

# Aesculap<sup>®</sup> Excia<sup>®</sup> T

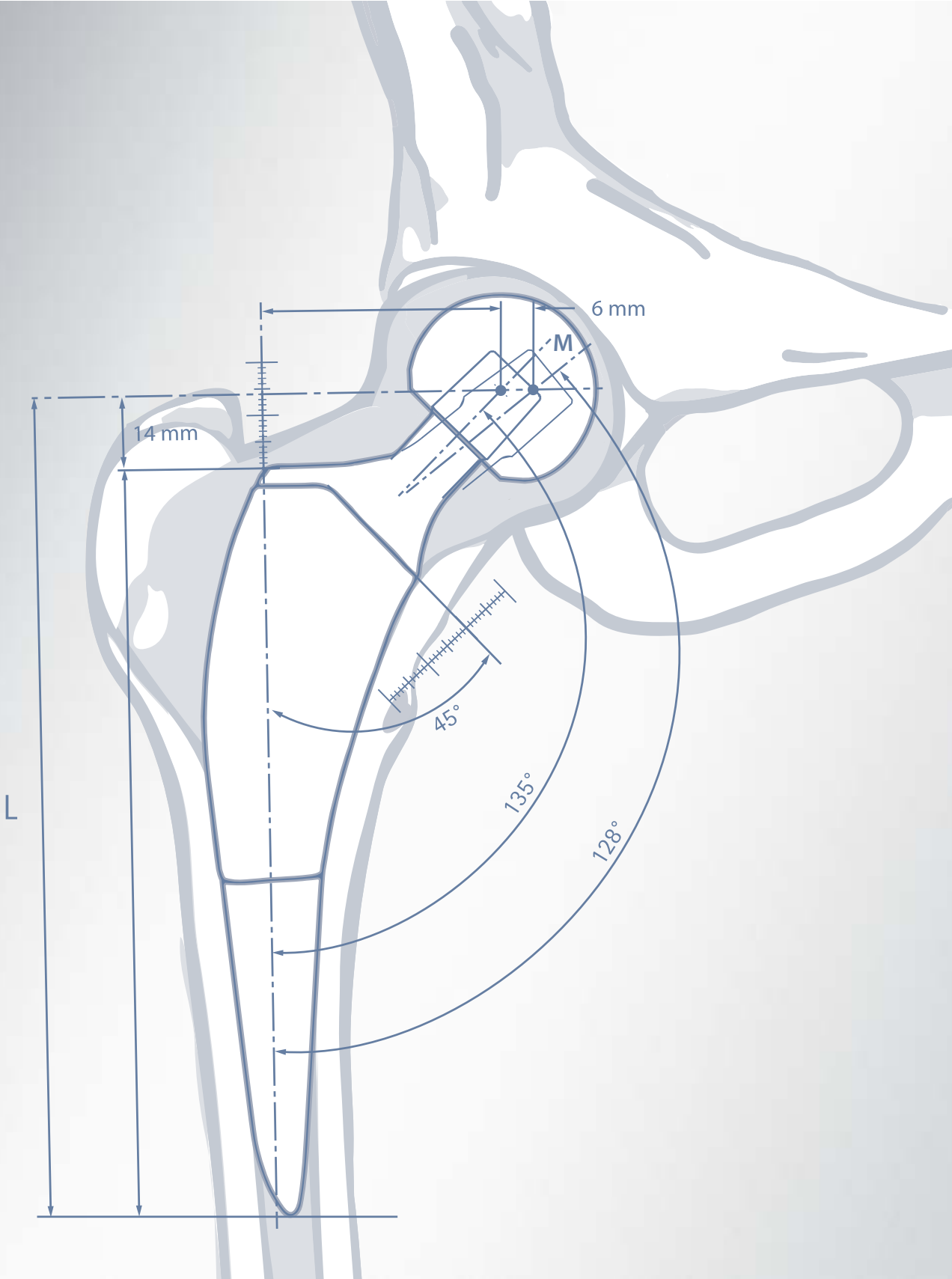
Hip Endoprosthesis System



Aesculap Orthopaedics

# Aesculap<sup>®</sup> Excia<sup>®</sup> T

Hip Endoprosthesis System



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# Aesculap<sup>®</sup> Excia<sup>®</sup> T Concept

Hip Endoprosthesis System



## Excia® T Cementless Design

The universal and distally slim implant design and the standardized implantation technique allow the implant to be used in different femoral anatomies. Excia® T implants are also suitable for narrow femur canals.

Essential design characteristics of the proximally fixing implant are the trochanter-preserving rounded shoulder and the modern stem length. These features support minimally invasive surgical techniques, especially the direct anterior approach.

The Excia® T double taper design as well as the proximal bilateral flanges provide a high primary stability.

The 12/14 taper with a distally reduced neck diameter increases the range of motion.

Excia® T is available as standard as well as a high-offset implant, which supports an individual offset reconstruction.

