AESCULAP® Plasmafit®

Cementless acetabular cup system

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SHARING EXPERTISE

AESCULAP® Plasmafit®

Cementless acetabular cup system

Content

AESCULAP® Plasmafit®

1 | Concept

Plasmafit® Family

The AESCULAP® Plasmafit® Family reflects a comprehensive solution for total hip joint replacements. Different requirements for patient specific solutions are combined in one system and complement each other using the same instruments, design parameters and surgical procedure.

Based on the properties of the materials and instruments, Plasmafit® Dual Mobility and Plasmafit® Revision have joined the family and continue the system concept. The Plasmafit® Family therewith covers indications from primary up to revision treatments.

The Plasmafit® Family offers a high flexibility – not only with different cup systems but also regarding articulations. Various polyethylene bearing options are available based on Vitelene®, a highly crosslinked polyethylene with vitamin E stabilization.

In addition, Dual Mobility liners provide additional joint stability preventing hip joint dislocations.

Acetabular solutions

Plasmafit®

Plasmafit® is a cementless acetabular cup system for both primary treatment and slight revisions.
The hemispherical shape and teeth structured surface provide a high primary stability.

The Plasmafit® portfolio incorporates two lines: Plasmafit® Poly and Plus. In case of a dislocation risk, a modular Dual Mobility liner can be combined with the Plasmafit® Plus system to provide additional joint stability.

In addition, Structan® acetabular augments can be combined with the Plasmafit® Plus 3 or 7 for treating larger defects.

The AESCULAP® acetabular components address solutions for defect filling that permit stable anchoring in the bony situation.

AESCULAP® Plasmafit®

1 | Concept

Acetabular cup system

Plasmafit® Revision & Structan®

Dual Mobility

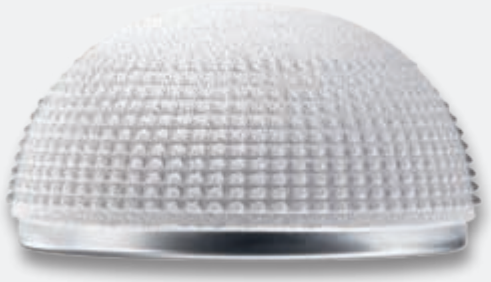
Symmetrical +4 mm*

Asymmetrical 20°*

*Only compatible with Plasmafit® Revision

AESCULAP® Plasmafit®

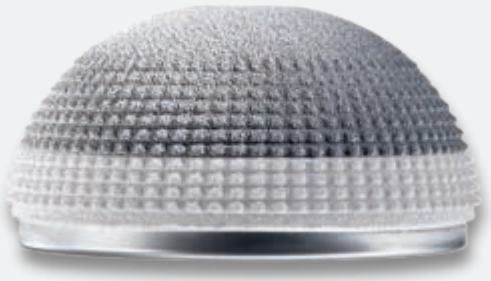
1 | Concept



Ream the fit

✓ no trial cups

The precise profile structure of the Plasmafit® surface enables the surgeon to skip the step of trial cup implantation in most cases.



Feel the fit

✓ no screws

The intraoperative primary stabilty of Plasmafit® reduces the need for additional screw fixation to only a few cases and allows implantations with screws under challenging conditions and easy revision treatments.

Fit the insert

✓ no compromises

The wall thickness of both Plasmafit® implant lines offers an improved articulation choice for highly crosslinked polyethyelene liners. Additionally, ceramic liners as well as modular dual mobility articulation is available for the Plus line.

Feel the grip.
Get the fit.

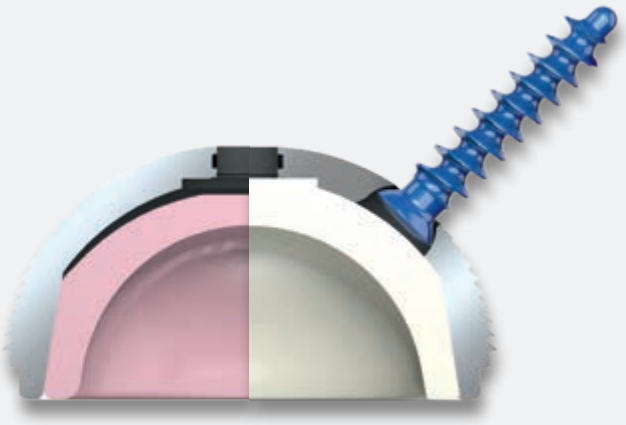
Plasmafit® Poly

Improved cup implant line for Vitelene® XLPE

- ✓ Thin metal shell without screw option
- ✓ Only for polyethylene liners
- ✓ Large articulation diameter for small cup sizes
- ✓ 36 mm articulation for cup size 50 and higher
- ✓ PE wall thickness of min. 5.5 mm in main load area
- ✓ Closing plug for central insertion hole

Plasmafit® Plus

Universal cup implant line for ceramic and Vitelene® with screw option



- ✓ Thick cup design with screw option
- ✓ For the use of ceramic and polyethylene cup liners
- ✓ BIOLOX®*delta*, Vitelene® and conventional PE
- ✓ 36 mm articulation for cup size 52
- ✓ Modular Plasmafit® Dual Mobility Option
- ✓ Cup alternatives with no, 3 or 7 screw holes
- ✓ Closing plug for no hole cup line

Plasmafit® Plus

without screw hole

Plasmafit® Plus 3

with 3 screw holes

Plasmafit® Plus 7

5 screw holes cranially, 2 screw holes caudally

AESCULAP® Plasmafit®

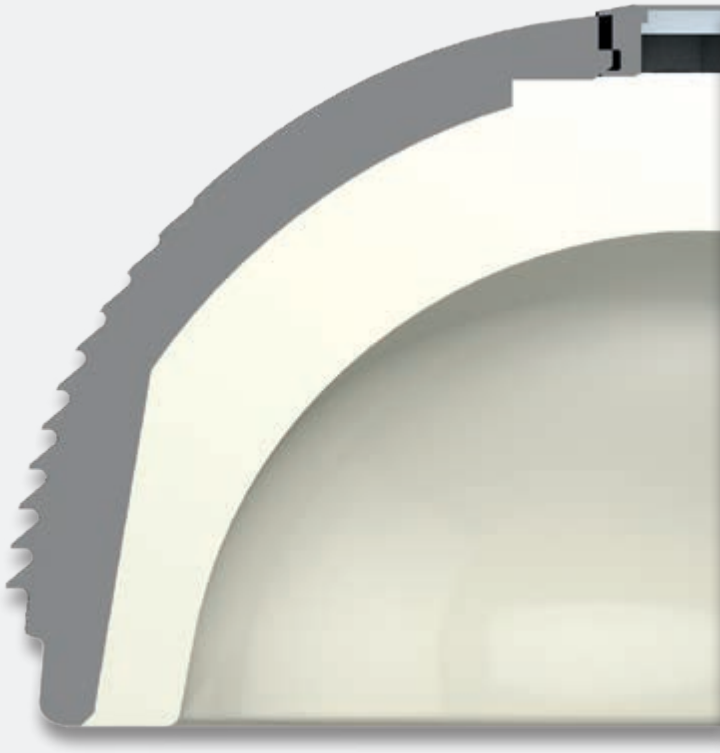
2 | System

Plasmafit® Poly with Vitelene®

- ✓ Thin shell without screw holes
- ✓ Increased polyethylene wall thickness
- ✓ Large articulation diametre

