B BRAUN
SHARING EXPERTISE

SPINE SURGERY

AESCULAP® CeSPACE® XP

ANTERIOR CERVICAL INTERBODY FUSION SYSTEM

SURGICAL TECHNIQUE

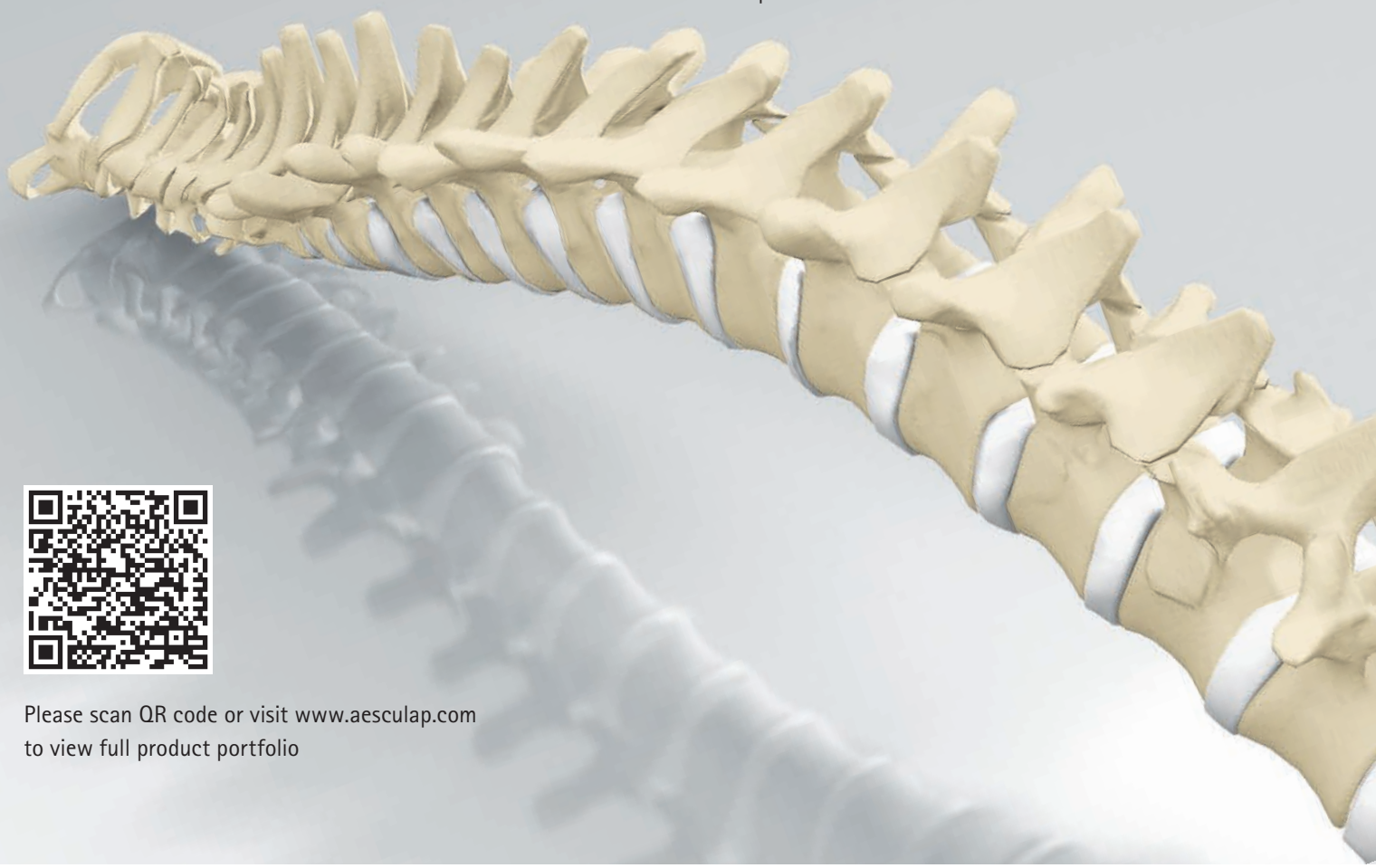
AESCULAP® CERVICAL SPINE

PROTECTING AND PRESERVING SPINAL STABILITY

Modern lifestyle has resulted in increasing physical inactivity among people all over the world. Of the many medical problems associated with this, spinal disorders are among the most critical. This is even more significant as the spinal column is one of the most important structures in the human body. It supports and stabilizes the upper body and is the center of our musculoskeletal system, which gives the body movement.

