AESCULAP® Excia® 12/14

Hip Endoprosthesis System

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SHARING EXPERTISE

AESCULAP® Excia® 12/14

Hip Endoprosthesis System

AESCULAP® Excia®

Excellence in Arthroplasty

The prosthesis design, implantation technique and implant surface are important factors in primary hip replacement surgery. Excia® is implanted using a rasp that works for both the cementless stem and the cemented stem with a distal centralizer. The lateral offset of the Excia® stem increases with stem size, further enhancing the stability of the joint. Excia® can be implanted with computer navigation and supports less invasive surgical techniques, thus making it well-equipped for the needs of advanced hip replacement surgery.

Design Concept

Two design options are available

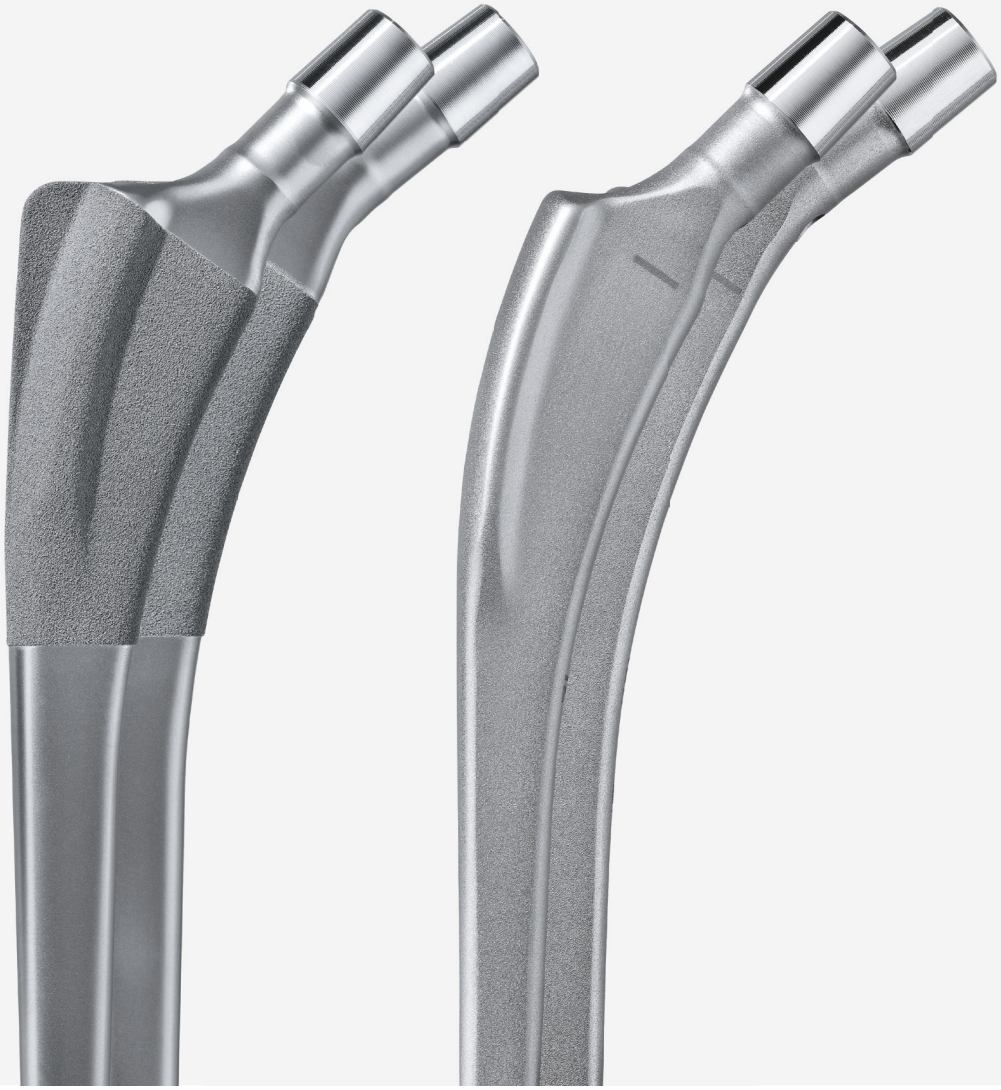
The Excia® straight stem is designed for implant longevity with or without bone cement – available in standard or high offset. This flexibility allows surgeons to adapt to individual anatomical requirements. The stem's proven design supports reliable fixation and stability, ensuring long-term performance.

