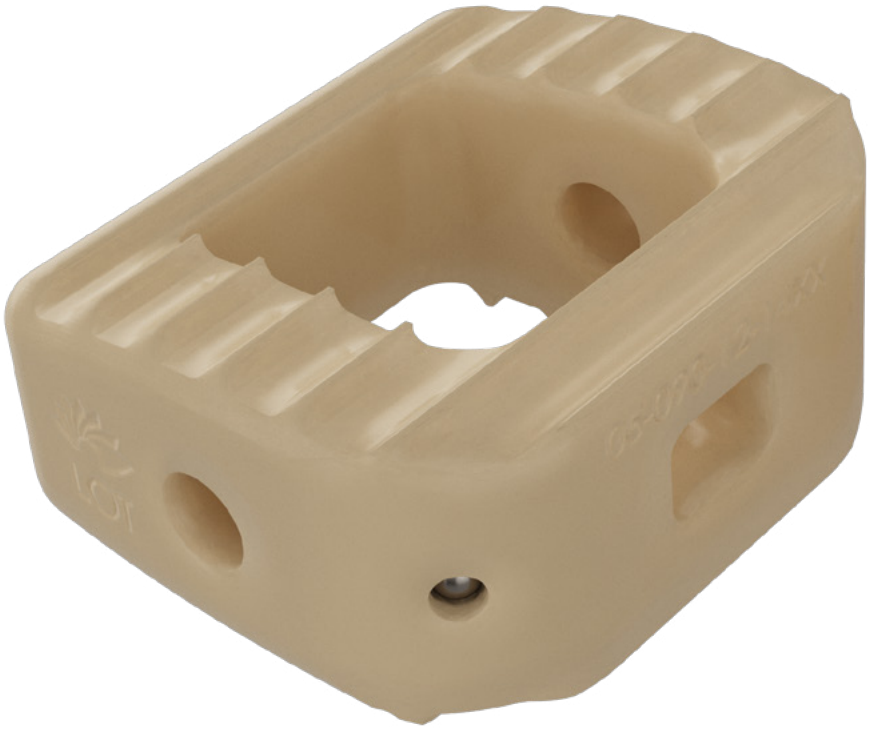
SURGICAL TECHNIQUE GUIDE

ASCENDANT® PEEK

Anterior Cervical Spacer System



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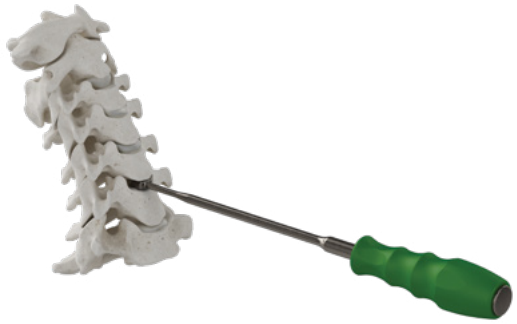
ASCENDANT® PEEK

Anterior Cervical Spacer System

Introduction

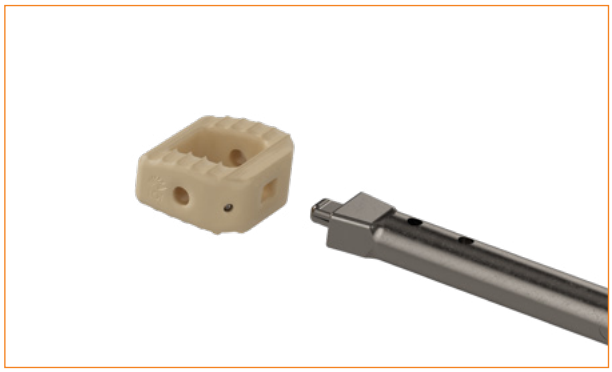
The Ascendant® PEEK Anterior Cervical Spacer System is an anterior cervical discectomy and fusion device offered in pure PEEK Optima®. It is offered in a variety of heights, footprints, and lordosis profiles to accommodate varying patient anatomy's. Ascendant PEEK features a large graft opening for bone graft material.