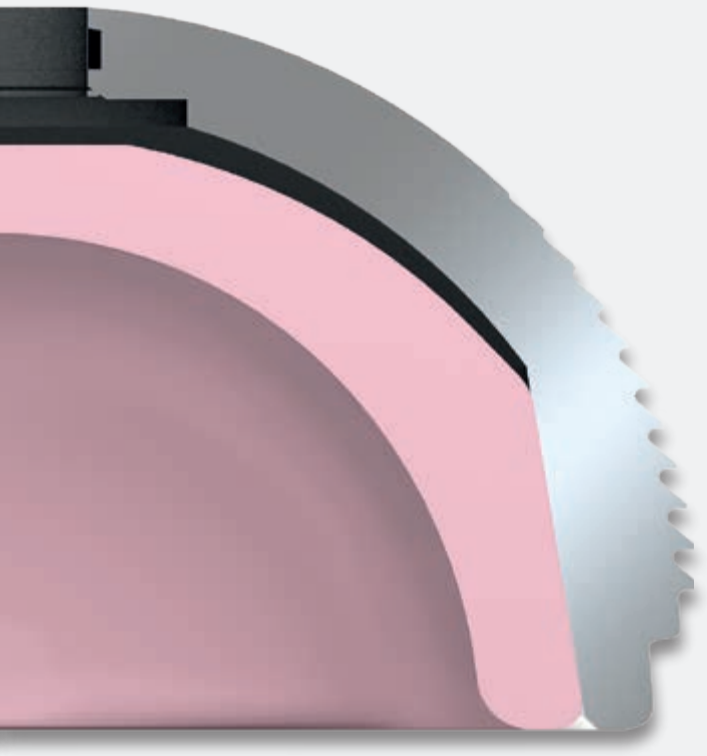
Plasmafit® Poly is a dedicated cup implant line exclusively for the use with polyethylene liners. The profile of the wall thickness enlarges the material thickness of polyethylene liners and allows the optional use of correction liners.

Plasmafit® Poly implants enable a 36 mm highly crosslinked Vitelene® liner for cup size 50, up to a 40 mm articulation for cup size 54.



Plasmafit® Poly from size 50 with 36 mm Vitelene®

Plasmafit® Poly and Plasmafit® Plus



Plasmafit® Plus from size 52 with 36 mm BIOLOX®*delta*

Plasmafit® Plus with BIOLOX®*delta*

- ✓ Universal cup implant line
- ✓ Vitelene® as additional bearing option
- ✓ Implants with and without cancellous screws

Plasmafit® Plus designed for combined treatments with ceramic, modular Plasmafit® Dual Mobility or polyethylene articulation materials.
The increased wall thickness compared to Plasmafit® Poly allows additional screw holes for an optional use of cancellous fixation screws.

A 36 mm BIOLOX®*delta* ceramic on ceramic articualtion can be realized for cup size 52, 40 mm articualtion for cup size 56.

All Plasmafit® Plus cup implants can be combined with modular Vitelene® polyethylene liners made of vitamin E stabilized highly crosslinked polyethylene.

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3 | Surface

- ✓ High implant stability
- ✓ Wide range of indication
- ✓ Easy surgical technique

Plasmafit® structure

The profile structure of the Plasmafit® cup surface features a precise and fine tooth geometry which gradually diminishes towards the dome.

The primary implant stability should be supported particularly on the rim of the cup.

The pressfit locking allows a primary cup stability under different bone qualities and cup preparations.

High implant stability

- ✓ Microporous pure titanium coating
- ✓ Increased implant surface
- ✓ Pressfit locking in implant bed

Plasmapore® coating

The combination of the Plasmafit® surface structure with the Plasmapore® coating leads to a very rough implant surface. Pure titanium powder is applied in a plasma vacuum coating process to the surface of cementless implants to form a 0.35 mm thick layer with up to 50 % porosity.

The Plasmapore® surface supports the direct bone apposition on the increased implant surface.

AESCULAP® Plasmafit®

4 | Design

Plasmafit® periphery

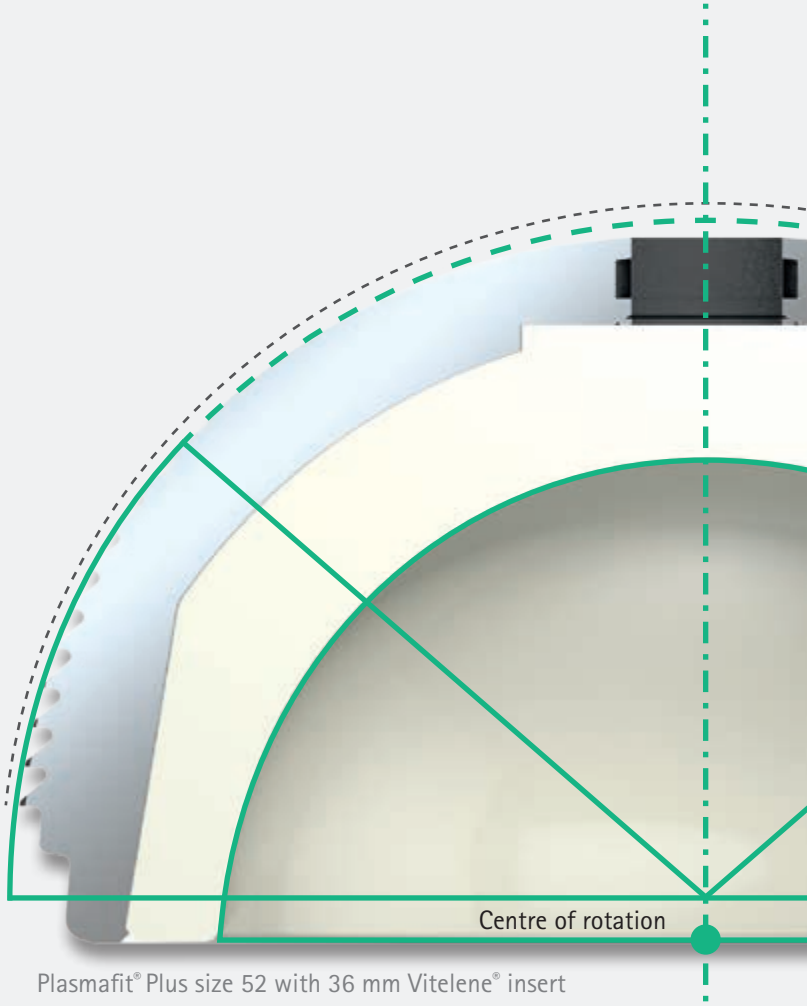
The external Plasmafit® shape is spherical with a slightly flattened dome. The centre of rotation with standard liners is located on the exact cup entrance plane. The liners are supported by the rounded rim of the cup. The equatorial pressfit is 1.5 mm.

Plasmafit® structure

The design of the Plasmafit® inside allows an intraoperative choice of modular liners, alternatively polyethylene or ceramic.