Cementless design

Stem design with distal fit and proximal flanges for mechanical stability. Proximal fixation with the Plasmapore® coating.

Cemented design

Wingless stem design preserves bone near the trochanter. Flanges allow a good proximal fit within the cement mantle.



Good stem alignment with the distal centralizer.

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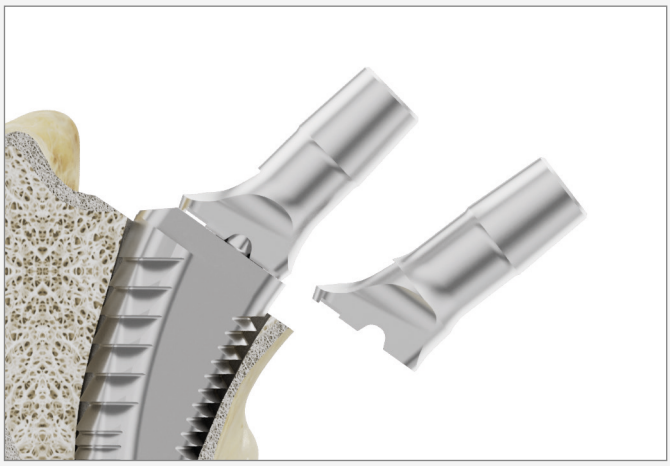
Design Concept

Rasps

The wing rasp is only used in the final step of the cementless implantation.

Trial Necks

The modular trial necks with standard or high offset offer the possibility to simulate an optimal soft tissue reconstruction.

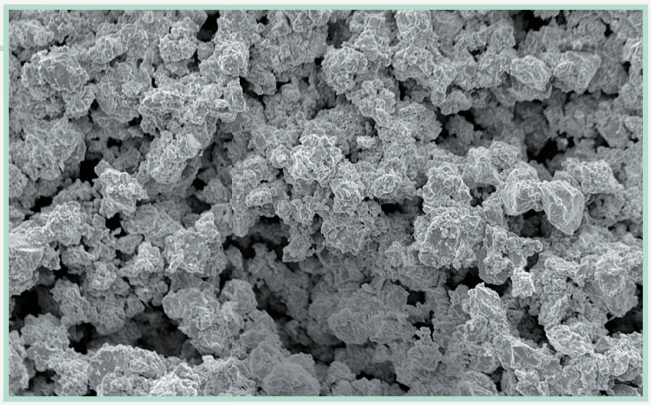


Trial Reduction

The trial reduction with the stem rasps mimics the final implant accurately.

Lateral Wing

Cementless and cemented Excia® stems differ by material, surface and especially by the lateral wing.



Plasmapore® Coating

For osseous integration into the proximal bone structure the cementless Excia® stem, which is made of 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 (1).

(1) Simank HG, Stuber M, Frahm R, Helbig L, van Lenthe H, Müller R. The influence of surface coatings of dicalcium phosphate (DCPD) and growth and differentiation factor-5 (GDF-5) on the stability of titanium implants in vivo.Biomaterials. 2006 Jul;27(21):3988-94

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Surgical Technique

1 Osteotomy

The osteotomy angle is 55 degrees. All markings on the instruments and implants are in 55° reference to this plane.

2 Medullary Canal

The medullary canal is opened with a box osteotome, which is inserted postero-laterally and determines the femoral anteversion angle of the implant.