## Plasmapore® Coating

For osseous integration into the proximal bone structure, the cementless Excia® T stem, which is made of ISOTAN<sub>F</sub> titanium alloy, is coated with the proven microporous Plasmapore® titanium spray.

During the Plasmapore® coating process, pure titanium powder, with a thickness of 0.35 mm and a microporosity up to 40% is sprayed on the proximal anchoring area of the implant. The very rough Plasmapore® structure also supports the implant's primary stability.

## OrthoPilot® Navigation

Excia® T can be implanted using the OrthoPilot® navigation system. Stem navigation tools allow intra-operative control and documentation of leg length and offset changes. OrthoPilot® navigation also supports minimally invasive surgical techniques.

## Excia® T Geometry

Size	Length	Standard		Lateralized	
		CCD	Offset	CCD	Offset
8	131.4 mm	135°	37.7 mm	128°	43.7 mm
9	135.9 mm	135°	38.9 mm	128°	44.9 mm
10	140.4 mm	135°	40.1 mm	128°	46.1 mm
11	144.9 mm	135°	41.3 mm	128°	47.3 mm
12	149.4 mm	135°	42.5 mm	128°	48.5 mm
13	153.9 mm	135°	43.7 mm	128°	49.7 mm
14	158.4 mm	135°	44.9 mm	128°	50.9 mm
15	162.9 mm	135°	46.1 mm	128°	52.1 mm
16	167.4 mm	135°	47.3 mm	128°	53.3 mm
17	171.9 mm	135°	48.5 mm	128°	54.5 mm
18	176.4 mm	135°	49.7 mm	128°	55.7 mm
19	180.9 mm	135°	50.9 mm	128°	56.9 mm
20	185.4 mm	135°	52.1 mm	128°	58.1 mm

# Aesculap<sup>®</sup> Excia<sup>®</sup> T Concept

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## Excia® T Cemented Design

The universal implant design with the trochanter-preserving shoulder geometry and the modern stem length has also been adopted for the cemented Excia® T stem.

The bilateral flanges in the trochanter area support the proximal fit of the implant in the cement mantle.

The geometry of the cemented Excia® T is parametric to the cementless Excia® T stem. The stem design is 6 mm shorter for all sizes and has been radially reduced by 1 mm along the complete stem. This design supports a constant cement mantle for all implant sizes.

The adjustment of the profiler design with the cemented implant allows an influence of the desired nominal cement mantle thickness when choosing the stem size based on the last profiler size used. The distal stem alignment in the cement can be achieved with a centralizer.

The cemented Excia® T implant is also available as standard and lateralized version, which supports individual offset reconstruction.

## CoCr Material

The cemented Excia® T differs from the cementless version in implant material that is used, the ISODUR®<sub>F</sub> cobalt chrome alloy. The implant surface is not coated.

## OrthoPilot® Navigation

The cemented Excia® T can also be implanted using the OrthoPilot® navigation system. To navigate the cemented stems, the recommended implant size is displayed according to the last used profiler size.

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## Excia® T Profiler – Design

The design of the profilers allows for a smooth preparation of the implant bed. Proximal compression planes of the profilers support a compaction of the cancellous bone in anterior and posterior direction and herewith the preservation of bone material.

An effective rasping is supported by chip flutes in the distal part of the broaches. The flutes also facilitate the cleaning of the broaches from blood and bone material.

The asymmetrical tip of the implant and the profiler prevent a distal-lateral load transmission and provide a safe intra-medullary guidance of the profiler during the implantation.

The Excia® T profiler are thus manufactured, that a trial reposition with trial neck and trial head allow for a precise evaluation of the joint function. Standard as well as lateralized modular trial necks are available to check the offset situation and simulate the expectable joint stability.

## Excia® T System Approach

The essential benefit of the Excia® T instruments can be found in the system approach. Excia® T supports the implantation with or without bone cement for all surgical approaches with one single set of instruments. Excia® T herewith provides a great intraoperative flexibility.