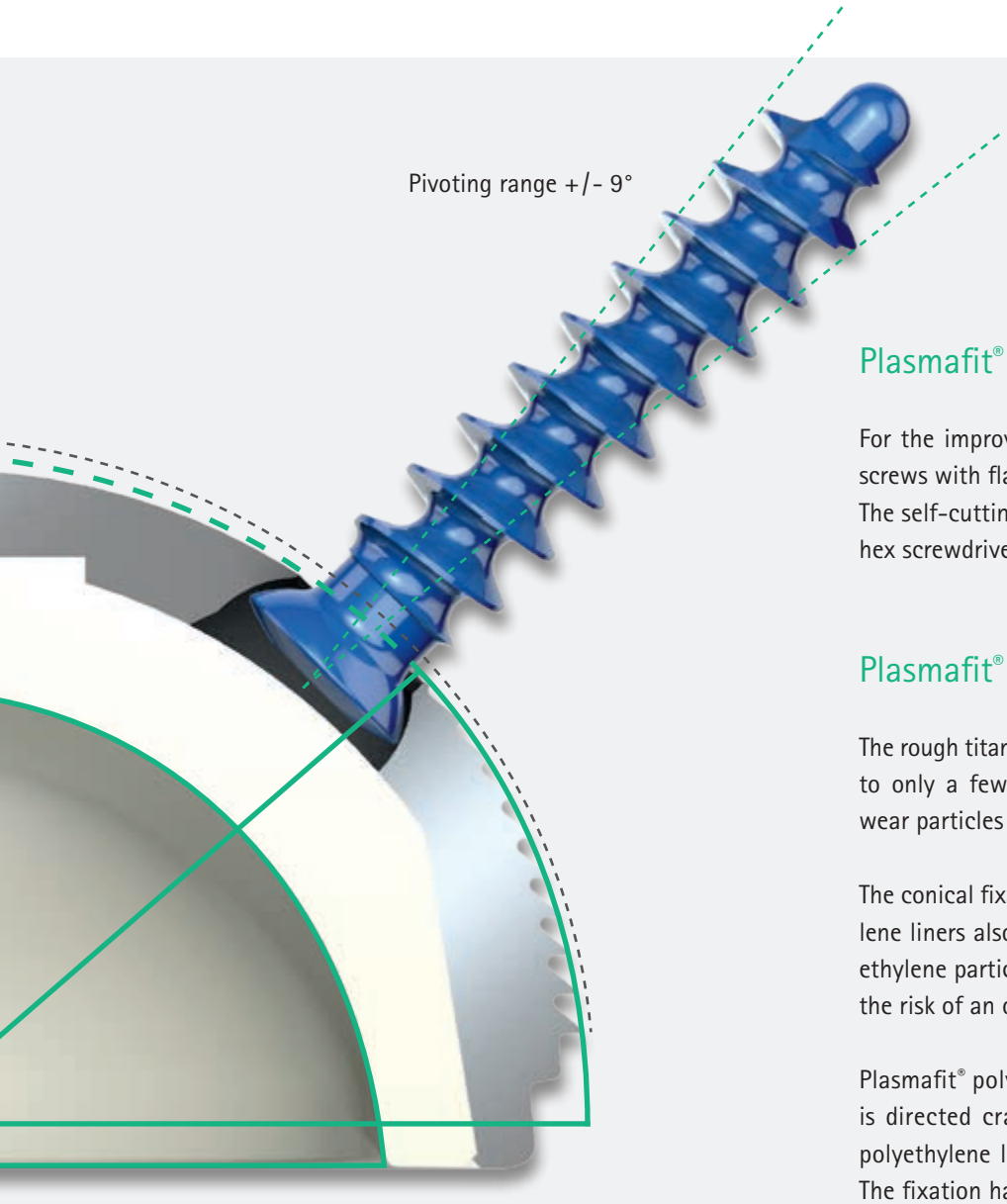
Plasmafit® Plus cups can be combined with liners of polyethylene, ceramic and fixation screws. A further option is the combination with Plasmafit® Dual Mobility liners. The thin-walled implant line Plasmafit® Poly is especially designed for polyethylene liners.

The fixation of the Plasmafit® liners is realized by a large area conical locking mechanism. Polyethylene liners have an additional locking-free contact with the base of the cup.



Plasmafit® Plus size 52 with 36 mm Vitelene® insert

Conical locking mechanism



Plasmafit® cancellous screws

For the improved Plasmafit® wall thickness special fixation screws with flatter screw heads have been designed.
The self-cutting, blue 6.5 mm screws are inserted with a 3.5 hex screwdriver and allow a pivoting angle of +/- 9°.

Plasmafit® liner anchoring

The rough titanium inner surface reduces relative movements to only a few microns, thus preventing the formation of wear particles on the rear side of the liner (1).

The conical fixation surface area of the Plasmafit® polyethylene liners also forms a seal against the migration of polyethylene particles from the articulating joint, thus reducing the risk of an osteolysis adjacent to the screw holes (1).

Plasmafit® polyethylene liners are strongest when the load is directed cranially. In the primary load area Plasmafit® polyethylene liners have a minimum thickness of 5.5 mm. The fixation has a high stability against tilting and rotation forces (1).

(1) Braun S, Sonntag R, Schroeder S, Mueller U, Jaeger S, Gotterbarm T et al. Backside wear in acetabular hip joint replacement. Acta Biomater. 2019;83:467-76.

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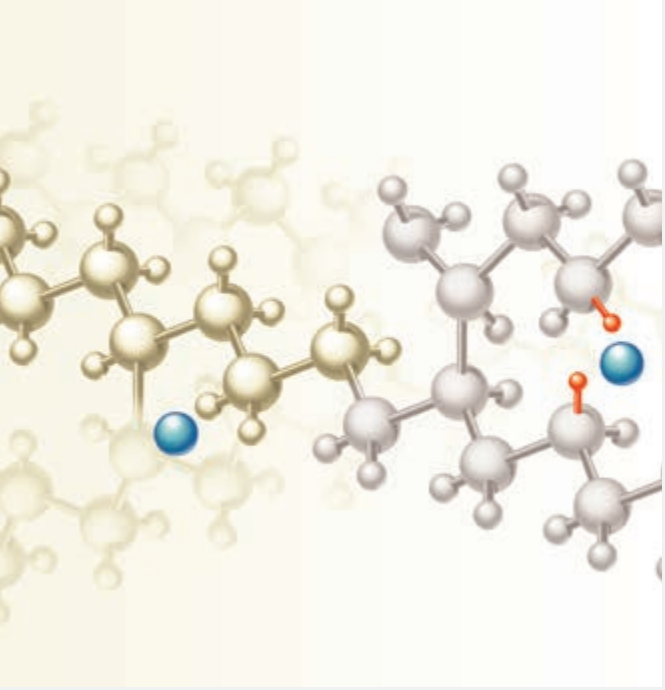
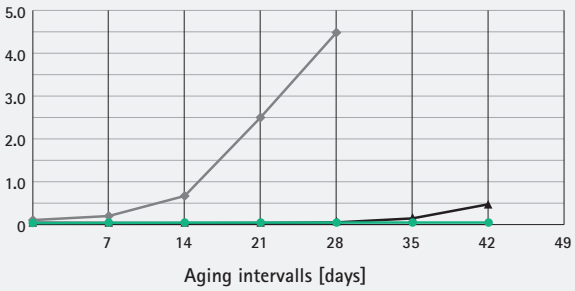
5 | Articulation



Oxidation index (2)



PE conventional
XLPE standard
Vitelene®

Oxidation index measurements of conventional, standard highly crosslinked polyethylene and vitamin E stabilized highly crosslinked Vitelene®.

Vitelene® for Plasmafit® Poly

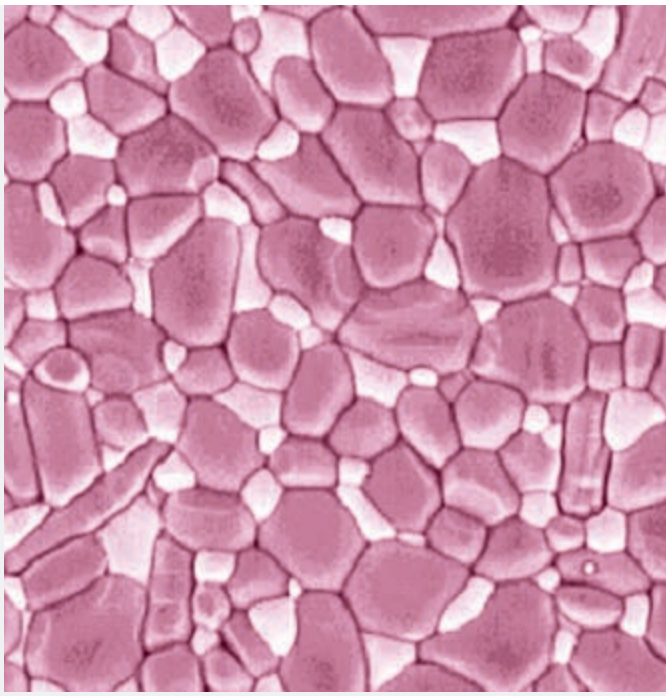
Vitelene® is a highly crosslinked polyethylene stabilized with vitamin E. Vitamin E provides long-term oxidation protection by binding free radicals through the release of H atoms. Polyethylene powder GUR 1020 is mixed with vitamin E (0.1 % α-Tocopherol) and pressed into sheets. Afterwards a total dose of 80 kGy electron beam radiation is applied to cross link the blank product. The Vitelene® inserts are manufactured using state of the art CNC technology and sterilized with ethylene oxide. There is no post-irradiation thermal treatment necessary, hence no negative impact on mechanical properties is induced.

