

## Self-Locking Cementless or Cemented Hip Stem



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# Traditional Hip Replacement

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Proven Design. HA-Coated. Straight forward.

2 | Design Concept

# Self-Locking Cementless or Cemented Hip stem.



The TrendHip<sup>®</sup> design concept combines the traditional features of a straight tapered and fully surface coated cementless hip stem. The TrendHip<sup>®</sup> triple tapered shape additionally supports the implant positioning inside the femoral cavity.

The cementless rectangular self-locking stem enables a reliable primary stable implant position and a direct secondary periprosthetic bone contact to the coated surface. The hydroxylapatite surface is a combined double layer of a rough titanium plasmaspray coating in the proximal stem part with decreasing thickness in the mid third stem section and smooth coating distally. Medial and horizontal grooves increase the bone contact area and axial implant stabilisation. The implant range is available for standard and lateralized offset stems. The cemented TrendHip<sup>®</sup> stem is a rectangular self-locking straight polished hip stem. It is triple tapered and produced from polished stainless steel. TrendHip<sup>®</sup> cemented stems are available as standard and lateralized offset versions. Cemented TrendHip<sup>®</sup> stems require a nominal thickness of cement mantle which can be influenced by the rasp and the implant size selection. The rasp size corresponds to the respective implant size. The cement mantle thickness is 0.9 mm.



Stem length	CCD angle	Offset standard	Offset lateralized
134 mm	134°	40.0 mm	46.0 mm
139 mm	134°	40.5 mm	46.5 mm
144 mm	134°	41.0 mm	47.0 mm
149 mm	134°	41.5 mm	47.5 mm
154 mm	134°	42.0 mm	48.0 mm
159 mm	134°	42.5 mm	48.5 mm
164 mm	134°	43.0 mm	49.0 mm
169 mm	134°	43.5 mm	49.5 mm
	Stem length   134 mm   139 mm   139 mm   144 mm   144 mm   154 mm   159 mm   164 mm   169 mm	Stem length CCD angle   134 mm 134°   139 mm 134°   144 mm 134°   144 mm 134°   144 mm 134°   154 mm 134°   154 mm 134°   159 mm 134°   164 mm 134°   169 mm 134°	Stem lengthCCD angleOffset standard134 mm134°40.0 mm139 mm134°40.5 mm144 mm134°41.0 mm144 mm134°41.0 mm149 mm134°41.5 mm154 mm134°42.0 mm159 mm134°42.5 mm164 mm134°43.0 mm169 mm134°43.5 mm

3 | Surgical Technique





#### 1 | Planning

Planning templates are available at 115 % scale. Digital templates are available on request.



#### 2 | Femur Osteotomy

After the femoral neck resection the medullary canal is opened with the box osteotome.

# Straight forward surgical technique.



#### 3 | Femur Preparation

The medullary canal is prepared with increasing rasp sizes until sufficient stability is achieved. The final implant size selection corresponds to the final rasp size.



#### 4 | Trial Reduction

The rasp trial reduction is performed with a trial neck and modular trial heads. To simulate standard as well as lateral offset, a trial neck adapter for each case is available.

3 | Surgical Technique



#### 5 | Cement Plug Preparation and Bone Cement Application

The medullary canal is prepared in exactly the same way as for the TrendHip $^{\circ}$  cementless version. To implant the cemented option the following additional step is required.

The application of a cement plug is mandatory before the application of the bone cement. If an artificial cement plug is used, the application of the cement plug depends on its instruction for use. The distal femoral canal size is measured 10 mm below the distal implant tip level with intramedullary probes. After the cement plug has been placed intramedullary, the bone cement can be inserted into the femoral canal. The bone cement application depends on the instruction for use of the bone cement and the used cement application system.

#### 6 | Stem Insertion

The final implant is inserted with the impactor. Implant and impactor can be locked optionally to control the stem orientation. In case of implanting the cemented TrendHip<sup>®</sup> stem, the laser marking on the proximal part can be used as a guideline for the insertion depth. Hammering is prohibited during the stem insertion. The stem should be inserted carefully and slowly to assure a homogenous cement mantle. The cement exuding from the bone cavity should be removed as much as possible. After the cement has hardened thoroughly, trial heads can be applied to the stem for final trial reduction.







#### 7 | Joint Reduction

The joint stability can be finally checked with the trial heads. The appropriate prosthesis head is then connected on the cleaned and dried taper.