3 Starter Rasp

The starter rasp is an optional instrument which is used manually without any force to check the intramedullary situation. There is no need to use a hammer.

4 Rasp

The medullary canal is prepared with increasing sized rasps until the desired depth and stability are achieved.

5 Trial Reduction

In combination with the Excia® rasp the two modular trial necks with standard (135°) or high offset (128°, + 6 mm) simulate exactly the Excia® implant geometry.

6 Trial Head

The appropriate trial heads enable finally trial reduction and joint inspection with the Excia® rasp.

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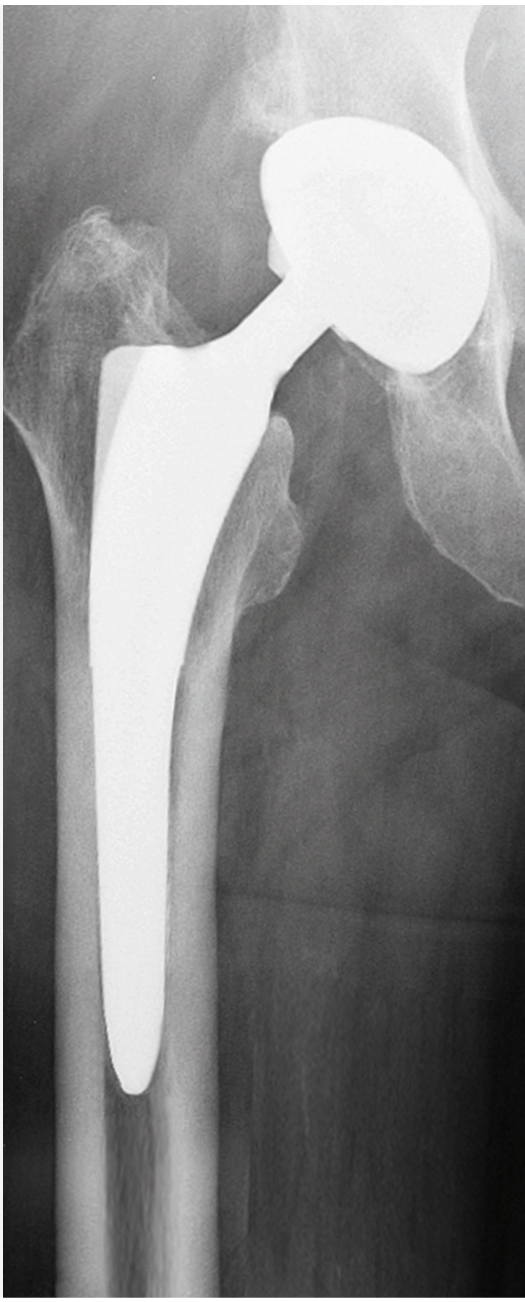
Surgical Technique

Cement Mantle mm	Rasp Size	Excia® Stem Size	Centralizer ø mm
1.0	12	12	12
1.5	12	11	12
2.0	12	10	12

7 Cemented Implantation

For a cemented implantation the Excia® stem and centralizer sizes are selected according to the table above. The distal centralizer size always corresponds to the size of the last rasp used.

The required thickness of the cement mantle can be adjusted from 1 to 2 mm, depending on the size of the final implanted stem.



8 Cementless Implantation

For a cementless implantation, a groove for Excia®'s lateral wing is incised with the wing profiler, which is guided down a slot in the final stem rasp. The cementless Excia® stem can be implanted after the trial reduction. The size of the cementless Excia® stem corresponds directly to the final stem rasp for a proper press-fit. The stem impactor controls the rotational alignment during implantation.

9 Biomechanical Concept

Primary stability is achieved by a precise fit of the distal stem and rotational stability in the proximal area. Secondary stability results from bony ingrowth into the Plasmapore® coating.