It is characterized by wear and oxidation resistance. The in vitro wear of Plasmafit® Vitelene® liners in combination with a 36 mm ceramic head is three times below the threshold that is known to cause osteolysis. Higher wear rates can occur with metal heads, by third-body wear, through cup malpositioning or as a result of implant loosening.

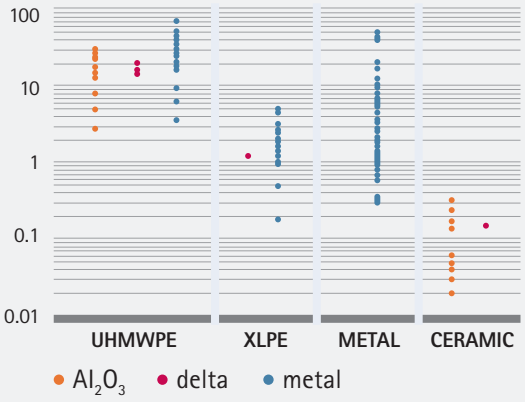
BIOLOX®*delta* for Plasmafit® Plus

When using ceramic BIOLOX®*delta* cup liners, wear in the joint is reduced to only a few µm per year. With a correct implant positioning and a good joint stability a ceramic on ceramic total hip arthroplasty is approved. BIOLOX®*delta* is a high strength aluminium oxide matrix ceramic. Besides high fracture strength BIOLOX®*delta* implant components are characterized additionally by high fracture toughness. Finest ZiO_2 particles strengthen the ceramic material and prevent the propagation of cracks. This leads to an excellent material strength (3).

For the Plasmafit® Plus implant line BIOLOX®*delta* ceramic liners are available. During the development process, special attention was paid to rounded liner edges, maximum liner wall thickness and conical fixation area.



Gravimetric wear [mg / million] (4)



ISO 14242 hip simulator wear measurements and data referring to other studies.

(2) Grupp T et al. Biotribology of a vitamin E-stabilized polyethylene for hip arthroplasty – Influence of artificial ageing and third-body particles on wear. Acta Biomaterialia. 2014 Jul;10(7):3068-78. Epub 2014 Mar 12.

(3) CeramTec GmbH, Plochingen.

(4) Dr. Ing. Christian Kaddick, Endolab Mechanical Engineering GmbH, Thansau / Rosenheim.

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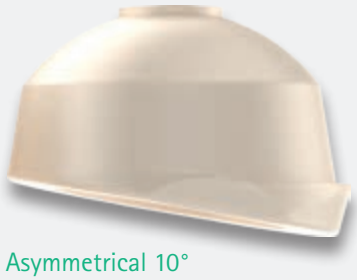
5 | Articulation

Liner options

Plasmafit® can be used with Vitelene® liners or with the special modular Dual Mobility liner.
Ceramic liners are also available.

Standard liners

Symmetrical
Standard reconstruction



Asymmetrical 10°
Correction of the cup position by 10°

With shoulder
Higher luxation stability, e.g. direction posterior for posterior approach

Dual Mobility

Plasmafit® Dual Mobility
Modular cobalt-chromium liner and Vitelene® Dual Mobility head

Ceramic

BIOLOX®*delta*
Standard reconstruction for ceramic-on-ceramic articulation

Plasmafit® Dual Mobility

- ✓ Modular Dual Mobility articulation
- ✓ Dual Mobility treatment as of cup size 46 mm
- ✓ Ceramic multilayer coating for an increased corrosion resistance (5)
- ✓ Vitelene® highly crosslinked PE with vitamin E stabilization
- ✓ Reduced wear and oxidation with Vitelene® Dual Mobility head (6, 7)

Plasmafit® Revision

- ✓ Implant line for primary and revision treament
- ✓ Cup design with oblong screw hole options
- ✓ 3 screw holes cranially, 2 caudally
- ✓ Additive titanium surface
- ✓ Polyethylene or Dual Mobility liner

(5) Aesculap AG; Test report V2035, Fretting Corrosion Behaviour of the Dual Mobility Inserts, August 2019. The Dual Mobility Liners have been tested on fretting corrosion behaviour compared to a competitor product and showed a significantly lower corrosion behaviour.

(6) Aesculap AG; Test report T455, Determination of the Wear Behaviour of the Dual Mobility System; July 2019. The average wear rates of Vitelene® Dual Mobility Liners have been tested and the results are well below the threshold value that reported to literature may lead to osteolysis.

(7) Grupp T et al. Biotribology of a vitamin E-stabilized polyethylene for hip arthroplasty – Influence of artificial ageing and thirdbody particles on wear. Acta Biomaterialia. 2014 Jul;10(7):3068-78. Epub 2014 Mar 12.

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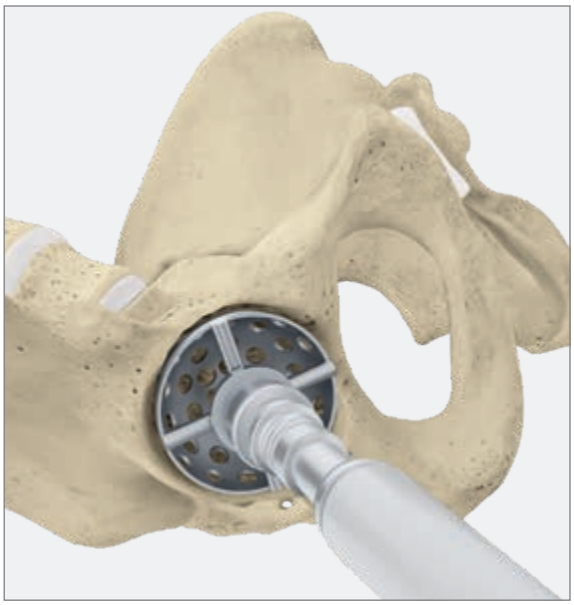
6 | Surgical technique



Aetabular preparation

Acetabular exposure and removal of cartilage and osteophytes are required for the proper preparation of the acetabulum. This is done by using spherical reamers, which are driven by a low-speed motor handpiece. During the reaming procedure all cartilage down to the subchondral bone must be ablated until bleeding occurs. For non-dysplastic cases care must be taken not to medialize the center of rotation of the joint unnecessarily. The rim of the acetabulum should be prepared for a sufficient large bony fixation surface.

In cases of dysplastic changes a cup position in the region of the primary socket is recommended, as far as a shortening of the leg can be compensated. The caudal edge of the shell should be at the level of the tear drop figure. If necessary, a cranial bone craft, to provide sufficient cranial roofing, is positioned before the socket base is prepared.

Trial cup insertion

The size of the Plasmafit® implant corresponds to the size of the last acetabular reamer and includes the proper pressfit conditions.

