBR Size L Trial Implant, 93-123 mm	1

IX. Instrument Overview – Large *(continued)*

Trial Footplates

Modulift Size Large

Item No.	Description	Qty.
MF869T	Modulift VBR Size L Footplate Trial 0°	2
MF876T	Modulift VBR Size L Footplate Trial 3°	2
MF877T	Modulift VBR Size L Footplate Trial 6°	2
MF878T	Modulift VBR Size L Footplate Trial 9°	2
MF879T	Modulift VBR Size L Footplate Trial 15°	2

Trial Implant Inserter Handle

Item No.	Description	Qty.
MF699R	Modulift, Medium/Large, Trial Handle	2

Implant Inserter

Item No.	Description	Qty.
MF840R	Modulift, VBR Size Large Implant Inserter	1

Expansion Driver

Item No.	Description	Qty.
MF851R	Modulift, VBR Size L Expansion Driver	2

Bench Block

Item No.	Description	Qty.
MF858P	Modulift VBR Size Large Orientation Template	1

Bone Tamp

Item No.	Description	Qty.
MF854R	Modulift VBR Size Large Bone Tamp	1

Modulift® Vertebral Body Replacement System – Medium and Large

Surgical Technique – Set List

IX. Instrument Overview – Large *(continued)*

Graft Funnel

Item No.	Description	Qty.
MF855R	Modulift VBR Size Large Graft Funnel	1

Set Screwdriver

Item No.	Description	Qty.
MF848R	Modulift VBR Size Large Set Screwdriver	2

Set Screw Removal Driver

Item No.	Description	Qty.
MF852R	Modulift VBR Size Large Set Screw Removal Driver	1

Torque Limiting Handle

Item No.	Description	Qty.
FW129R	2.8 Nm S4® C Torque Limiting T-Handle (Medium/Large)	1
MF859R	Modulift, L, Footplate Removal	1

X. Modulift® Medium Implant Set List

ST0441 Modulift VBR Medium Instruments

Item No.	Qty.	Description
MF707R	1	Modulift, VBR Size M Implant Inserter
MF706R	2	Modulift, VBR Size M Expansion Driver
MF791R	1	Modulift VBR Size M Set Screw Removal Driver
MF790R	2	Modulift VBR Size M 4 mm Set Screwdriver
FW129R	1	S4C Torque Limiting T-Handle
MF708R	1	Modulift VBR Size S/M Bone Tamp
MF709R	1	Modulift VBR Size S/M Graft Funnel
MF710R	1	Modulift VBR Size M Implant Tamp
MF807R	1	Modulift VBR Size S/M Caliper
MF712R	1	Modulift, M, Footplate Removal
MF713P	1	Modulift VBR Size M Orientation Template
MF715R	1	Modulift VBR Footplate Sizer, 18
MF870R	1	Modulift, VBR Footplate Sizer, 21
MF872R	1	Modulift, VBR Footplate Sizer, 25
MF694T	2	Modulift VBR Size M Footplate Trial 0°
MF695T	2	Modulift VBR Size M Footplate Trial 3°
MF696T	2	Modulift VBR Size M Footplate Trial 6°
MF697T	2	Modulift VBR Size M Footplate Trial 9°
MF700T	1	Modulift VBR Size M Trial Implant 18.5-23.5 mm 0°
MF792T	1	Modulift VBR Size M Trial Implant 18.5-23.5 mm 6°
MF793T	1	Modulift VBR Size M Trial Implant 18.5-23.5 mm 9°
MF701T	1	Modulift VBR Size M Trial Implant 22-27 mm
MF702T	1	Modulift VBR Size M Trial Implant 24-31 mm
MF703T	1	Modulift VBR Size M Trial Implant 30-40 mm
MF704T	1	Modulift VBR Size M Trial Implant 38-53 mm
MF705T	1	Modulift VBR Size M Trial Implant 50-74 mm
MF699R	2	Modulift, M/L, Trial Handle

ST0442 Modulift VBR Medium Implants

Item No.	Qty.	Description
MF775T	1	Modulift VBR, M,18.5-23.5 mm, 0°
MF776T	1	Modulift VBR, M,18.5-23.5 mm, Lat / 6°
MF777T	1	Modulift VBR, M,18.5-23.5 mm, Pos / 6° Kyph
MF778T	1	Modulift VBR, M,18.5-23.5 mm, Lat / 9°
MF779T	1	Modulift VBR, M,18.5-23.5 mm, Pos / 9° Kyph
MF654T	2	Modulift VBR, M, Uni-Mod, 24-31 mm
MF655T	2	Modulift VBR, M, Mod, 30-40 mm
MF656T	1	Modulift VBR, M, Mod, 38-53 mm
MF657T	1	Modulift VBR, M, Mod, 50-74 mm
MF690T	2	Modulift VBR, M, Footplate, 18 mm, 0°
MF691T	2	Modulift VBR, M, Footplate, 18 mm, 3°
MF692T	2	Modulift VBR, M, Footplate, 18 mm, 6°
MF649T	2	Modulift VBR, M, Footplate, 21 mm, 0°
MF650T	2	Modulift VBR, M, Footplate, 21 mm, 3°
MF651T	2	Modulift VBR, M, Footplate, 21 mm, 6°
MF755T	2	Modulift VBR, M, Footplate, 25 mm, 0°
MF756T	2	Modulift VBR, M, Footplate, 25 mm, 3°
MF757T	2	Modulift VBR, M, Footplate, 25 mm, 6°
MF758T	2	Modulift VBR, M, Footplate, 25 mm, 9°