Operative Technique Overview



1. Preparing the Endplates

2. Trial Sizing



3. Attaching Implant to Inserter

4. Inserting Implant

Detailed Operative Technique

Surgical Approach

Identify the affected level radiographically. Using a standard surgical approach, expose the vertebral bodies to be fused. Prepare the fusion site following the appropriate technique for the given indication.

Distraction

Using the surgeon's preferred method, distract the vertebral bodies.. If using a caspar distractor, place one distraction pin in the vertebral body superior to the affected level and the other distraction pin in the vertebral body inferior to the affected level. The pin distractor is then placed over the pins and opened as needed to distract the vertebral bodies. Use caution to not over distract the vertebral segments.

Discectomy

Use the surgeon's preferred discectomy instruments and procedure, remove the intervertebral disc and osteophytes as needed. Use the **rasps (05-099-10-0000)** and **curettes (05-099-14-0000)** to prepare the endplates just enough to create a surface that will encourage vascularization between the endplates and the graft without weakening cortical bone (Figure 1).

CAUTION: Aggressive preparation of an endplate may remove excessive bone and weaken the endplate.

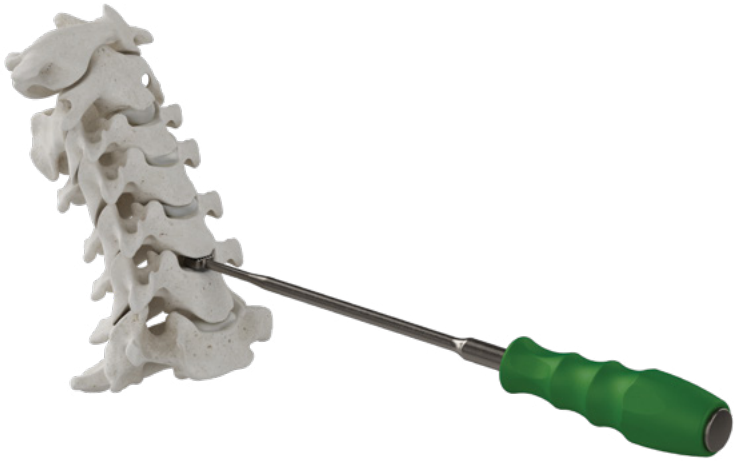


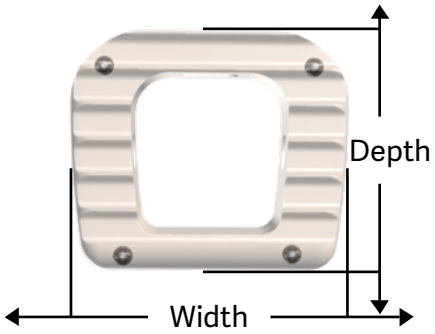
Fig. 1
Preparing the Endplates

Implant Size Selection

Insert the appropriate sized trial into the disc space and check for a secure fit. If necessary, use incrementally larger sizes until a tight fit is obtained. Use radiographic imaging to confirm the implant depth and height as well as endplate coverage (Figure 2).

Trials (05-099-05-1405 through 05-099-07-1612) are available with and without depth stops. The stops allow for a maximum of 2mm of countersink into the disc space.

NOTE: The trials are color coded to indicate whether it is a 14Wx12D or 16Wx14D footprint, and whether it is parallel, lordotic, or convex.