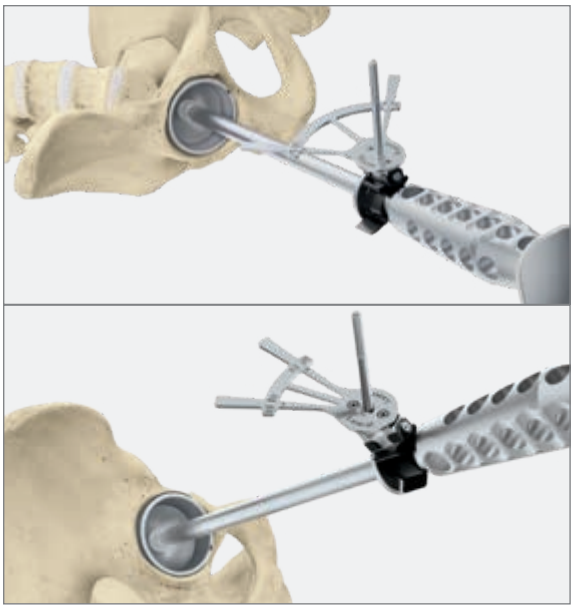
In difficult bone conditions, the use of a trial cup is recommended prior to the final cup implant selection. A stable fit of this trial cup is achieved when the pelvis of the patient can be moved slightly by gently moving the cup impactor. The trial implant can be easily levered out from the in-vivo trial position by moving beyond this angle.

For the implantation of the Plasmafit® cup implants two straight insertion instruments with two different lengths and one curved instrument for less invasive surgical approaches are provided.

Cementless acetabular cup system

The accurate and stable assembly of the Plasmafit® implant on the insertion instrument must be checked by a surgical assistant and the surgeon prior to the implantation. The impactor is also suitable for shifting and correcting the position of the cup implant. For the positioning of the cup implant aiming devices are available either for supine or lateral patient position. Additionally a universal aiming device for both patient positions can be offered, where inclination and anteversion can also be adjusted in 5° steps.

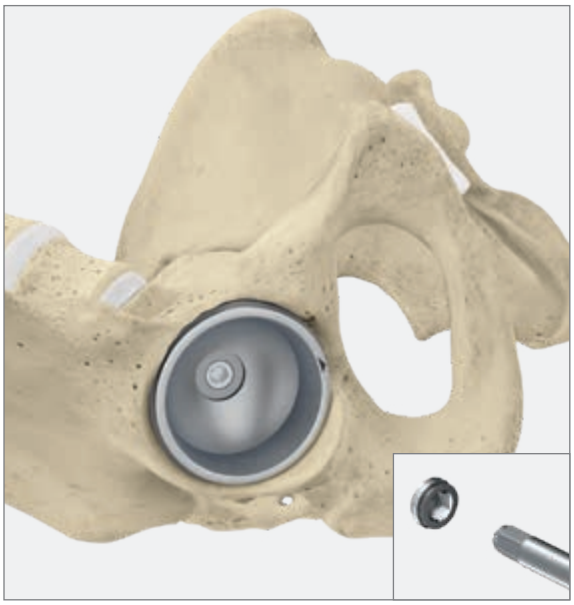
Plasmafit® cup implants can be navigated with all OrthoPilot® THA Universal V2. The Plasmafit® instruments are designed for the use with navigation technology and can be combined with all specific navigation instruments.



Plasmafit® cup implant with central closing plug

After completing the surgical steps of acetabular exposure, reaming and implantation of the Plasmafit® cup, the central impaction hole can be closed with a plug which is automatically provided with the no hole cup implants.

Afterwards the insertion of the trial liner follows. The final selection of the modular liner is determined after the stem is implanted and a final trial reduction has been performed.



AESCULAP® Plasmafit®

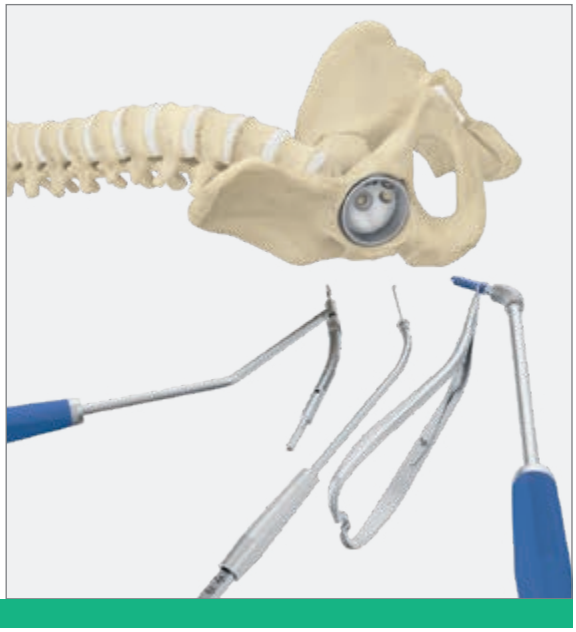
6 | Surgical technique

Plasmafit® with trial liner

Liners with posterior wall (hooded) increase luxation stability e.g. towards posterior for implantations using the posterior surgical approach. The asymmetrical liners correct the cup position by 10 degrees. In good bone Plasmafit® can be implanted without additional screws. As a stability check the cup impactor is moved slightly until the patient's pelvis moves. Under these conditions, Plasmafit® Plus 3 can also be rotated 180° prior to implantation, placing the screw holes in the non load bearing caudal region since they are not needed cranially.

Note

For the implantation of Plasmafit® cups with Plasmafit® Dual Mobility liners, please refer to the corresponding surgical technique for Dual Mobility implantation.



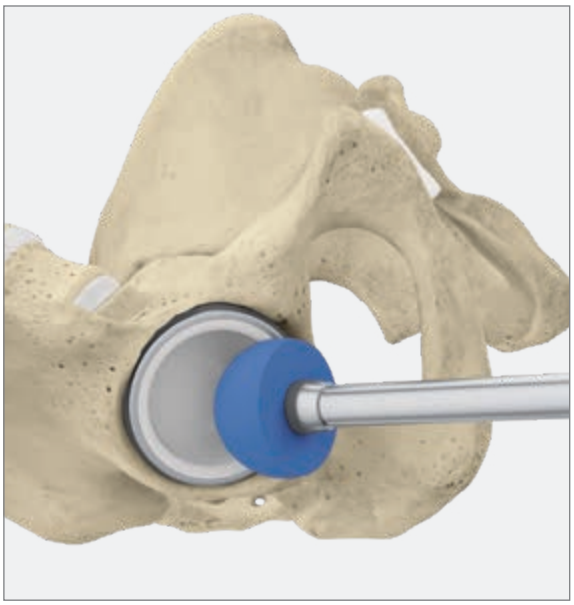
Plasmafit® Plus with additional screw fixation

If there is any doubt concerning the intraoperative primary stability the Plasmafit® Plus implant line can optionally be used with screws. Plasmafit® Plus 3 cup implants offer three screw holes in the cranial region. To protect the medial blood vessels, the middle and lateral screw positions can be used and the medial hole is usually left open. Plasmafit® 5 and 7 offer further screw holes in the cranial and caudal region.

Prior to inserting the self-tapping 6.5 mm screws the drill holes are prepared with a flexible 3.2 mm drill. The required screw length is measured and the screws are implanted using a screw holding forceps and a cardan screwdriver.