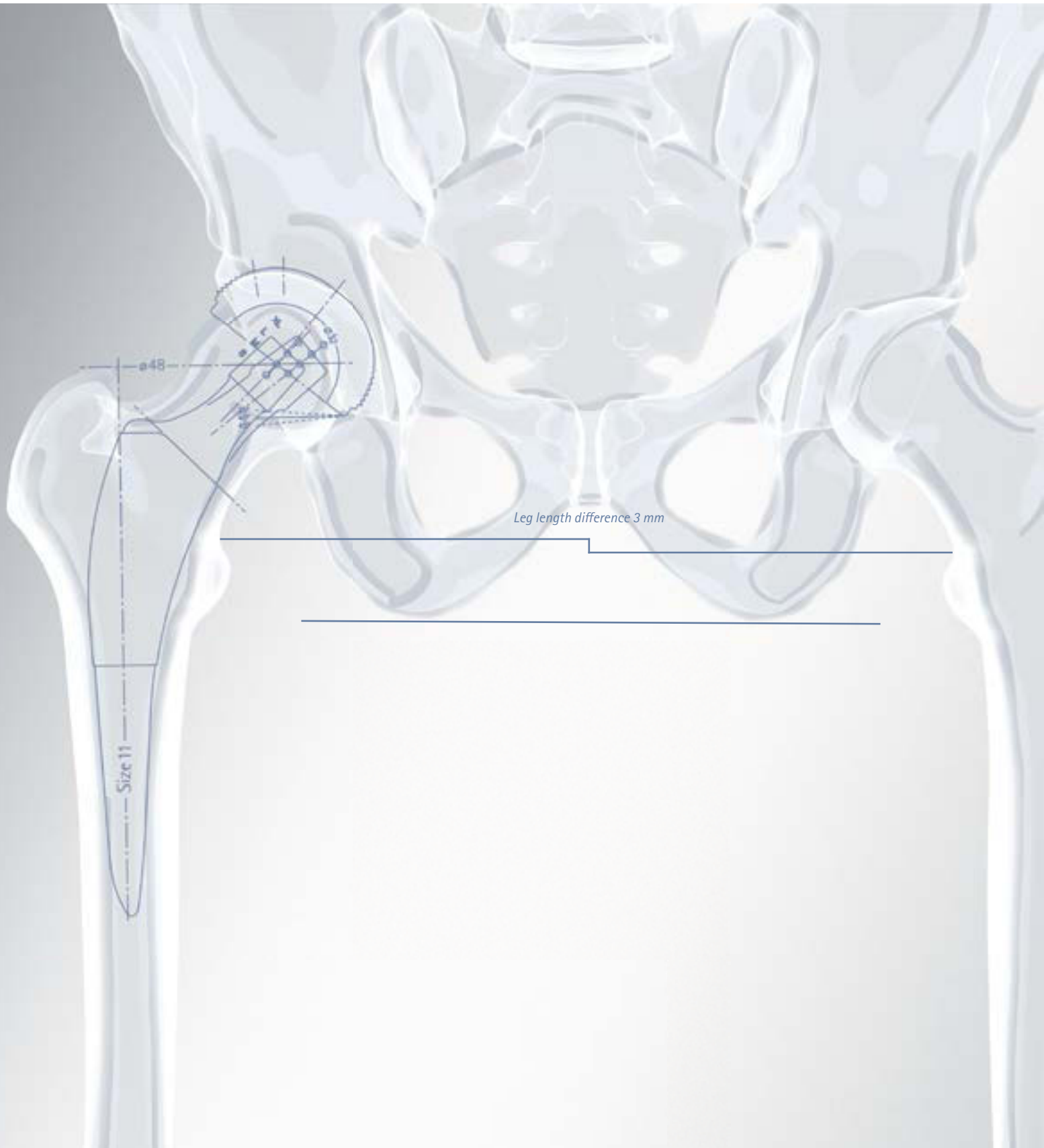
The Excia® T approach of using one instrument system for cementless and cemented implantations furthermore significantly reduces the intra-operatively necessary number of instruments. The combination of a reduced number of instruments and an intelligent OrthoTray storage enables that all Excia® T instruments fit into one single tray. Hence the OrthoTray needs low storage capacity and reduces the costs for instrument processing and sterilization.

## Aesculap Instrument Platform

Profiler handles of the new generation allow for the implantation of all Aesculap hip stems with the same handles. Herewith not only the number of necessary instruments is reduced but also the effort when different implant systems are in use. Depending on the approach and patient position in supine or lateral position ten different profiler handle versions are available.

# Aesculap<sup>®</sup> Excia<sup>®</sup> T Preoperative Planning

Hip Endoprosthesis System



## Aims of Preoperative Planning

Based on the indication preoperative planning considers the position and size selection of the implant components. Anatomical circumstances are evaluated with an AP view of the complete pelvis as well as the view of the contralateral side to the indicated hip joint.

On the basis of the preoperative planning it is possible to already identify intraoperative challenges in the forefront of the surgery. According to bone quality and shape preoperative planning indicates the possible fixation of the stem component, position of the rotation center, offset and leg length circumstances as well as the position of the femoral osteotomy.

## Procedure of Preoperative Planning

1. Drawing in of the pelvis base line and the reference to the trochanter minor
2. Determination of the femoral hip center
3. Position of the cup component, which indicates the rotation center
4. Selection of the appropriate stem implant after the following requirements:
  - Proximal medial fit of the stem
  - Distal axial stem position
  - Without oversizing of the distal part of the implant
5. Adjustment of offset and leg length via the rotation center of the stem component in relation to the cup component
6. Marking of the 45° osteotomy line for the intraoperative orientation with 10-15 mm reference to the trochanter minor

## Excia® T Stem Implants

The broad size range as well as a precisely adjusted size growth for Excia® T cementless and cemented implants allow for an individual selection of the implant size.