Implant Size Offerings

Footprints:
14 x 12 and 16 x 14mm
Lordotic, convex and parallel

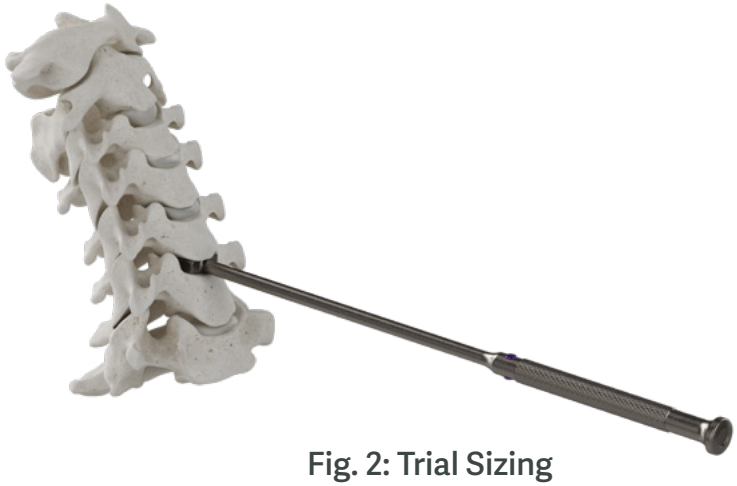


Fig. 2: Trial Sizing

Implant Connection to Inserter

Select the appropriate size implant as determined in the trialling step. Attach the distal tip of the **inserter (05-099-01-2000)** into the rectangular opening in the anterior face of the implant (Figure 3). Press the locking shaft (05-099-01-2006) into the inserter until fully seated to lock the implant into place (Figures 4 and 5).

NOTE: The convex implant version has a pronounced radial dome on the superior side. There is an arrow on the posterior end of the device to indicate which side is convexed.

Once the implant is attached to the inserter (Figure 6), fill the center graft window with graft material. The **graft loading block (05-099-16-0003)** and **graft impactor (05-099-17-0000)** can be used if necessary.

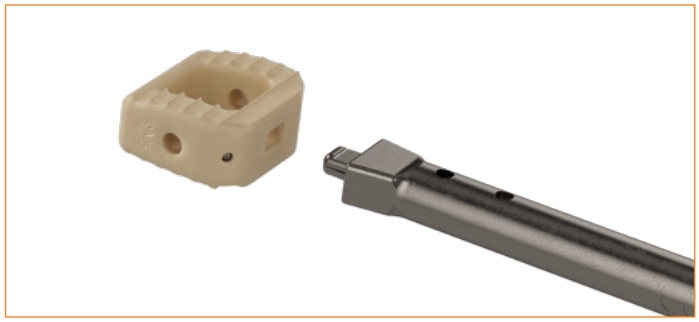


Fig. 3
Inserter Attachment

Fig. 4
Inserter Shaft Engagement

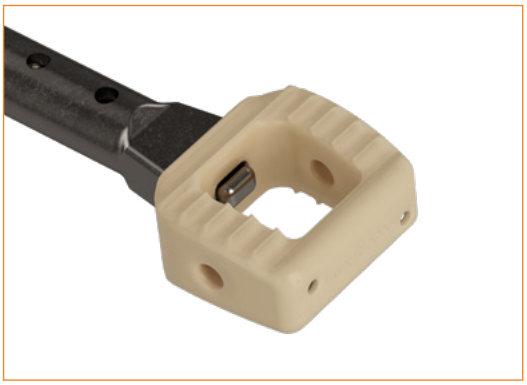


Fig. 5
Inserter Attached to Implant

Fig. 6
Inserter and Implant
Locked Together

Implant Insertion

Insert the implant into the disc space until the implant is flush with the anterior surface of the vertebral body (Figure 7).

Confirm the final position of the implant under radiographic imaging. Radiographic markers are incorporated in the implant to enable accurate assessment of implant position.

Fig. 7
Implant Insertion

Implant Removal

If it becomes necessary to remove the implant, carefully observe the implant position and the presence of any scar tissue, which can make exposure more challenging compared to the unoperated spine.

To remove the implant, use a standard operating instrument (e.g., kocher) to grasp the implant and proceed with removal. Alternatively, the implant inserter can be reattached to the implant with the locking shaft in place as described in Figures 3, 4 and 5 to aid in implant removal. If the implant cannot be easily removed, a cobb elevator or osteotome should be used to loosen the bone to implant interface.