## 4 | Implants





#### **Cementless Stems\***

Size	Standard	Lateralized
1	GL-HET-HS401	GL-HET-HL401
2	GL-HET-HS402	GL-HET-HL402
3	GL-HET-HS403	GL-HET-HL403
4	GL-HET-HS404	GL-HET-HL404
5	GL-HET-HS405	GL-HET-HL405
6	GL-HET-HS406	GL-HET-HL406
7	GL-HET-HS407	GL-HET-HL407
8	GL-HET-HS408	GL-HET-HL408

#### **Cemented Stems\***

Size	Standard	Lateralized
3	GL-HET-CS403	GL-HET-CL403
4	GL-HET-CS404	GL-HET-CL404
5	GL-HET-CS405	GL-HET-CL405
6	GL-HET-CS406	GL-HET-CL406
7	GL-HET-CS407	GL-HET-CL407
8	GL-HET-CS408	GL-HET-CL408

#### **IMSET Cement Plug**

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



#### **Composition** Gelatine (porcine based)

Glycerol (glycerin) Water (purified) Methylparahydroxybenzoate

#### Implant Materials

Hydroxylapatite	(ISO 13799-1)*
Stainless steel	(ISO 5832-9)*
Titanium alloy	(Ti6Al4V/ISO 5832-3)*

\* TrendHip<sup>®</sup> stems are manufactured by Groupe Lépine, 175 Rue Jacquard, 69730 Genay, France.

### 5 | Hip Endoprosthesis Heads 12/14

#### Ceramic – Prosthesis Head



Size	28 mm	32 mm	36 mm
S	NK460D	NK560D	NK650D
Μ	NK461D	NK561D	NK651D
L	NK462D	NK562D	NK652D
XL	-	NK563D	NK653D

Biolox<sup>®</sup> Delta

#### Ceramic - Prosthesis Head

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

lsocer<sup>®</sup>

#### Metal - Prosthesis Head



Size	28 mm	32 mm	36 mm
S	NK429K	NK529K	NK669K
Μ	NK430K	NK530K	NK670K
L	NK431K	NK531K	NK671K
XL	NK432K	NK532K	NK672K
XXL	NK433K	NK533K	NK673K

CoCr

#### Implant Materials

Biolox <sup>®</sup> delta	Aluminium oxide matrix ceramic $(Al_2O_3/ZrO_2/ISO 6474-2)$
lsocer®	Zirconia-toughened alumina ceramic (AI <sub>2</sub> O <sub>3</sub> /ZrO <sub>2</sub> /ISO 6474-2)
CoCr	Cobalt-chromium forged alloy (CoCrMo/ISO 5832-12)

6 | Instruments



#### TrendHip<sup>®</sup> Instrumentation NF320

Art. No.	Description
NF321R	TrendHip <sup>®</sup> tray
TF106	Graphic template
JA455R	Lid
GL-HTA-TA060	Stem impactor
GL-HEA-CC428	Trial head 12/14 ø 28 mm -3.5
GL-HTA-CM428	Trial head 12/14 ø 28 mm 0
GL-HTA-CL428	Trial head 12/14 ø 28 mm +3.5
GL-HTA-CX428	Trial head 12/14 ø 28 mm +7
GL-HEA-CC432	Trial head 12/14 ø 32 mm -4
GL-HEA-CM432	Trial head 12/14 ø 32 mm 0
GL-HTA-CL432	Trial head 12/14 ø 32 mm +4
GL-HTA-CX432	Trial head 12/14 ø 32 mm +8
NF324R	Extraction adapter

#### Please order separately

Art. No.	Description
NT001M	Handle for lateral approach
NT002M	Handle for posterior approach
NT003M	Handle for anterior approach
NT004M	Handle lat. approach offset left
NT005M	Handle lat. approach offset right
NT006M	Handle ant. approach offset left
NT007M	Handle ant. approach offset right
NT008M	Handle for lateral approach
NT009M	Handle lat. approach offset left
NT010M	Handle lat. approach offset right
ND017R	Cross bar
ND060	Impaction instrument
GL-HEA-MI001	Locked impactor
GL-HTA-CC436	Trial head 12/14 ø 36 mm -4
GL-HTA-CM436	Trial head 12/14 ø 36 mm 0
GL-HTA-CL436	Trial head 12/14 ø 36 mm +4
GL-HTA-CX436	Trial head 12/14 ø 36 mm +8



#### TrendHip<sup>®</sup> Instrumentation NF320

Art. No.	Description
NT118R	Box osteotome
GL-HEA-MR101	TrendHip <sup>®</sup> rasp size 1
GL-HEA-MR102	TrendHip <sup>®</sup> rasp size 2
GL-HEA-MR103	TrendHip <sup>®</sup> rasp size 3
GL-HEA-MR104	TrendHip <sup>®</sup> rasp size 4
GL-HEA-MR105	TrendHip <sup>®</sup> rasp size 5
GL-HEA-MR106	TrendHip <sup>®</sup> rasp size 6
GL-HEA-MR107	TrendHip <sup>®</sup> rasp size 7
GL-HEA-MR108	TrendHip <sup>®</sup> rasp size 8
NF322R	TrendHip <sup>®</sup> trial neck standard
NF323R	TrendHip <sup>®</sup> trial neck lateralized

#### Please order separately

Art. No.	Description
GL-HETHSQ115	TrendHip <sup>®</sup> X-ray templates, standard offset, Scale 1.15:1
GL-HETHLQ115	TrendHip <sup>®</sup> X-ray templates, lateralized offset, Scale 1.15:1

## AESCULAP<sup>®</sup> – a B. Braun brand

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