Offset versions of the standard stem with 135° CCD angle and the lateralized stem with 128° CCD angle and 6 mm offset increase support the reconstruction of the femoral offset.

## Possibilities of Preoperative Planning

Excia® T X-ray templates with a scale of 1.15:1 are available for manual planning. Furthermore Excia® T is integrated into several digital planning systems.

## X-Ray Images

For the planning of Excia® T a deeply regulated pelvis overview and an image of the lateral view of the indicated hip should be available.

# Aesculap® Excia® T Surgical Technique

Hip Endoprosthesis System



## Patient Position

Depending on the surgical technique and approach the patient is positioned either in supine or in lateral position.

The following images underlining the explanation of the surgical technique are related to a lateral patient position and the utilization of a posterior approach.

## Landmark Determination

Bony landmarks at the trochanter need to be defined before luxation and resection of the femoral head. According to preoperative and intraoperative measurements of these landmarks leg length changes can be followed. The aim is to achieve the leg length situation that has been determined during the preoperative planning.

## Approaches

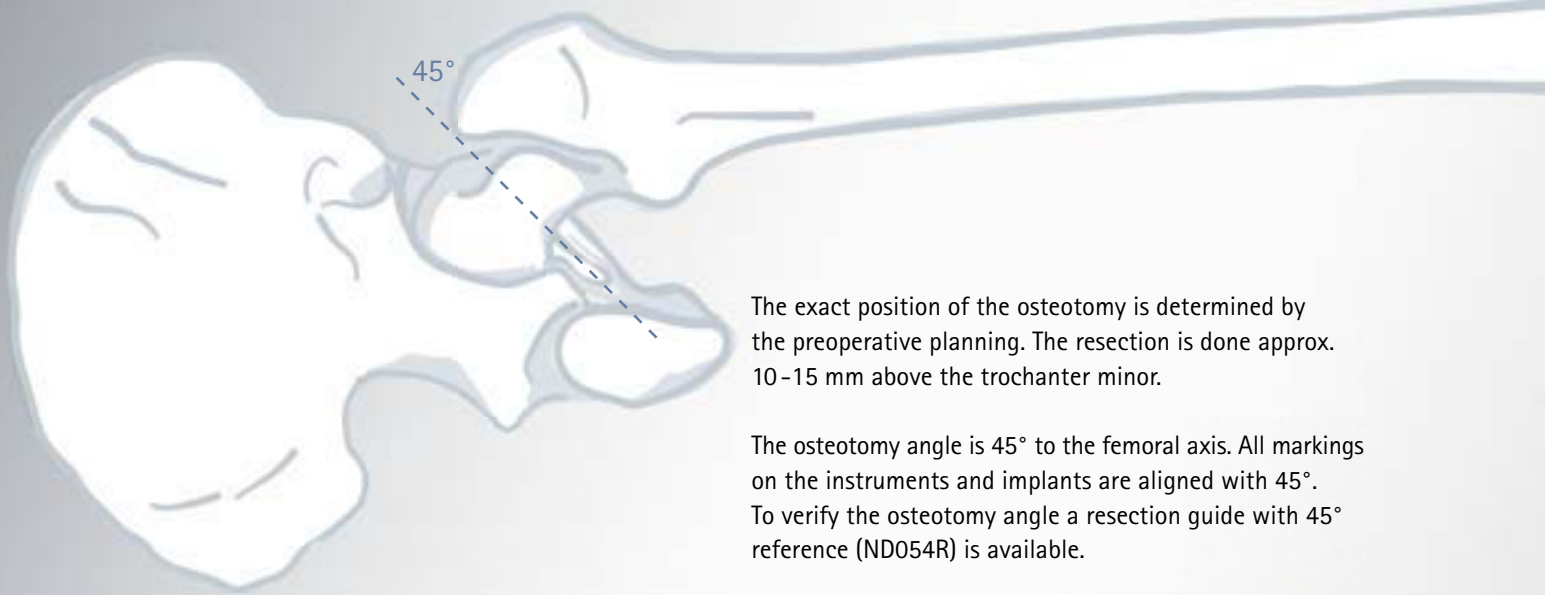
Generally Excia® T supports all common approaches also in minimally invasive technique.

Due to the trochanter preserving proximal rounded design of the implant Excia® T is especially well suitable for the direct anterior approach.