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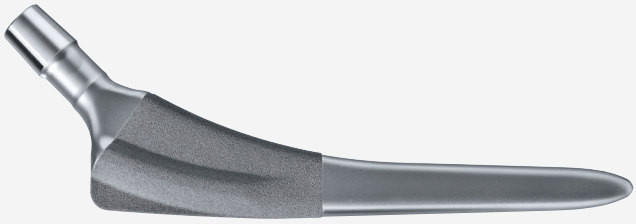
Implant Overview



Excia® 12/14 Cementless

Size	Standard	Lateralised*
8 mm	NK198T	NK598T
9 mm	NK199T	NK599T
10 mm	NK200T	NK600T
11 mm	NK201T	NK601T
12 mm	NK202T	Nk602T
13 mm	NK203T	Nk603T
14 mm	NK204T	NK604T
15 mm	NK205T	NK605T
16 mm	NK206T	NK606T
17 mm	NK207T	NK607T
18 mm	NK208T	NK608T

Ti6Al4V

Excia® 12/14 Cemented

Size	Standard	Lateralised*
9 mm	NK689K	–
10 mm	NK690K	NK990K
11 mm	NK691K	NK991K
12 mm	NK692K	NK992K
13 mm	NK693K	NK993K
14 mm	NK694K	NK994K
15 mm	NK695K	NK995K
16 mm	NK696K	NK996K
17 mm	NK697K	Nk997K
18 mm	NK698K	NK998K

CoCr

Distal Centralizer

mm	Centralizer
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
10	NK910
12	NK912
14	NK914
16	NK916
18	NK918

Composition:

Gelatine (porcine based), approx. 57%
Glycerol (glycerin), approx. 37%
Water (purified), approx. 6%
Methylparahydroxybenzoate, approx. 0.2%

Implant Materials:

Plasmapore®	Pure titanium (Ti / ISO 5832-2)
Ti6Al4V	Titanium forged alloy (Ti6Al4V / ISO 5832-3)
CoCr	Cobald-chromium forged alloy (CoCrMo / ISO 5832-12)
PMMA	Polymethylmethacrylate

* Excia® L (lateralised) implants have an increased offset of 6 mm compared with Excia® standard and a reduced CCD angle of 128°

BIOLOX® Delta Ceramic Head

12/14

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

Isocer® Ceramic Head

12/14

Size	28 mm	32 mm	36 mm
S	NK324	NK424	NK524
M	NK325	NK425	NK525
L	NK326	NK426	NK526
XL	–	NK427	NK527

Metal Head

12/14

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

Relative values for modular heads with cone 12/14

28 mm	≥ 32 mm
- 3.5 mm	- 4.0 mm
± 0 mm	± 0 mm
+ 3.5 mm	+ 4.0 mm
+ 7.0 mm	+ 8.0 mm
+ 10.5 mm	+ 12.0 mm

Implant Materials:

Isocer®	Zirconia-toughened alumina ceramic (Al_2O_3/ZrO_2/ISO 6474-2)
BIOLOX® delta	Aluminium oxide matrix ceramic (Al_2O_3/ZrO_2/ISO 6474-2)
CoCr	Cobalt-chromium forged alloy (CoCrMo/ISO 5832-12)

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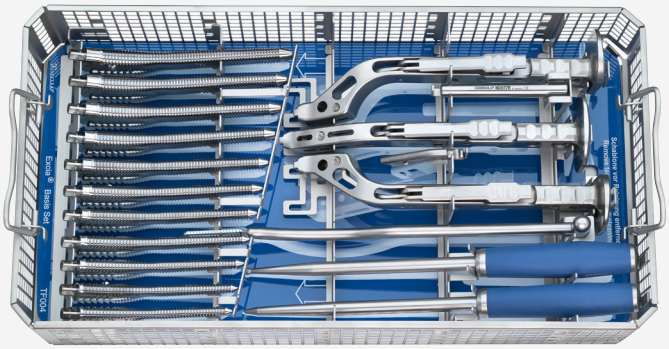
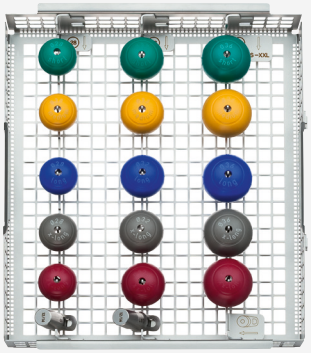
Instruments / Set Overview