Cementless acetabular cup system

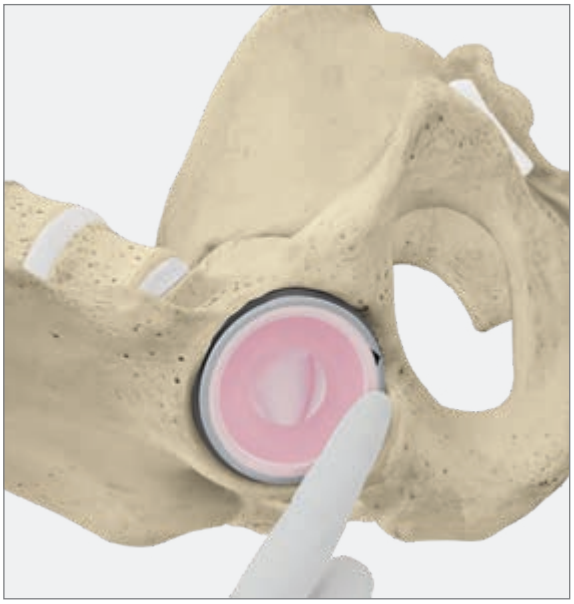
Plasmafit® Liner implanation



After trial reduction and removal of the trial liner, the inner area of the Plasmafit® cup is cleaned and dried before the final liner is inserted. When inserting the liner, it is necessary to ensure that no bone or tissue residues remain in the conical fixation area.
The liner is inserted by hand. The liner must not be tilted during insertion. The position of the liner is checked intraoperatively by feeling the inner rim of the cup and corrected, if necessary.
The rims of the liner and the Plasmafit® cup are flush with one another. In a tilted position, the inlay protrudes clearly in one place. Only after this check, the inlay can be fixed in place using the cup pressing instrument with plastic head that is provided for this purpose.

Note
In case of Plasmafit® Dual Mobility implantation, please refer to the corresponding surgical technique.

Plasmafit® Plus with BIOLOX®*delta* ceramic liner



The ceramic liner must not be tilted during insertion. The position of the liner is checked intraoperatively by feeling the inner rim of the cup with a fingertip check and corrected, if necessary.
After inserting, the liner is fixed using an impactor with a plastic head. After the joint reduction the correct liner position should be checked again.

The ceramic Plasmafit® liners can be removed with special attachments for the cup impactor. It is important to place the instruments precisely on the rim of the metal shell. The separation of the liner from the cup is done with several sharp blows or impulses. Please see the instructions for use enclosed with every Plasmafit® implant.

Removal of ceramic cup liners

AESCULAP® Plasmafit®

7 | Implants

Plasmafit® Poly implants

Cup size		40	42	44	46	48	50
Liner size		B	C	D	E	F	G
Plasmafit® Poly	Ti6Al4V	NV040T	NV042T	NV044T	NV046T	NV048T	NV050T
Symmetrical Vitelene® 	ø 22.2 mm	NV183E	NV184E	-	-	-	-
	ø 28 mm	-	NV189E	NV190E	NV191E	NV192E	NV193E
	ø 32 mm	-	-	-	NV201E	NV202E	NV203E
	ø 36 mm	-	-	-	-	-	NV213E
	ø 40 mm	-	-	-	-	-	-
Posterior wall Vitelene® 	ø 22.2 mm	NV283E	NV284E	-	-	-	-
	ø 28 mm	-	NV289E	NV290E	NV291E	NV292E	NV293E
	ø 32 mm	-	-	-	NV301E	NV302E	NV303E
	ø 36 mm	-	-	-	-	-	NV313E
Asymmetrical 10° Vitelene® 	ø 22.2 mm	NV383E	NV384E	-	-	-	-
	ø 28 mm	-	NV389E	NV390E	NV391E	-	-
	ø 32 mm	-	-	-	NV401E	NV402E	NV403E
	ø 36 mm	-	-	-	-	-	NV413E
Symmetrical UHMWPE	ø 32 mm	-	-	-	NV201	NV202	NV203
Posterior wall UHMWPE	ø 28 mm	-	NV289	NV290	-	-	-
	ø 32 mm	-	-	-	NV301	NV302	NV303

52	54	56	58	60	62
H	I	J	K	L	M
NV052T	NV054T	NV056T	NV058T	NV060T	NV062T
-	-	-	-	-	-
NV194E	NV195E	-	-	-	-
NV204E	NV205E	NV206E	NV207E	NV208E	NV209E
NV214E	NV215E	NV216E	NV217E	NV218E	NV219E
-	NV225E	NV226E	NV227E	NV228E	NV229E
-	-	-	-	-	-
NV294E	NV295E	-	-	-	-
NV304E	NV305E	NV306E	NV307E	NV308E	NV309E
NV314E	NV315E	NV316E	NV317E	NV318E	NV319E
-	-	-	-	-	-
-	-	-	-	-	-
NV404E	NV405E	NV406E	NV407E	NV408E	NV409E
NV414E	NV415E	NV416E	NV417E	-	-
NV204	NV205	NV206	NV207	NV208	NV209
-	-	-	-	-	-
NV304	NV305	NV306	NV307	NV308	NV309

Plasmafit® Poly
no screw holes, with closing plug

The central closing plug is automatically delivered with cup implants without screw holes.

The closing plug NV001T can also be ordered separately.

AESCULAP® Plasmafit®

7 | Implants

Plasmafit® Plus implants

Cup size		40	42	44	46	48	50	52	54
Liner size		A	B	C	D	E	F	G	H
Plasmafit® Plus	Ti6Al4V	NV140T	NV142T	NV144T	NV146T	NV148T	NV150T	NV152T	NV154T
Plasmafit® Plus 3	Ti6Al4V	NV240T	NV242T	NV244T	NV246T	NV248T	NV250T	NV252T	NV254T
Plasmafit® Plus 7	Ti6Al4V	NV340T*	NV342T*	NV344T*	NV346T	NV348T	NV350T	NV352T	NV354T
		* with 5 screw holes							
Symmetrical BIOLOX®*delta* 	ø 28 mm	-	-	NV089D	NV090D	NV091D	NV092D	NV093D	NV094D
	ø 32 mm	-	-	-	-	NV101D	NV102D	NV103D	NV104D
	ø 36 mm	-	-	-	-	-	-	NV113D	NV114D
	ø 40 mm	-	-	-	-	-	-	-	-
Symmetrical Vitelene® 	ø 22.2 mm	NV182E	NV183E	NV184E	-	-	-	-	-
	ø 28 mm	-	-	NV189E	NV190E	NV191E	NV192E	NV193E	NV194E
	ø 32 mm	-	-	-	-	NV201E	NV202E	NV203E	NV204E
	ø 36 mm	-	-	-	-	-	-	NV213E	NV214E
	ø 40 mm	-	-	-	-	-	-	-	-
Posterior wall Vitelene® 	ø 22.2 mm	NV282E	NV283E	NV284E	-	-	-	-	-
	ø 28 mm	-	-	NV289E	NV290E	NV291E	NV292E	NV293E	NV294E
	ø 32 mm	-	-	-	-	NV301E	NV302E	NV303E	NV304E
	ø 36 mm	-	-	-	-	-	-	NV313E	NV314E
Asymmetrical 10° Vitelene® 	ø 22.2 mm	NV382E	NV383E	NV384E	-	-	-	-	-
	ø 28 mm	-	-	NV389E	NV390E	NV391E	-	-	-
	ø 32 mm	-	-	-	-	NV401E	NV402E	NV403E	NV404E
	ø 36 mm	-	-	-	-	-	-	NV413E	NV414E
Sym. UHMWPE	ø 32 mm	-	-	-	-	NV201	NV202	NV203	NV204
Posterior wall UHMWPE	ø 28 mm	-	-	NV289	NV290	-	-	-	-
	ø 32 mm	-	-	-	-	NV301	NV302	NV303	NV304
Dual Mobility liner 		-	-	-	NV1010Z	NV1011Z	NV1012Z	NV1013Z	NV1014Z
Dual Mobility head Vitelene® 	ø 22.2 mm	-	-	-	NV1030E	NV1031E	NV1032E	-	-
	ø 28 mm	-	-	-	-	-	-	NV1043E	NV1044E

56	58	60	62	64	66	68	70
I	J	J	J	K	K	K	K
NV156T	NV158T	NV160T	NV162T	NV164T	NV166T	NV168T	NV170T
NV256T	NV258T	NV260T	NV262T	NV264T	NV266T	NV268T	NV270T
NV356T	NV358T	NV360T	NV362T	NV364T	NV366T	NV368T	NV370T
-	-			-			
NV105D	NV106D			NV107D			
NV115D	NV116D			NV117D			
NV125D	NV126D			NV127D			
-	-			-			
NV195E	-			-			
NV205E	NV206E			NV207E			
NV215E	NV216E			NV217E			
NV225E	NV226E			NV227E			
-	-			-			
NV295E	-			-			
NV305E	NV306E			NV307E			
NV315E	NV316E			NV317E			
-	-			-			
-	-			-			
NV405E	NV406E			NV407E			
NV415E	NV416E			NV417E			
NV205	NV206			NV207			
-	-			-			
NV305	NV306			NV307			
NV1015Z	NV1016Z			NV1017Z			
-	-			-			
NV1045E	NV1046E			NV1047E			

Plasmafit® Plus
no screw holes, with closing plug

Plasmafit® Plus 3
with 3 screw holes

Plasmafit® Plus 7
5 screw holes cranially,
2 screw holes caudally

The central closing plug is automatically delivered with cup implants without screw holes.