# Aesculap® Excia® T Surgical Technique

## Hip Endoprosthesis System

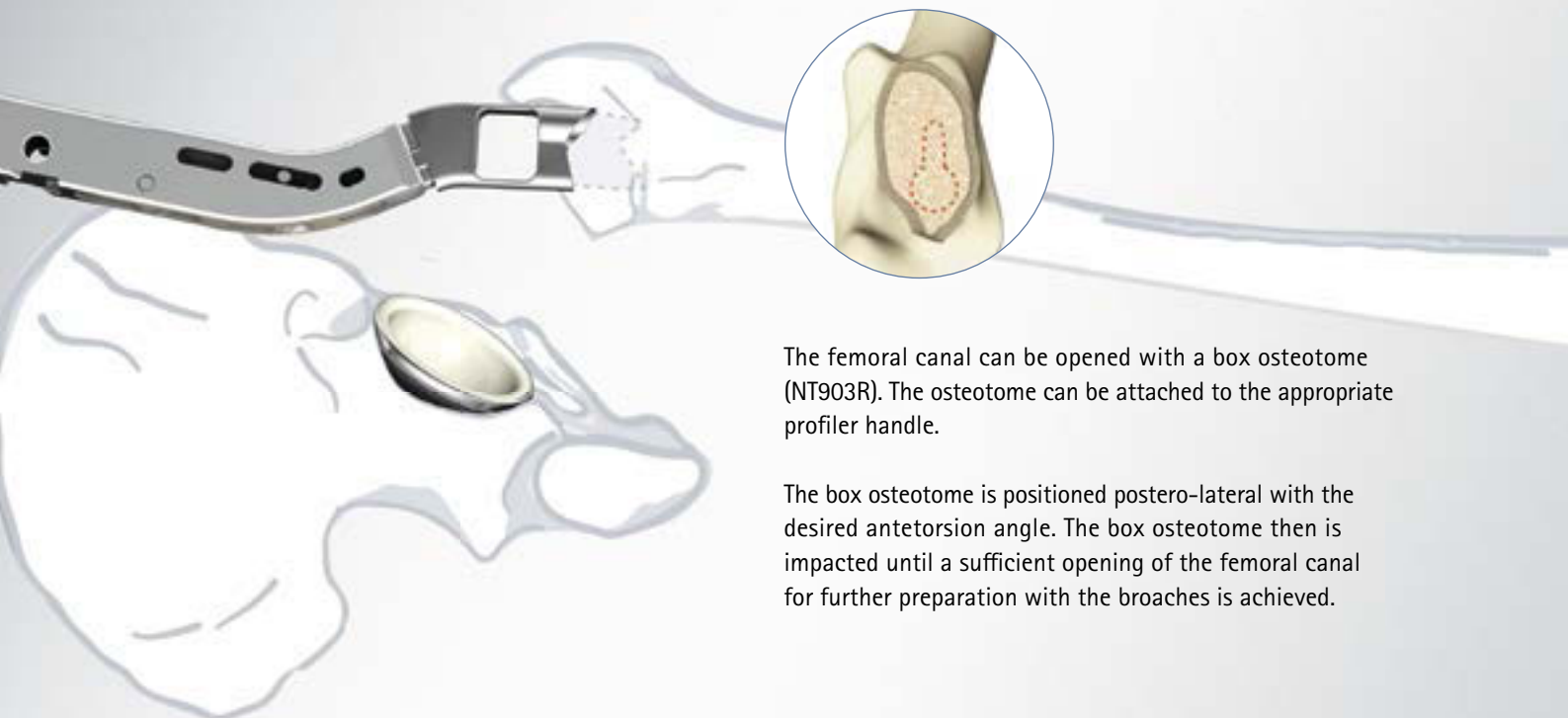
### 1. Osteotomy



The exact position of the osteotomy is determined by the preoperative planning. The resection is done approx. 10–15 mm above the trochanter minor.

The osteotomy angle is 45° to the femoral axis. All markings on the instruments and implants are aligned with 45°. To verify the osteotomy angle a resection guide with 45° reference (ND054R) is available.