Our work in the field of spine surgery is dedicated to protecting the spinal column and preserving its stability. We support spine surgeons with durable, reliable products and partner services for proven procedures and good clinical outcomes (1-10).

Our philosophy of sharing expertise with healthcare professionals and patients allows us to develop innovative implant and instrument systems that help to preserve stability and stabilize the cervical and thoracolumbar spine.



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AESCULAP® CeSPACE® XP

CONTENT

AESCULAP® CeSPACE® XP

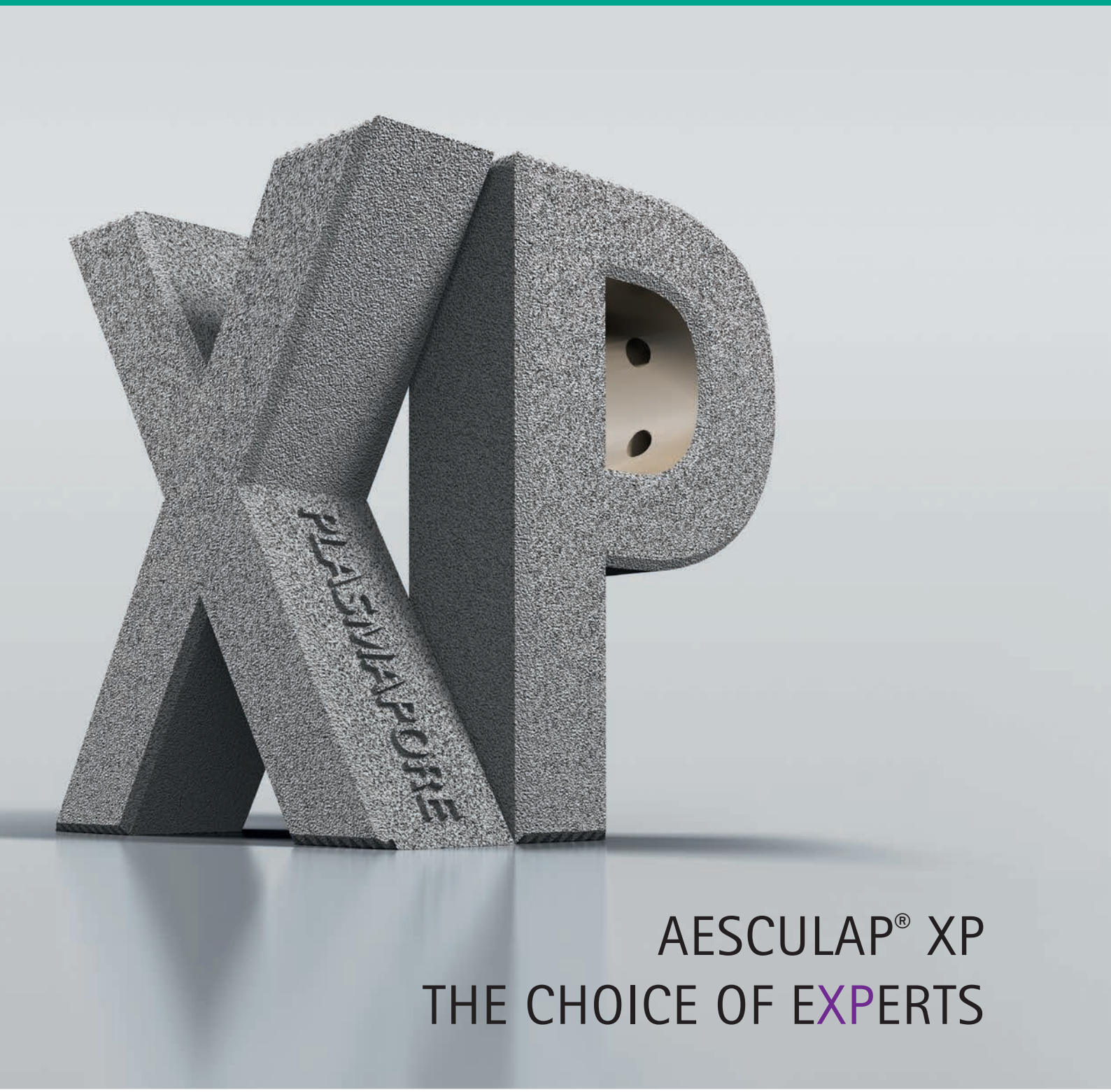
PHILOSOPHY

CeSPACE® XP is a spacer used for cervical interbody fusion.

It is indicated for stabilization of the cervical spine C2-T1 through anterior approach, monosegmental and multisegmental.

CeSPACE® XP IS DESIGNED TO DELIVER

- PRIMARY STABILITY (15).
- RESTORATION OF THE NATURAL DISC HEIGHT (15).
- SEGMENTAL LORDOTIC CORRECTION (15).



AESCULAP® XP
THE CHOICE OF EXPERTS

IMPLANT MATERIAL

Fig. 1

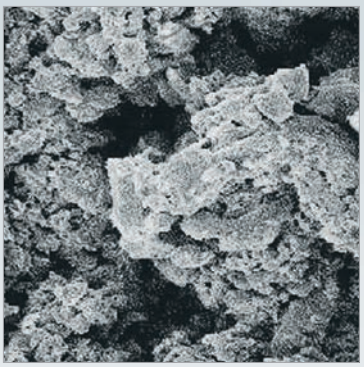


Fig. 2

COMBINING MATERIAL ADVANTAGES

The core of the implant is biocompatible PEEK-OPTIMA®*. PEEK stands for PolyEtherEtherKetone. PEEK-OPTIMA® polymer complies with ISO 10993-1, USP Class VI and ASTM F2026 for use as a medical implant material. The