The closing plug NV001T can also be ordered separately.

AESCULAP® Plasmafit®

7 | Implants

Ceramic – Prosthesis heads

12 / 14

Diameter	Art. no.				
	ø 22.2 mm	ø 28 mm	ø 32 mm	ø 36 mm	ø 40 mm
S	-	NK460D	NK560D	NK650D	NK750D
M	-	NK461D	NK561D	NK651D	NK751D
L	-	NK462D	NK562D	NK652D	NK752D
XL	-	-	NK563D	NK653D	NK753D

BIOLOX®*delta*

12 / 14

Diameter	Art. no.				
	ø 22.2 mm	ø 28 mm	ø 32 mm	ø 36 mm	ø 40 mm
S	-	NK324	NK424	NK524	-
M	-	NK325	NK425	NK525	-
L	-	NK326	NK426	NK526	-
XL	-	-	NK427	NK527	-

Isocer®

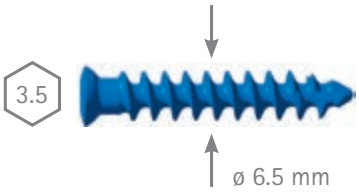
Metal – Prosthesis heads

12 / 14

Diameter	Art. no.				
	ø 22.2 mm	ø 28 mm	ø 32 mm	ø 36 mm	ø 40 mm
S	-	NK429K	NK529K	NK669K	NK769K
M	NK330K	NK430K	NK530K	NK670K	NK770K
L	NK331K	NK431K	NK531K	NK671K	NK771K
XL	-	NK432K	NK532K	NK672K	NK772K
XXL	-	NK433K	NK533K	NK673K	NK773K

CoCr

Plasmafit® – Cancellous screws ø 6.5 mm



16 mm	20 mm	24 mm	28 mm	32 mm	36 mm	40 mm
NV010T	NV011T	NV012T	NV013T	NV014T	NV015T	NV016T
44 mm	**48 mm**	**52 mm**	**56 mm**	**60 mm**	**64 mm**	**68 mm**
NV017T	NV018T	NV019T	NV020T	NV021T	NV022T	NV023T

Ti6Al4V

Implant Materials:

BIOLOX®*delta*	Aluminium oxide matrix ceramic (Al_2O_3/ZiO_2/ISO 6474-2)
Isocer®	Zirconia-toughened alumina ceramic (Al_2O_3/ZrO_2/ISO 6474-2)
Ti6Al4V	Titanium forged alloy (Ti6Al4V/ISO 5832-3)
CoCr	Cobalt-chromium forged alloy (CoCrMo/ISO 5832-12)
Plasmapore®	Pure titanium (Ti/ISO 5832-2)
UHMWPE	Ultra high molecular weight polyethylene (ISO 5834-2)
Vitelene®	UHMWPE-XE vitamin E stabilized highly crosslinked polyethylene

AESCULAP® Plasmafit®

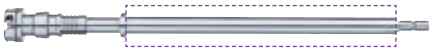
8 | Instruments

Full profile reamers

Outer diameter	Art. no.
ø 38 mm	NF938R
ø 40 mm	NF940R
ø 42 mm	NF942R
ø 44 mm	NF944R
ø 46 mm	NF946R
ø 48 mm	NF948R
ø 50 mm	NF950R
ø 52 mm	NF952R
ø 54 mm	NF954R
ø 56 mm	NF956R
ø 58 mm	NF958R
ø 60 mm	NF960R
ø 62 mm	NF962R
ø 64 mm	NF964R
ø 66 mm	NF966R
ø 68 mm	NF968R
ø 70 mm	NF970R

Note

Acetabular reamers are available on request in increments of 1 mm between the sizes 38 mm - 68 mm.
Tray for 1 mm reamers: NF933R



Straight reamer shanks	Art. no.
Reamer shank ZIMMER	NF985R
Reamer shank HARRIS	NF986R
Reamer shank AO	NF987R
OrthoPilot® navigation sleeve	FS939
Standard protection sleeve	FS974

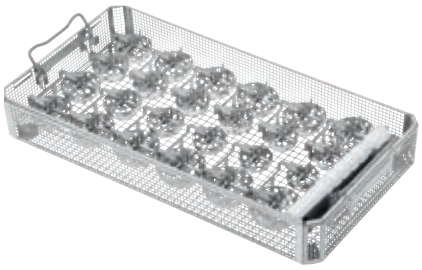
Reamer module	Art. no.
Half module tray with supports for reamers ø 44 - 68 mm, one straight reamer shank and protection sleeve 465 x 118 x 45 mm	NT635R

Note

Please order all reamer components separately.

Curved reamer shanks	Art. no.
ENZTEC MIOS® reamer shank HARRIS	ENZTEC-4250-7105
ENZTEC MIOS® reamer shank AO-PROTEK	ENZTEC-4250-7090

Curved reamer shanks	Art. no.
HPF MIOS® reamer shank HARRIS	HPF-H0032102099
HPF MIOS® reamer shank AO-PROTEK	HPF-H0032101499



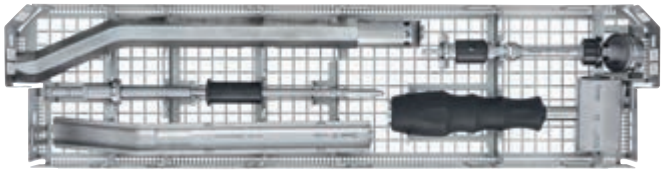
Tray NF933R

485 x 253 x 76 mm

With supports for:	Art. no.
24 reamer attachments heads and two straight reamer shanks	
OrthoPilot® navigation sleeve	FS939
Standard protection sleeve	FS974

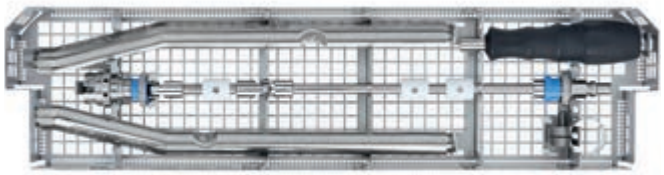
Lid JH217R
489 x 257 mm

Recommended container JK440
592 x 274 x 90 mm
Lid JK489



Tray NT633R

With supports for:	Art. no.
One curved reamer shank ENZTEC	



Tray NT634R

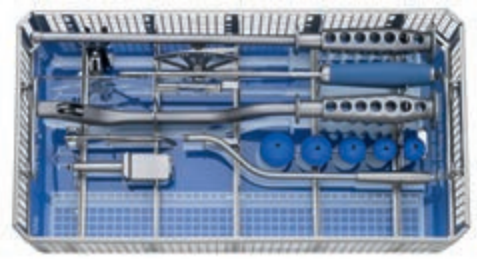
With supports for:	Art. no.
One curved reamer shank HPF	

Note

Please order all reamer components separately.