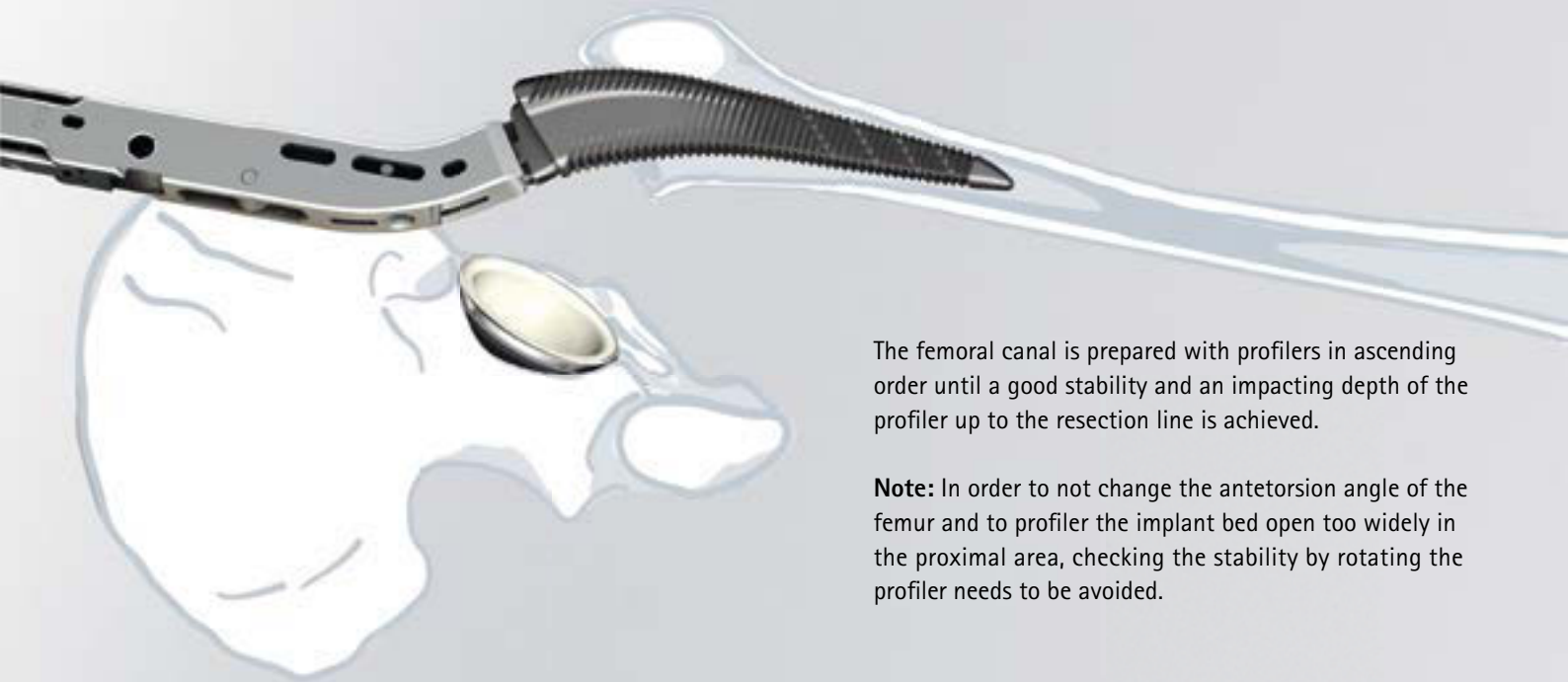
### 2. Opening the Femoral Canal



The femoral canal can be opened with a box osteotome (NT903R). The osteotome can be attached to the appropriate profiler handle.

The box osteotome is positioned postero-lateral with the desired antetorsion angle. The box osteotome then is impacted until a sufficient opening of the femoral canal for further preparation with the broaches is achieved.