Note:

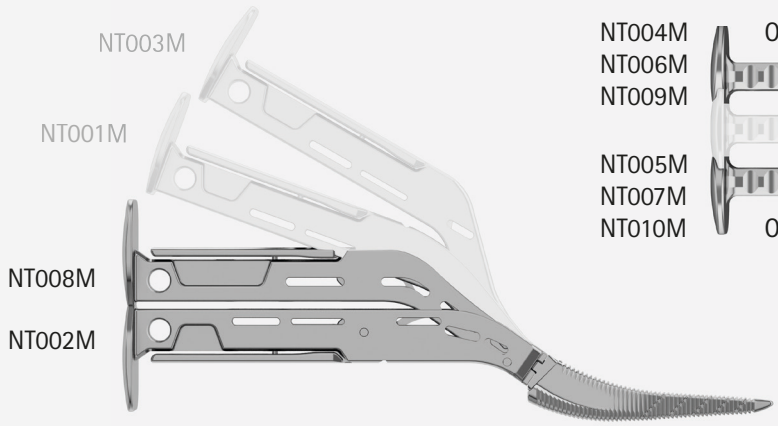
In the tray NT329R three rasp handles can be stored.
The small tray for the trial components fits on top.

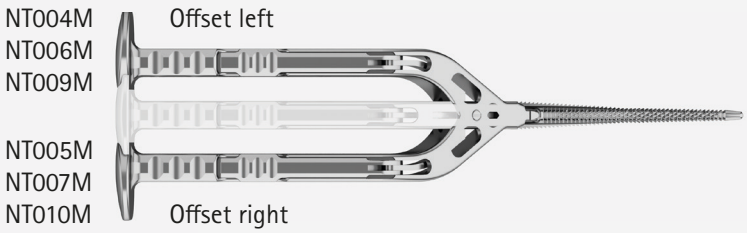
NT330 Excia® 12/14 Basic Set

Tray with supports and small tray for trial components | 489 x 253 x 106 mm	NT329R
Graphic template	TF004
Lid for AESCULAP® OrthoTray®	JH217R
Insertion instrument	ND844R
Extraction instrument	ND820R
Wing profiler	NT321R
Modular box osteotome	NT118R
Cross bar for rasp handle	ND017R*
Rasp size 8	NT308R
Rasp size 9	NT309R
Rasp size 10	NT310R
Rasp size 11	NT311R
Rasp size 12	NT312R
Rasp size 13	NT313R
Rasp size 14	NT314R
Rasp size 15	NT315R
Rasp size 16	NT316R
Rasp size 17	NT317R
Rasp size 18	NT318R

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, 28mm	NT360
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
Trial neck standard	NT303R
Trial neck lateralised	NT305R

Please order separately





Rasp Handles *(Optional)*

Note: Up to three rasp handles can be stored in the tray.

Patient Postion	Surgical Approach	Straight	Offset	
			Left	Right
Supine	Antero-lateral | Lateral	NT001M	NT004M NT009M	NT005M NT010M
	Direct anterior	NT003M	NT006M	NT007M
Lateral	Posterior	NT002M	-	-
	Antero-lateral | Lateral	NT001M	NT004M NT009M	NT005M NT010M

General Instruments *(Optional)*

Tray with supports | 489 x 253 x 76 mm	NT301R
Lid	JH217R
Impactor for prosthesis heads	ND060
Curved insertion instrument	ND845R
Starter rasp	ND058R
Canal finder	NT323R
Femoral head saw guide 55°	ND058R

X-Ray Templates *(Optional)*

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

AESCULAP® – a B. Braun brand

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