use of the PEEK-OPTIMA® material has several advantages, as its properties include radiolucency, high mechanical strength, high fatigue resistance, a low wear factor and biocompatibility (11-14, 17).
The core is mantled with the proven PLASMAPORE XP® coating to increase the contact area between implant and endplate (16). PLASMAPORE XP® is an osteoconductive pure titanium coating (Ti / ISO 5832-2) which enables bone ingrowth due to its balanced relationship between pore depth, porosity and roughness (16). The coating allows for clear visualization of implant contours during intra and post operative imaging (Fig. 1).

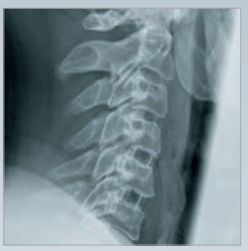
AIM OF THE PLASMAPORE XP® COATING

- **Primary Stability**
  The increased surface roughness of the PLASMAPORE XP® coating contributes to the primary stability of the motion segment (15-16).
- **Secondary Stability**
  Bone growth into the coating is enabled due to the supportive features of PLASMAPORE XP®, which leads to bone fusion between the adjacent vertebras with the implant (15-16). (Fig. 2)

IMPLANT FEATURES

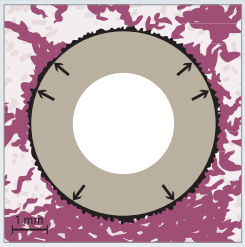
IMAGING PROPERTIES

- PLASMAPORE XP® allows for clear visualization of implant contours under X-ray (15).
- Allows for assessment of the bone structure and progress towards bone fusion (15).