Fig. 8
Implant Removal

Implant List

Part Number	Part Description
05-090-10-1405	ASCENDANT,SPACER,LOR,14x12x5
05-090-10-1406	ASCENDANT,SPACER,LOR,14x12x6
05-090-10-1407	ASCENDANT,SPACER,LOR,14x12x7
05-090-10-1408	ASCENDANT,SPACER,LOR,14x12x8
05-090-10-1409	ASCENDANT,SPACER,LOR,14x12x9
05-090-10-1410	ASCENDANT,SPACER,LOR,14x12x10
05-090-10-1411	ASCENDANT,SPACER,LOR,14x12x11
05-090-10-1412	ASCENDANT,SPACER,LOR,14x12x12
05-090-11-1405	ASCENDANT,SPACER,PAR,14x12x5
05-090-11-1406	ASCENDANT,SPACER,PAR,14x12x6
05-090-11-1407	ASCENDANT,SPACER,PAR,14x12x7
05-090-11-1408	ASCENDANT,SPACER,PAR,14x12x8
05-090-11-1409	ASCENDANT,SPACER,PAR,14x12x9
05-090-11-1410	ASCENDANT,SPACER,PAR,14x12x10
05-090-11-1411	ASCENDANT,SPACER,PAR,14x12x11
05-090-11-1412	ASCENDANT,SPACER,PAR,14x12x12
05-090-12-1405	ASCENDANT,SPACER,CON,14x12x5
05-090-12-1406	ASCENDANT,SPACER,CON,14x12x6
05-090-12-1407	ASCENDANT,SPACER,CON,14x12x7
05-090-12-1408	ASCENDANT,SPACER,CON,14x12x8
05-090-12-1409	ASCENDANT,SPACER,CON,14x12x9
05-090-12-1410	ASCENDANT,SPACER,CON,14x12x10
05-090-12-1411	ASCENDANT,SPACER,CON,14x12x11
05-090-12-1412	ASCENDANT,SPACER,CON,14x12x12
05-090-10-1605	ASCENDANT,SPACER,LOR,16x14x5
05-090-10-1606	ASCENDANT,SPACER,LOR,16x14x6
05-090-10-1607	ASCENDANT,SPACER,LOR,16x14x7
05-090-10-1608	ASCENDANT,SPACER,LOR,16x14x8
05-090-10-1609	ASCENDANT,SPACER,LOR,16x14x9
05-090-10-1610	ASCENDANT,SPACER,LOR,16x14x10
05-090-10-1611	ASCENDANT,SPACER,LOR,16x14x11
05-090-10-1612	ASCENDANT,SPACER,LOR,16x14x12

05-090-11-1605	ASCENDANT,SPACER,PAR,16x14x5
05-090-11-1606	ASCENDANT,SPACER,PAR,16x14x6
05-090-11-1607	ASCENDANT,SPACER,PAR,16x14x7
05-090-11-1608	ASCENDANT,SPACER,PAR,16x14x8
05-090-11-1609	ASCENDANT,SPACER,PAR,16x14x9
05-090-11-1610	ASCENDANT,SPACER,PAR,16x14x10
05-090-11-1611	ASCENDANT,SPACER,PAR,16x14x11
05-090-11-1612	ASCENDANT,SPACER,PAR,16x14x12

05-090-12-1605	ASCENDANT,SPACER,CON,16x14x5
05-090-12-1606	ASCENDANT,SPACER,CON,16x14x6
05-090-12-1607	ASCENDANT,SPACER,CON,16x14x7
05-090-12-1608	ASCENDANT,SPACER,CON,16x14x8
05-090-12-1609	ASCENDANT,SPACER,CON,16x14x9
05-090-12-1610	ASCENDANT,SPACER,CON,16x14x10
05-090-12-1611	ASCENDANT,SPACER,CON,16x14x11
05-090-12-1612	ASCENDANT,SPACER,CON,16x14x12