AESCULAP® Plasmafit®

8 | Instruments



Plasmafit® Basic set NT400

Consisting of:	Art. no.
Tray with storage and space for one small and one half module tray 489 x 253 x 106 mm	NT401R
Lid	JH217R
Graphic template for NT400	TF072
Screwdriver SW 4.5	NT412R
Polyamid head ø 28 mm	FS979
Polyamid head ø 32 mm	FS980

Please order separately:	Art. no.
Insertion instrument length 442 mm	NT410R*
Insertion instrument short length 377 mm	NT414R*
Insertion instrument curved length 442 mm	NT411R
Plug insertion instrument curved	NT413R
Rotation and extraction plate	NT416R
Universal aiming device, adjustable	NT420R**
Aiming device supine position	NT417R**
Aiming device lateral position	NT418R**
Polyamid head ø 22.2 mm	FS977
Polyamid head ø 36 mm	FS983
Polyamid head ø 40 mm	FS988

* In the basic set NT400 one insertion instrument can be stored.
** In the basic set NT400 one aiming device can be stored.

Plasmafit® Ceramic removal NT480

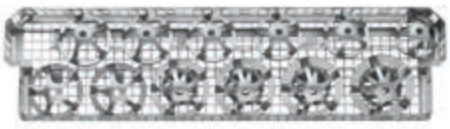
Consisting of:	Art. no.
Small tray can be clicked into the basic set 428 x 59 x 30 mm	NT481R
Universal articulation attachment	NT431R
Bar for size 44 mm C	NT471R
Bar for size 46 mm D	NT472R
Bar for size 48 mm E	NT473R
Bar for size 50 mm F	NT474R
Bar for size 52 mm G	NT475R
Bar for size 54 mm H	NT476R
Bar for size 56 mm I	NT477R
Bar for size 58 - 62 mm J	NT478R
Bar for size 64 - 70 mm K	NT479R
Articulation attachment ø 28 mm	NT495
Articulation attachment ø 32 mm	NT496
Articulation attachment ø 36 mm	NT497
Articulation attachment ø 40 mm	NT498

Please order separately:	Art. no.
Plasmafit® X-ray templates scale 1.15:1	NT409

Plasmafit® Module screw fixation NT402

Consisting of:	Art. no.
Half module tray with supports 465 x 118 x 45 mm	NT403R
Flexible drilling shaft	NT419R
Drill bit ø 3.2 mm, length 32 mm	NT424R
Cardan screwdriver SW 3.5	NT428R
Depth gauge	NT427R

Please order separately:	Art. no.
Drill bit ø 3.2 mm, length 44 mm	NT429R
Drill guide straight ø 3.2 mm	NT421R
Drill guide curved ø 3.2 mm	NT423R
Screw holding forceps straight	NT432R
Screw holding forceps curved	NT433R
Drill bit ø 3.2 mm, length 20 mm	NT393R
Drill bit ø 4.0 mm, length 20 mm	NT394R
Drill guide straight ø 4.0 mm	NT422R
Drill guide curved ø 4.0 mm	NT425R
Drill bit ø 4.0 mm, length 32 mm	NT426R



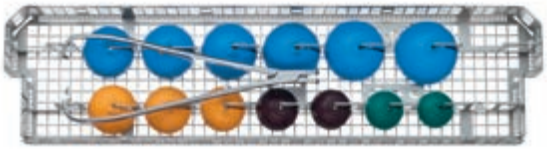
Plasmafit® Module trial cups NT436

Consisting of:	Art. no.
Half module tray with supports 465 x 118 x 45 mm	NT437R
Trial cup ø 44 C	NT444R
Trial cup ø 46 D	NT446R
Trial cup ø 48 E	NT448R
Trial cup ø 50 F	NT450R
Trial cup ø 52 G	NT452R
Trial cup ø 54 H	NT454R
Trial cup ø 56 I	NT456R
Trial cup ø 58 J	NT458R
Trial cup ø 60 J	NT460R
Trial cup ø 62 J	NT462R
Trial cup ø 64 K	NT464R
Trial cup ø 66 K	NT466R
Trial cup ø 68 K	NT468R

Please order separately:	Art. no.
Trial cup ø 40 A	NT440R
Trial cup ø 42 B	NT442R
Trial cup ø 70 K	NT470R

AESCULAP® Plasmafit®

8 | Instruments



Plasmafit® Module trial liners NT404

Consisting of:	Art. no.
Half module tray for maximum 16 trial liners 465 x 118 x 45 mm	NT405R
Forceps for trial liners	NT430R

Please order separately:

Liner size		A	B	C	D	E	F	G	H
Symmetrical	ø 22.2 mm	NT482	NT483	NT484	-	-	-	-	-
	ø 28 mm	-	-	NT489	NT490	NT491	NT532	NT533	NT534
	ø 32 mm	-	-	-	-	NT501	NT502	NT503	NT504
	ø 36 mm	-	-	-	-	-	-	NT513	NT514
	ø 40 mm	-	-	-	-	-	-	-	-
Posterior wall	ø 22.2 mm	NT582	NT583	NT584	-	-	-	-	-
	ø 28 mm	-	-	NT589	NT590	NT591	NT592	NT593	NT594
	ø 32 mm	-	-	-	-	NT601	NT602	NT603	NT604
	ø 36 mm	-	-	-	-	-	-	NT613	NT614
Asymmetrical 10°	ø 22.2 mm	NT682	NT683	NT684	-	-	-	-	-
	ø 28 mm	-	-	NT689	NT690	NT691	-	-	-
	ø 32 mm	-	-	-	-	NT701	NT702	NT703	NT704
	ø 36 mm	-	-	-	-	-	-	NT713	NT714

I	J	K	L	M
-	-	-	-	-
NT535	-	-	-	-
NT505	NT506	NT507	NT508	NT509
NT515	NT516	NT517	NT518	NT519
NT525	NT526	NT527	NT528	NT529
-	-	-	-	-
NT595	-	-	-	-
NT605	NT606	NT607	NT608	NT609
NT615	NT616	NT617	NT618	NT619
-	-	-	-	-
-	-	-	-	-
NT705	NT706	NT707	NT708	NT709
NT715	NT716	NT717	-	-

Note

Plasmafit® Plus

Cup sizes 40 - 70 mm with liner sizes A - K

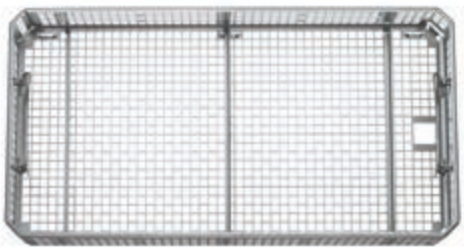
Plasmafit® Poly

Cup sizes 40 - 62 mm with liner sizes B - M

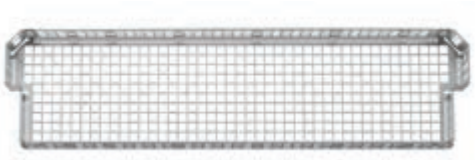
AESCULAP® Plasmafit®

8 | Instruments

Additional trays



Two modules tray	Art. no.
Empty tray to store two modules 489 x 253 x 76 mm	NT399R



Half module tray	Art. no.
Half empty module tray 465 x 118 x 45 mm	NT398R

Small tray	Art. no.
Small empty tray to click into basic set 428 x 59 x 30 mm	NT397R
Lid to use with NT397R for separate storage	NT396R

Recommended containers for:
Plasmafit® basic set e.g. JK442
(592 x 274 x 135 mm)
Plasmafit® additional module tray e.g. JK441
(592 x 274 x 120 mm)

Notes

AESCULAP® – a B. Braun brand

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