IMPLANT DESIGN

- Concave anatomical shape and serrated profile for an implant fit and high primary stability
- Increased ratio between contact area and opening
- Option of filling with bone or bone substitute to enhance bone bridging
- Clamping mechanism allows a firm connection to inserter



IMPLANT VARIETY

- Adequate range of sizes to enable the choice of implant size to fit the patient.

INSTRUMENT DESIGN

- Specifically designed and clearly arranged instruments

AESCULAP® CeSPACE® XP

B | SURGICAL TECHNIQUE

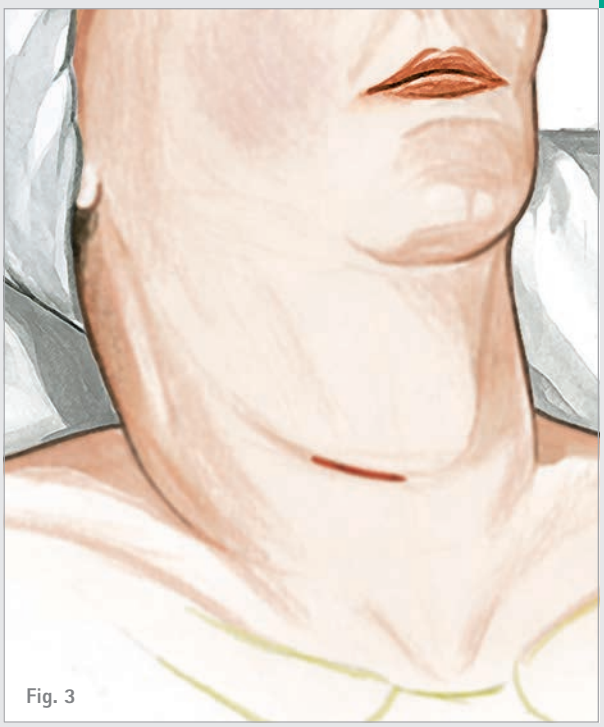


Fig. 3

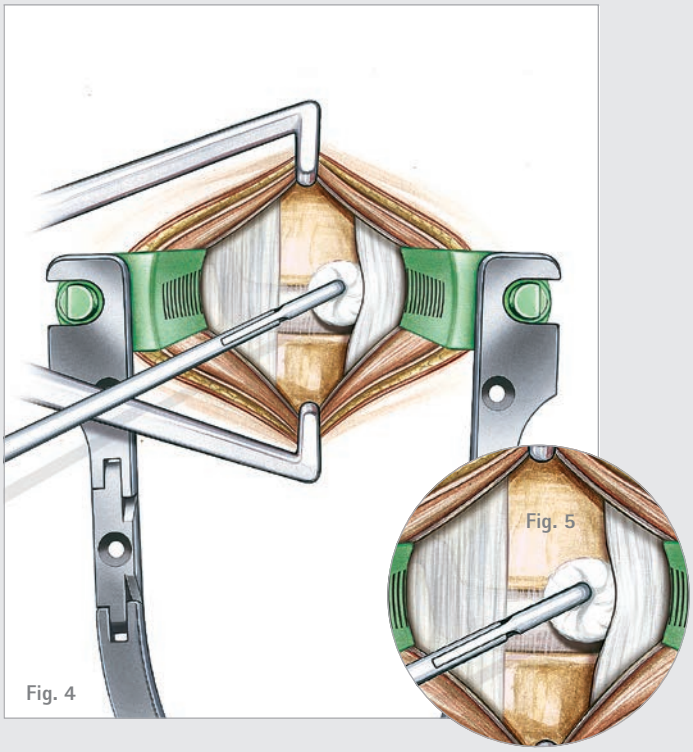


Fig. 4

Fig. 5

B.1. PATIENT POSITIONING

- The patient is placed in the supine position with the head slightly reclined (Fig. 3) and stabilized in a head holder. Once the lordotic cervical spine has been supported, the thorax may be placed on a pillow to emphasize the reclination of the cervical spine. The arms are fixed alongside the body.