Instrument List

05-099-05-1405	Lordotic Trial 14W x 12D x 5H
05-099-05-1406	Lordotic Trial 14W x 12D x 6H
05-099-05-1407	Lordotic Trial 14W x 12D x 7H
05-099-05-1408	Lordotic Trial 14W x 12D x 8H
05-099-05-1409	Lordotic Trial 14W x 1vD x 9H
05-099-05-1410	Lordotic Trial 14W x 12D x 10H
05-099-05-1411	Lordotic Trial 14W x 12D x 11H
05-099-05-1412	Lordotic Trial 14W x 12D x 12H

05-099-06-1405	Parallel Trial 14W x 12D x 5H
05-099-06-1406	Parallel Trial 14W x 12D x 6H
05-099-06-1407	Parallel Trial 14W x 12D x 7H
05-099-06-1408	Parallel Trial 14W x 12D x 8H
05-099-06-1409	Parallel Trial 14W x 12D x 9H
05-099-06-1410	Parallel Trial 14W x 12D x 10H
05-099-06-1411	Parallel Trial 14W x 12D x 11H
05-099-06-1412	Parallel Trial 14W x 12D x 12H

05-099-07-1405	Convex Trial 14W x 12D x 5H
05-099-07-1406	Convex Trial 14W x 12D x 6H
05-099-07-1407	Convex Trial 14W x 12D x 7H
05-099-07-1408	Convex Trial 14W x 12D x 8H
05-099-07-1409	Convex Trial 14W x 12D x 9H
05-099-07-1410	Convex Trial 14W x 12D x 10H
05-099-07-1411	Convex Trial 14W x 12D x 11H
05-099-07-1412	Convex Trial 14W x 12D x 12H

05-099-05-1605	Lordotic Trial 16W x 14D x 5H
05-099-05-1606	Lordotic Trial 16W x 14D x 6H
05-099-05-1607	Lordotic Trial 16W x 14D x 7H
05-099-05-1608	Lordotic Trial 16W x 14D x 8H
05-099-05-1609	Lordotic Trial 16W x 14D x 9H
05-099-05-1610	Lordotic Trial 16W x 14D x 10H
05-099-05-1611	Lordotic Trial 16W x 14D x 11H
05-099-05-1612	Lordotic Trial 16W x 14D x 12H

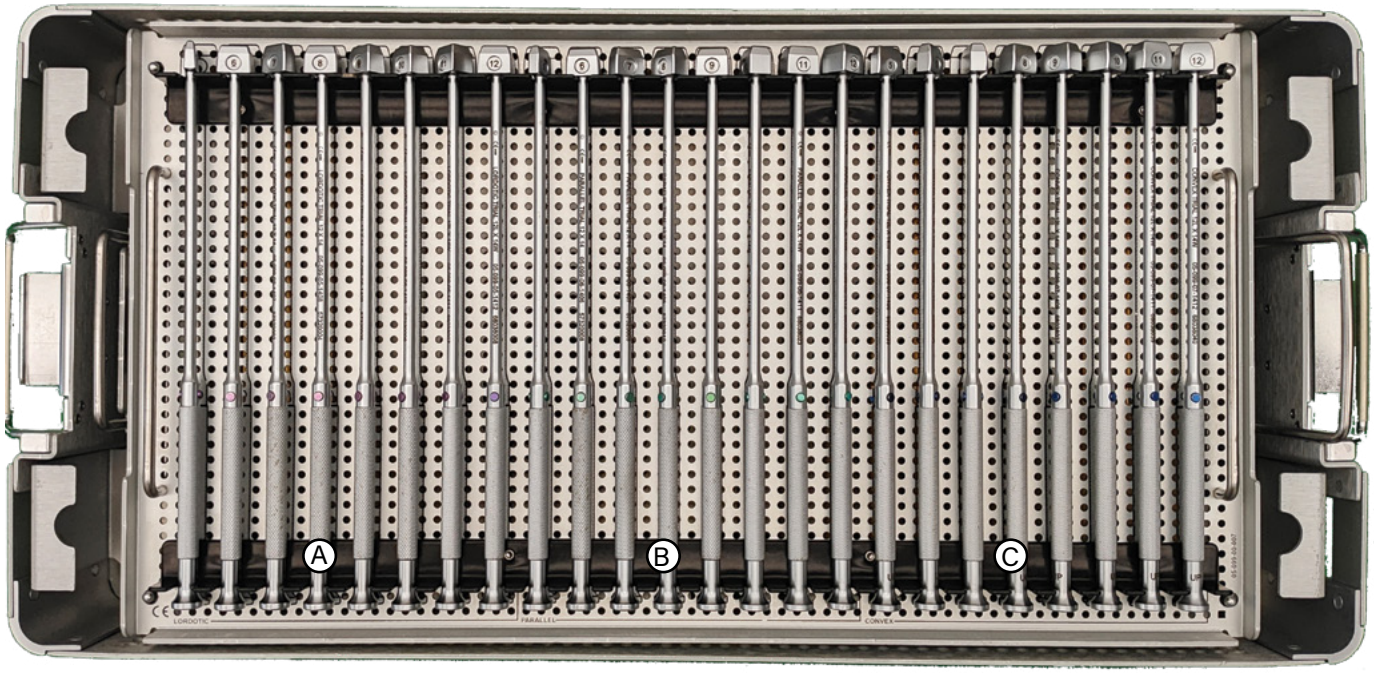
05-099-06-1605	Parallel Trial 16W x 14D x 5H
05-099-06-1606	Parallel Trial 16W x 14D x 6H
05-099-06-1607	Parallel Trial 16W x 14D x 7H
05-099-06-1608	Parallel Trial 16W x 14D x 8H
05-099-06-1609	Parallel Trial 16W x 14D x 9H
05-099-06-1610	Parallel Trial 16W x 14D x 10H
05-099-06-1611	Parallel Trial 16W x 14D x 11H
05-099-06-1612	Parallel Trial 16W x 14D x 12H