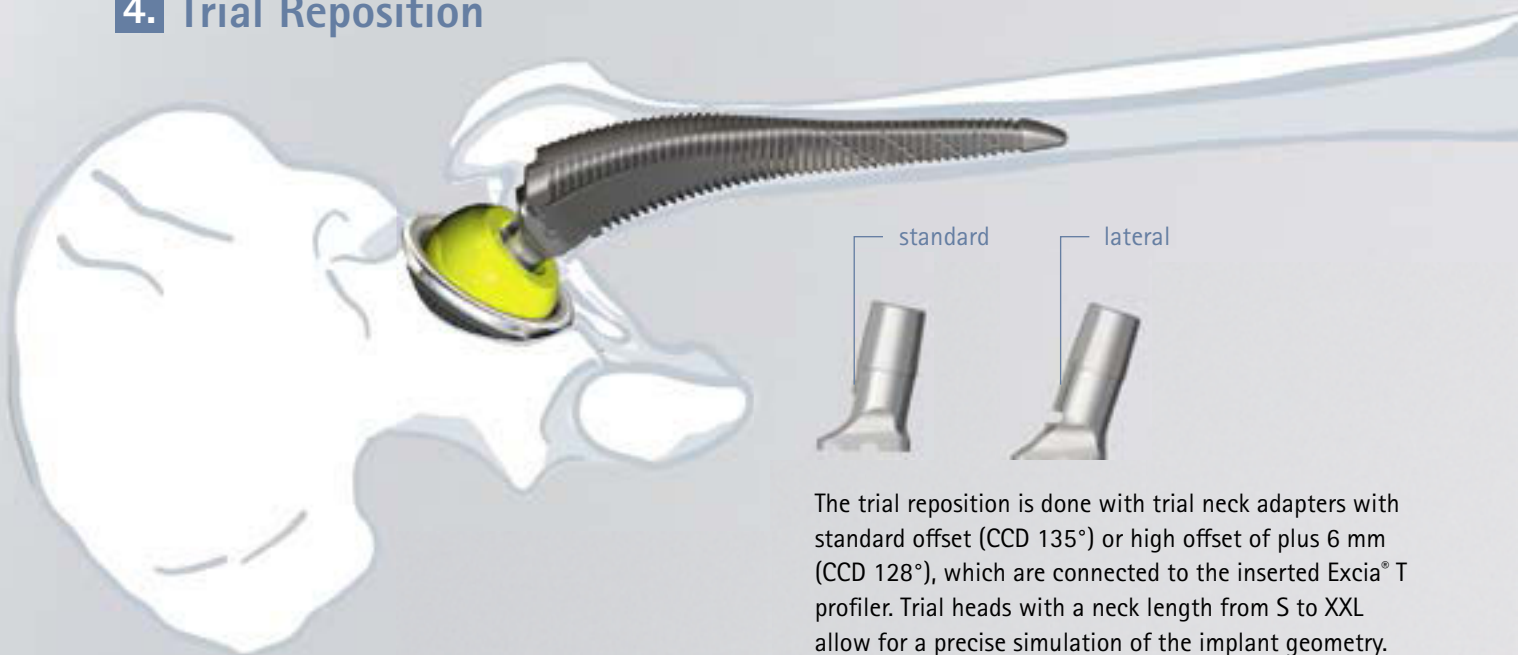
### 3. Profiler



The femoral canal is prepared with profilers in ascending order until a good stability and an impacting depth of the profiler up to the resection line is achieved.

**Note:** In order to not change the antetorsion angle of the femur and to profiler the implant bed open too widely in the proximal area, checking the stability by rotating the profiler needs to be avoided.

### 4. Trial Reposition



The trial reposition is done with trial neck adapters with standard offset (CCD 135°) or high offset of plus 6 mm (CCD 128°), which are connected to the inserted Excia® T profiler. Trial heads with a neck length from S to XXL allow for a precise simulation of the implant geometry.

# Aesculap® Excia® T Surgical Technique

## Hip Endoprosthesis System

### 5.a Excia® T Cementless – Implantation

For the cementless implantation of Excia® T the appropriate implant size corresponds to the last used profiler size.

Depending on the utilized approach a curved impaction device (ND945R) or a straight impacting device (ND944R) is available. These instruments allow for a rotational stable impaction of the implant.





## 5.b Excia® T Cemented – Implantation

For the implantation with bone cement the implant size is selected in relation to the last utilized profiler as well as the desired nominal thickness of the cement mantle. On the packaging of each Excia® T cemented implant the size of the corresponding centralizer is stated.

In case of distally widened femoral canals and after measuring the canal width it is also possible to use a bigger centralizer in order to achieve a distal canal fitting.

Profiler size	10	11	12	13	14	15	16	17	18	19	20
Excia® T cemented	10		12		14		16		18		20
Centralizer Ø mm	8		9		10		11		12		13
Cement mantle mm	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1



# Aesculap® Excia® T Article Overview

## Hip Endoprosthesis System



Excia® T Cementless

Size	Standard T	Lateral TL
8	NU208T	NU228T
9	NU209T	NU229T
10	NU210T	NU230T
11	NU211T	NU231T
12	NU212T	NU232T
13	NU213T	NU233T
14	NU214T	NU234T
15	NU215T	NU235T
16	NU216T	NU236T
17	NU217T	NU237T
18	NU218T	NU238T
19	NU219T	NU239T
20	NU220T	NU240T

ISOTAN®<sub>F</sub>



Excia® T Cemented

Size	Standard T	Lateral TL
10	NU270K	NU290K
12	NU272K	NU292K
14	NU274K	NU294K
16	NU276K	NU296K
18	NU278K	NU298K
20	NU280K	NU300K

ISODUR®<sub>F</sub>



Distal Centralizer

mm	Centralizer
8	NK088
9	NK089
10	NK090
11	NK091
12	NK092
13	NK093
14	NK094
15	NK095
16	NK096
17	NK097
18	NK098

PMMA



IMSET Plug

mm	Plug
8	NK908
10	NK910
12	NK912
14	NK914
16	NK916
18	NK918

**Composition:**

- 50 % Gelatine (from pigs)
- 30 % Glycerine
- 20 % Water
- 2 % Methylparahydroxybenzoate

**Implant materials:**

- Plasmapore® Pure titanium (Ti/ISO 5832-2)
- ISOTAN®<sub>F</sub> Titanium forged alloy (Ti6Al4V/ISO 5832-3)
- ISODUR®<sub>F</sub> Cobalt-chromium forged alloy (CoCrMo/ISO 5832-12)
- PMMA Polymethylmethacrylate



12/14

**Ceramic Heads**

Size	28 mm	32 mm	36 mm	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

**Metal Heads**

Size	28 mm	32 mm	36 mm	40 mm
S	NK429K	NK529K	NK669K	NK769K
M	NK430K	NK530K	NK670K	NK770K
L	NK431K	NK531K	NK671K	NK771K
XL	NK432K	NK532K	NK672K	NK772K
XXL	NK433K	NK533K	NK673K	NK773K