B.2. EXPOSURE OF THE INTERVERTEBRAL SPACE

- After the skin incision and preparation, the CCR retractor is placed. The blades are available in PEEK and titanium. A counter retractor can be used (Fig. 4/5). The subcutaneous tissue is separated from the platysma cranially, caudally and medially, and the platysma is also separated following the direction of its fibres. The margins of the platysma can be held apart with the retractor or with two surgical forceps.
- Now the medial edge of the sternocleidomastoid muscle is located and prepared with the index finger in the connective tissue space over the ventral surface of the cervical spine and under lateralization of the vascular nerve bundle and medialization of the trachea, esophagus and thyroid gland.
- After the Langenbeck hooks have been inserted, the ventral surface of the cervical spine, still covered by a thin prevertebral layer of connective tissue, is revealed. This layer can now be exposed by either a blunt scissor or alternatively through bipolar coagulation, in order to expand the tissue cranially and caudally using a swab. A wire is set under X-ray monitoring to mark the intervertebral disc space.

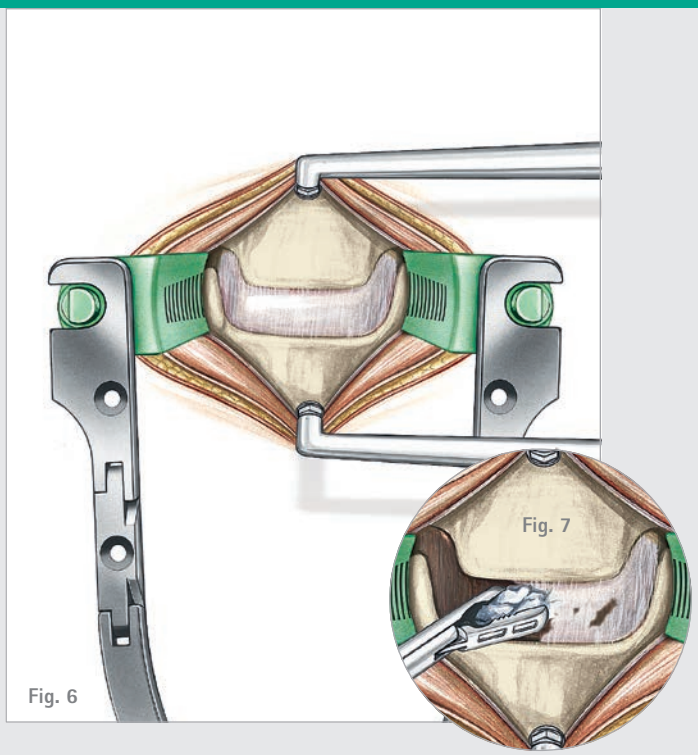


Fig. 6

B.3. DISTRACTION / DISCECTOMY / PREPARATION OF THE ENDPLATES

- The distraction screws are placed in position and the CASPAR® distractor is applied following the CASPAR® technique (Fig. 6).
- Complete discectomy is performed using various rongeurs, rectangular curettes and bone curettes (Fig. 7). While using a high speed drill to remove the posterior rim and / or dorsal osteophytes, care must be taken to avoid damaging the vertebral body endplates.

PLEASE NOTE

- Make certain that the endplates of the neighboring vertebral bodies are not weakened, in order to minimize the risk of migration.
- Make certain that the implant bed is properly prepared to avoid damage to the implant when it is driven in.