05-099-07-1605	Convex Trial 16W x 14D x 5H
05-099-07-1606	Convex Trial 16W x 14D x 6H
05-099-07-1607	Convex Trial 16W x 14D x 7H
05-099-07-1608	Convex Trial 16W x 14D x 8H
05-099-07-1609	Convex Trial 16W x 14D x 9H
05-099-07-1610	Convex Trial 16W x 14D x 10H
05-099-07-1611	Convex Trial 16W x 14D x 11H
05-099-07-1612	Convex Trial 16W x 14D x 12H

Instrument List

Part Number	Description
05-099-01-2000	INSERTER (x2)
05-099-01-2006	INSERTER SHAFT (x2)
05-099-10-0000	STRAIGHT RASP
05-099-14-0000	STRAIGHT RING CURETTE
05-099-16-0003	GRAFT LOADING BASE
05-099-17-0000	GRAFT IMPACTER
05-099-30-0000	MALLET
05-099-01-0020	TAMP

Ascendant® Trials: Top Tray

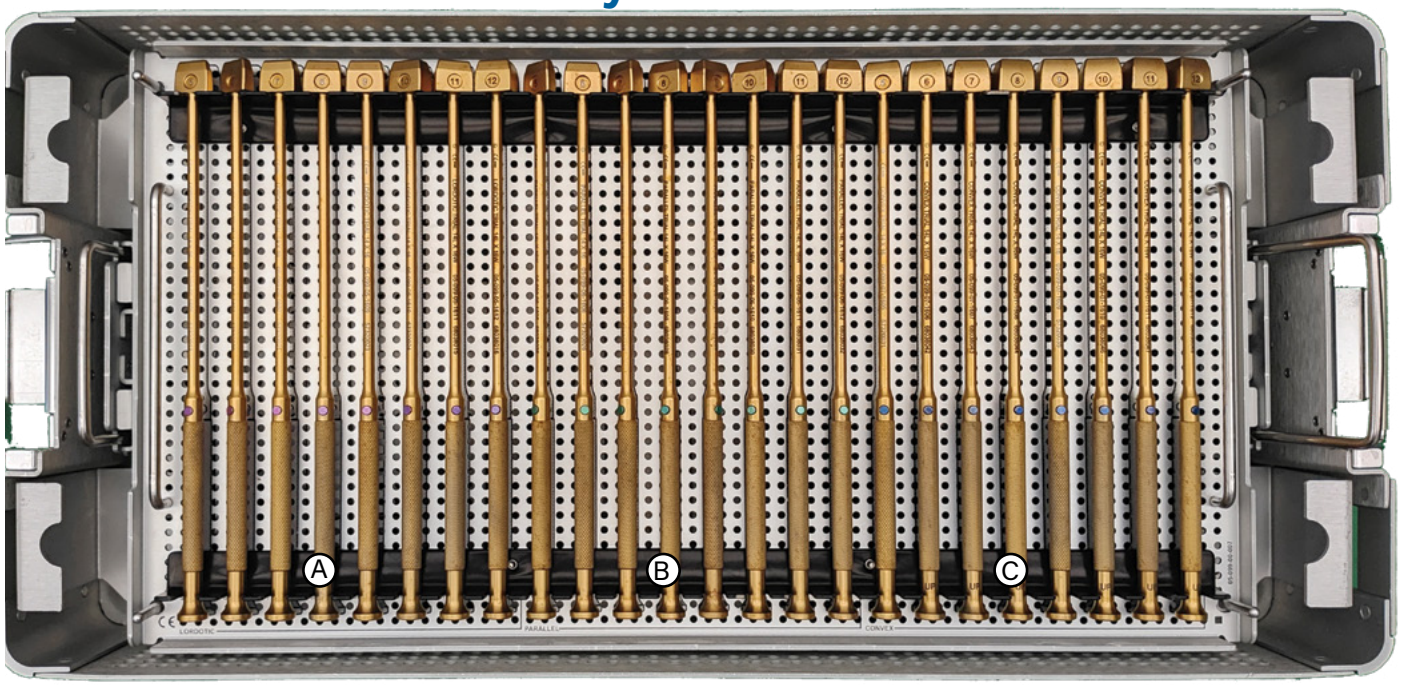


Ⓐ Lordotic Trials 14W x 12D x 5-12H 05-099-05-1405 through 05-099-05-1412

Ⓑ Parallel Trials 14W x 12D x 5-12H 05-099-06-1405 through 05-099-06-1412

Ⓒ Convex Trials 14W x 12D x 5-12H 05-099-07-1405 through 05-099-07-1412

Ascendant® Trials: Middle Tray

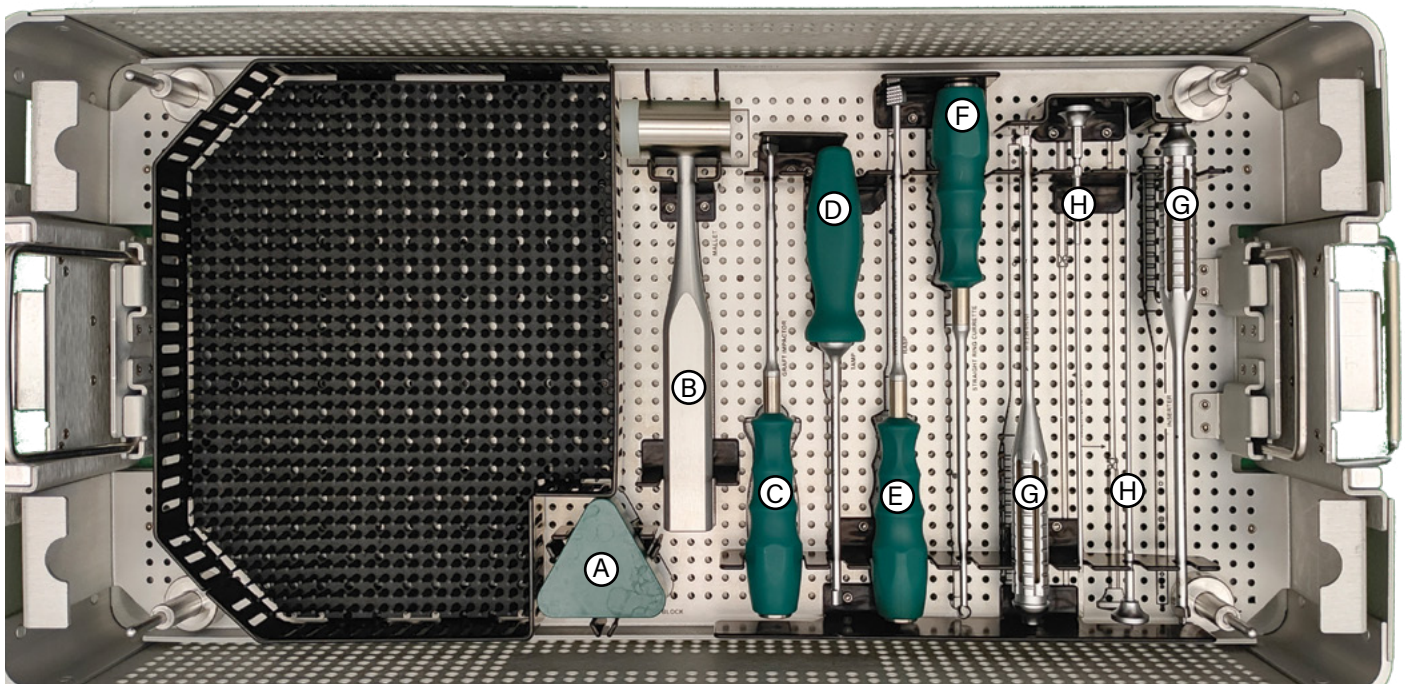


Ⓐ Lordotic Trials 16W x 14D x 5-12H 05-099-05-1605 through 05-099-05-1412