Modulift® Vertebral Body Replacement System – Medium and Large

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XI. Modulift Large Implant Set List

ST0443 Modulift VBR Large Instruments

Item No.	Qty.	Description
MF840R	1	Modulift, L, Implant Inserter
MF851R	2	Modulift, L, Expansion Driver
MF852R	1	Modulift, L, Set Screw Removal Driver
MF848R	2	Modulift, L, Set Screw Driver
FW129R	1	S4C Torque Limiting T-Handle
MF854R	1	Modulift, L, Bone Tamp
MF855R	1	Modulift, L, Graft Funnel
MF 857R	1	Modulift, L, Implant Tamp
MF711R	1	Modulift, L Caliper
MF858P	1	Modulift, L Orientation Template
R	1	Modulift, L, Footplate Removal
MF870R	1	Modulift, Footplate Sizer, 21
MF872R	1	Modulift, Footplate Sizer, 25
MF873R	1	Modulift, Footplate Sizer, 28
MF875R	1	Modulift, L, Footplate Sizer, 28 x 32 mm
MF869T	2	Modulift, L, Footplate Trial, 0°
MF876T	2	Modulift, L, Footplate Trial, 3°
MF877T	2	Modulift, L, Footplate Trial, 6°
MF878T	2	Modulift, L, Footplate Trial, 9°
MF879T	2	Modulift, L, Footplate Trial, 15°
MF880T	1	Modulift, L, Trial, 23.5-30.5 mm
MF804T	1	Modulift, L, Trial, 23.5-30.5 mm 6°
MF805T	1	Modulift, L, Trial, 23.5-30.5 mm 9°
MF881T	1	Modulift, L, U, Trial, 26-33 mm
MF882T	1	Modulift, L, Trial, 28.5-35.5 mm
MF883T	1	Modulift, L, Trial, 30-38 mm
MF885T	1	Modulift, L, Trial, 36-50 mm
MF886T	1	Modulift, L, Trial, 48-73 mm
MF887T	1	Modulift, L, Trial, 70-96 mm
MF888T	1	Modulift, L, Trial, 93-123 mm
MF699R	2	Modulift, M/L, Trial Handle
MF866P	1	Modulift, L Expansion Knob

ST0444 Modulift VBR Large Implants

Item No.	Qty.	Description
MF785T	1	Modulift VBR, L, 23.5-30.5 mm, 0°
MF786T	1	Modulift VBR, L, 23.5-30.5 mm, Lat, 6°
MF788T	1	Modulift VBR, L, 23.5-30.5 mm, Lat, 9°
MF728T	2	Modulift VBR, L,Mod, 28.5-35.5 mm
MF729T	2	Modulift VBR, L, Mod, 30-38 mm
MF730T	2	Modulift VBR, L, Mod, 36-50 mm
MF731T	2	Modulift VBR, L, Mod, 48-73 mm
MF732T	1	Modulift VBR, L, Mod, 70-96 mm
MF733T	1	Modulift VBR, L, Mod, 93-123 mm
MF750T	2	Modulift VBR, L, Footplate, 21 mm, 0°
MF751T	2	Modulift VBR, L, Footplate, 21 mm, 3°
MF752T	2	Modulift VBR, L, Footplate, 21 mm, 6°
MF753T	2	Modulift VBR, L, Footplate, 21 mm, 9°
MF760T	2	Modulift VBR, L, Footplate, 25 mm, 0°
MF761T	2	Modulift VBR, L, Footplate, 25 mm, 3°
MF762T	2	Modulift VBR, L, Footplate, 25 mm, 6°
MF763T	2	Modulift VBR, L, Footplate, 25 mm, 9°
MF766T	2	Modulift VBR, L, Footplate, 28 mm, 0°
MF767T	2	Modulift VBR, L, Footplate, 28 mm, 3°
MF768T	2	Modulift VBR, L, Footplate, 28 mm, 6°
MF769T	2	Modulift VBR, L, Footplate, 28 mm, 9°
MF770T	2	Modulift VBR, L, Footplate, 28 mm, 15°
MF772T	2	Modulift VBR, L, Footplate, 28x32 mm, 0°
MF773T	2	Modulift VBR, L, Footplate, 28x32 mm, 3°
MF774T	2	Modulift VBR, L, Footplate, 28x32 mm, 6°
MF780T	2	Modulift VBR, L, Footplate, 28x32 mm, 9°
MF781T	2	Modulift VBR, L, Footplate, 28x32 mm, 15°

Notes

Modulift® Vertebral Body Replacement System - Medium and Large

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Notes

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SOP-AIS-5001116 DOC1343 Rev A 250 7/17