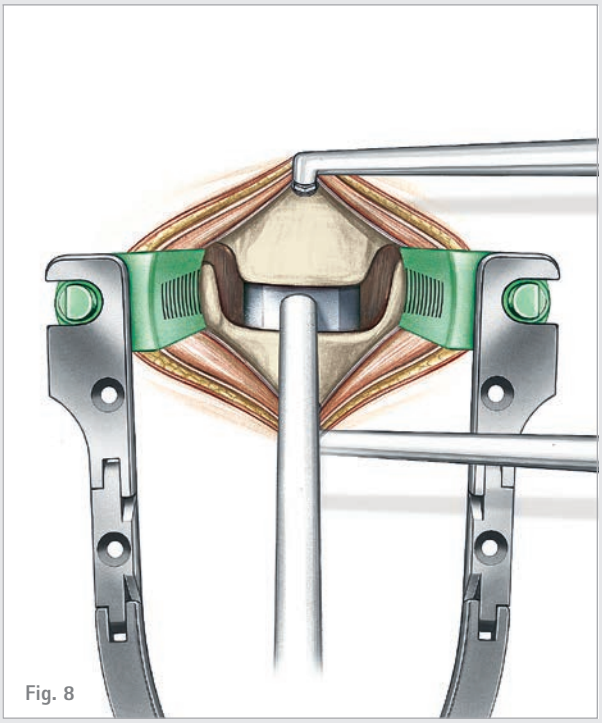


Fig. 8

B.4. IMPLANT SELECTION

- The correct implant size can be established using the trial implants (Fig. 8).
- Laser markings on the handle as well as on the trial itself indicate the cranial and caudal side of the trial.

DETERMINATION OF IMPLANT SIZE

- The CeSPACE® XP trials have the anatomical shape of the CeSPACE® XP implant.

PLEASE NOTE

The trials are essential to ensure the correct implant size to be used.

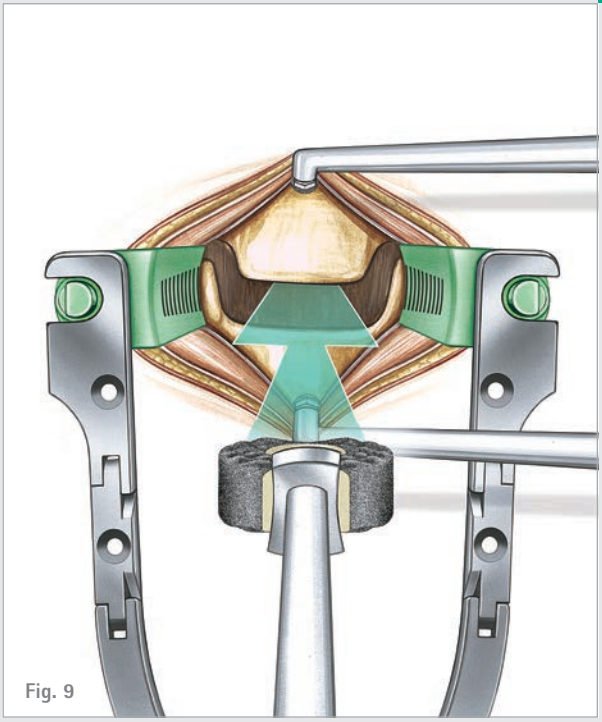


Fig. 9

B.5. FILLING OF CAGE

- Use the packing block and the punch for optional filling of the implant with bone or bone substitute.