Ⓑ Parallel Trials 16W x 14D x 5-12H 05-099-06-1605 through 05-099-06-1412

Ⓒ Convex Trials 16W x 14D x 5-12H 05-099-07-1605 through 05-099-07-1412

Ascendant® Instruments: Middle Tray



Ⓐ Graft Loading Base 05-099-16-0003

Ⓑ Mallet 05-099-30-0000

Ⓒ Graft Impactor 05-099-17-0000

Ⓓ Tamp 05-099-01-0020

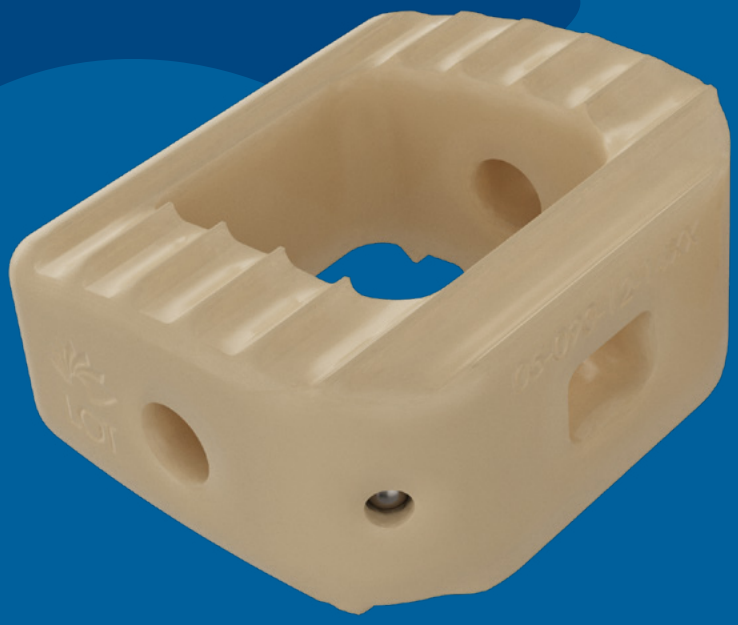
Ⓔ Straight Rasp 05-099-10-0000

Ⓕ Straight Ring Currette 05-099-14-0000

Ⓖ Inserter 05-099-01-2000 (x2)

Ⓗ Inserter Shaft 05-099-01-2006

Notes:



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