ISODUR®<sub>F</sub>

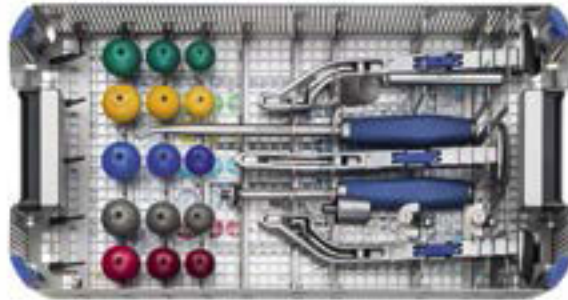


**Implant materials:**

Biolox® delta Aluminium oxide matrix ceramic (Al<sub>2</sub>O<sub>3</sub>/ZrO<sub>2</sub>/ISO 6474-2)  
 ISODUR®<sub>F</sub> Cobalt-chromium forged alloy (CoCrMo/ISO 5832-12)

# Aesculap® Excia® T Article Overview

## Hip Endoprosthesis System



### Excia® T NT900 Basic Set

#### Consisting of:

Excia® T tray	NT901R
Graphic template for NT901R	TF109
Lid for OrthoTray	JA455R
Excia® T extraction adapter	NT904R
Excia® T trial neck 12/14	NT905R
Excia® TL trial neck 12/14	NT906R
Head impactor	ND060
Cross bar for profiler handles	ND017R
Trial prosthesis head, S, 28 mm	NT356
Trial prosthesis head, M, 28 mm	NT357
Trial prosthesis head, L, 28 mm	NT358
Trial prosthesis head, XL, 28 mm	NT359
Trial prosthesis head, XXL, 28 mm	NT360

#### Please order separately:

Trial prosthesis head, S, 40 mm	NT386
Trial prosthesis head, M, 40 mm	NT387
Trial prosthesis head, L, 40 mm	NT388
Trial prosthesis head, XL, 40 mm	NT389
Trial prosthesis head, XXL, 40 mm	NT390

Trial prosthesis head, S, 32 mm	NT366
Trial prosthesis head, M, 32 mm	NT367
Trial prosthesis head, L, 32 mm	NT368
Trial prosthesis head, XL, 32 mm	NT369
Trial prosthesis head, XXL, 32 mm	NT370
Trial prosthesis head, S, 36 mm	NT376
Trial prosthesis head, M, 36 mm	NT377
Trial prosthesis head, L, 36 mm	NT378
Trial prosthesis head, XL, 36 mm	NT379
Trial prosthesis head, XXL, 36 mm	NT380

**Note:** The recommended container for Excia® T Basic Set NT900 is Aesculap basic container 592 x 285 x 153 mm.



Excia® T Small Tray



Excia® T profiler	
Form profiler size 8	NT908R
Form profiler size 9	NT909R
Form profiler size 10	NT910R
Form profiler size 11	NT911R
Form profiler size 12	NT912R
Form profiler size 13	NT913R
Form profiler size 14	NT914R
Form profiler size 15	NT915R
Form profiler size 16	NT916R
Form profiler size 17	NT917R
Form profiler size 18	NT918R
Form profiler size 19	NT919R
Form profiler size 20	NT920R
Excia® T Modular box osteotome	NT903R

Please order separately:	
Excia® T cemented X-ray templates scale 1.15:1	NT922
Excia® T cementless X-ray templates scale 1.15:1	NT923

Please order separately:	
Straight insertion instrument	ND844R
Curved insertion instrument	ND845R
Profiler handle lateral approach, straight *	NT001R
Profiler handle posterior approach, straight *	NT002R
Profiler handle anterior approach, straight *	NT003R
Profiler handle lateral approach, offset left *	NT004R
Profiler handle lateral approach, offset right *	NT005R
Profiler handle anterior approach, offset left *	NT006R
Profiler handle anterior approach, offset right *	NT007R
Profiler handle lateral approach, straight *	NT008R
Profiler handle lateral approach, offset left *	NT009R
Profiler handle lateral approach, offset right *	NT010R
Femoral head saw guide 45°	ND054R

\* three profiler handles can be stored in the tray

# Aesculap® Plasmafit®

Cementless Acetabular Cup System



## Acetabular Cup System

In addition to the Excia® T stem components the Plasmafit® cementless acetabular cup system is available.

## Plasmafit® Surface

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

The high intraoperative primary stability of Plasmafit® reduces the need for additional screw fixation to only a few cases and allows implantations under difficult conditions and easy revision treatments.

## Insert Selection

The wall thickness of both Plasmafit® implant lines offers an improved articulation choice for highly crosslinked polyethylene and ceramic cup liners.

## Plasmafit® Poly

Plasmafit® Poly is a dedicated cup implant line exclusively for the use with polyethylene liners and allows the optional use of correction liners.

## Plasmafit® Plus

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

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

For further information about the Plasmafit® acetabular cup system please refer to the Aesculap brochure O45502.