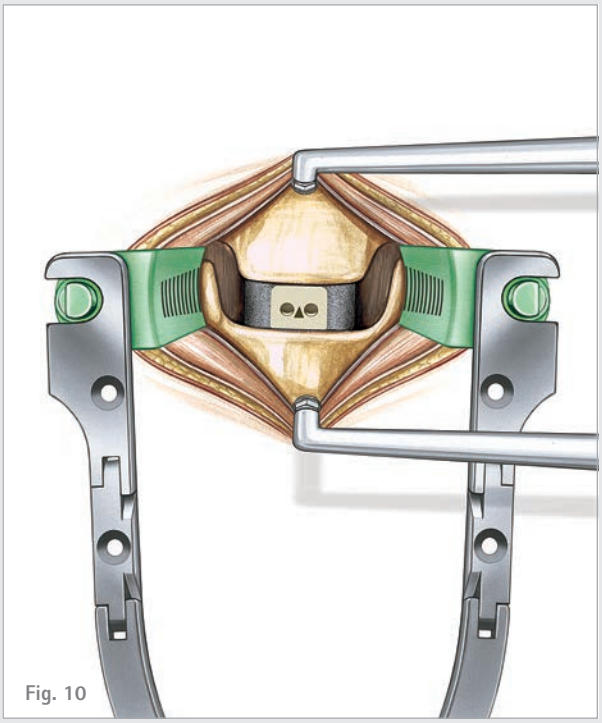


Fig. 10

B.6. CeSPACE® XP INSERTION

- The CeSPACE® XP inserter has a clamp mechanism and is available with or without depth stop. Laser markings indicate the cranial and caudal side of the instrument.
- Once CeSPACE® XP is attached to the inserter, it can be introduced into the intervertebral space using image converter monitoring (Fig. 9).
- The implant should be inserted centrally in AP and with a distance of approximately 1-2 mm to both the anterior and posterior rim (Fig. 10).
- For additional stabilization, a cervical plate may be necessary.

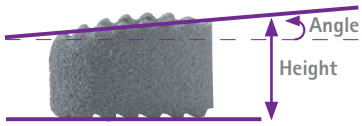
PLEASE NOTE
Use CeSPACE® XP inserter with depth stop.

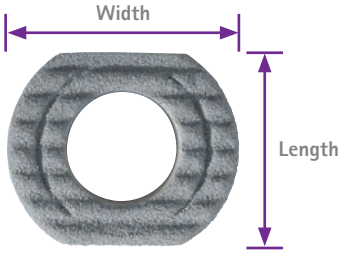
AESCULAP® CeSPACE® XP

C | IMPLANT & INSTRUMENT OVERVIEW

Basic set configuration

LORDOSIS 0° | 5°





Article No.	Lordosis	Size (Length x Width x Height)
SO254P	5°	11.5 x 14 x 4 mm
SO255P	5°	11.5 x 14 x 5 mm
SO256P	5°	11.5 x 14 x 6 mm
SO257P	5°	11.5 x 14 x 7 mm
SO258P	5°	11.5 x 14 x 8 mm
SO274P	5°	13.5 x 16 x 4 mm
SO275P	5°	13.5 x 16 x 5 mm
SO276P	5°	13.5 x 16 x 6 mm
SO277P	5°	13.5 x 16 x 7 mm
SO278P	5°	13.5 x 16 x 8 mm

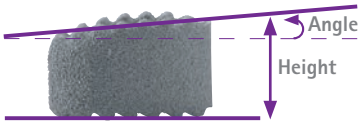
Further implants in heights ranging from 9–12 mm are available*:
5° L 11.5 x W 14 x H 9-12 mm: SO259P-SO262P
5° L 13.5 x W 16 x H 9-12 mm: SO279P-SO282P

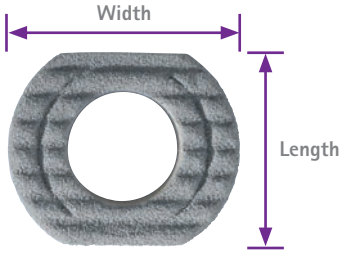
* This article is optional.

The specified height for the lordotic implant refers to the average height, which means the anterior section of the implant is higher than the posterior section.
All CeSPACE® XP implants are single sterile packed.

Basic set configuration

LORDOSIS 0° | 5°





Article No.	Lordosis	Size (Length x Width x Height)
SO245P*	0°	11.5 x 14 x 5 mm
SO246P*	0°	11.5 x 14 x 6 mm
SO247P*	0°	11.5 x 14 x 7 mm
SO248P*	0°	11.5 x 14 x 8 mm
SO265P*	0°	13.5 x 16 x 5 mm
SO266P*	0°	13.5 x 16 x 6 mm
SO267P*	0°	13.5 x 16 x 7 mm
SO268P*	0°	13.5 x 16 x 8 mm

Further implants in heights ranging from 4 mm and 9–12 mm are available*:
0° L 11.5 x W 14 x H 4 mm: SO244P
0° L 13.5 x W 16 x H 4 mm: SO264P
0° L 11.5 x W 14 x H 9–12 mm: SO249P-SO252P
0° L 13.5 x W 16 x H 9–12 mm: SO269P-SO272P

* This article is optional.

The specified height for the lordotic implant refers to the average height, which means the anterior section of the implant is higher than the posterior section.
All CeSPACE® XP implants are single sterile packed.

AESCULAP® CeSPACE® XP

C | IMPLANT & INSTRUMENT OVERVIEW

FJ005
CeSPACE® XP Instrumentation

FJ005 – CeSPACE® XP Instrumentation

Basic set configuration

INSTRUMENTS	Article No.	Description	Quantity
	FJ474R	CeSPACE® PEEK/XP trial implant 5°, 14 x 4 mm, blue	1
	FJ475R	CeSPACE® PEEK/XP trial implant 5°, 14 x 5 mm, blue	1
	FJ476R	CeSPACE® PEEK/XP trial implant 5°, 14 x 6 mm, blue	1
	FJ477R	CeSPACE® PEEK/XP trial implant 5°, 14 x 7 mm, blue	1
	FJ478R	CeSPACE® PEEK/XP trial implant 5°, 14 x 8 mm, blue	1
	FJ484R	CeSPACE® PEEK/XP trial implant 5°, 16 x 4 mm, green	1
	FJ485R	CeSPACE® PEEK/XP trial implant 5°, 16 x 5 mm, green	1
	FJ486R	CeSPACE® PEEK/XP trial implant 5°, 16 x 6 mm, green	1
	FJ487R	CeSPACE® PEEK/XP trial implant 5°, 16 x 7 mm, green	1
	FJ488R	CeSPACE® PEEK/XP trial implant 5°, 16 x 8 mm, green	1
	FJ308R	CeSPACE® PEEK/XP trial implant 0°, 14 x 5 mm, blue	1*
	FJ309R	CeSPACE® PEEK/XP trial implant 0°, 14 x 6 mm, blue	1*
	FJ310R	CeSPACE® PEEK/XP trial implant 0°, 14 x 7 mm, blue	1*
	FJ311R	CeSPACE® PEEK/XP trial implant 0°, 14 x 8 mm, blue	1*
	FJ335R	CeSPACE® PEEK/XP trial implant 0°, 16 x 5 mm, green	1*
	FJ336R	CeSPACE® PEEK/XP trial implant 0°, 16 x 6 mm, green	1*
	FJ337R	CeSPACE® PEEK/XP trial implant 0°, 16 x 7 mm, green	1*
	FJ338R	CeSPACE® PEEK/XP trial implant 0°, 16 x 8 mm, green	1*

* This article is optional.

Recommended container for tray FJ411P: JK440 (without perforation) / JN440 (with perforation)
Recommended lid: JK489

FJ005 – CeSPACE® XP Instrumentation

INSTRUMENTS	Article No.	Description	Quantity
	**FJ413P**	CeSPACE® XP packing block	1
	**FF914R**	Punch	1
	**FJ415R**	Inserter	1
	**FJ497R**	Depth stop	1
	**FJ499R**	Revision	1
	FJ411P	CeSPACE® XP tray	1

Corresponding to the CeSPACE® XP implants 4 mm and 9–12 mm trial implants are available*:
5° L 11.5 x W 14 x H 9–12 mm: FJ389R-FJ392R
5° L 13.5 x W 16 x H 9–12 mm: FJ399R-FJ402R
0° L 11.5 x W 14 x H 4 mm: FJ434R
0° L 11.5 x W 14 x H 9–12 mm: FJ439R-FJ442R
0° L 13.5 x W 16 x H 4mm: FJ444R
0° L 13.5 x W 16 x H 9–12 mm: FJ449R-FJ452R

The tray FJ411P has storing elements for the standard equipment W 14/16 in H 4–8 mm. Either the 0° or the 5° trials can be stored. If both is needed, two trays are necessary to order.
The marking of the tray only indicates 5°.

* This article is optional.

Recommended container for tray FJ411P: JK440 (without perforation) / JN440 (with perforation)
Recommended lid: JK489

AESCULAP® CeSPACE® XP

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AESCULAP® – a B. Braun brand

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